

Assessing The Landscape: A Survey of Microfinance Self-Help Groups and Their Impact on Financial Inclusion

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ABSTRACT

Microfinance is a trusted source of financing to the impoverished people in the remote areas all throughout the world. It is popular as a credit-based system for poverty alleviation. In India, the low-income group families need to be supported financially. To do this efficiently, microfinance is very useful since it provides small loans and other financial services to the poor and the marginalized. Thus, the low-income families get financial support in a legitimate way. This economic tool is framed in a manner that it helps the low-income households come out of their financial distress and lead better lives and be able to participate in healthier living. Microfinance can also help in the nation's development, raising the standard of living, poverty reduction. Women's groups can also essentially benefit from this type of credit system. With respect to India, two different approaches are followed – bank - led Self-Help Groups (SHGs) and the micro-finance approach. Most of them are under the Reserve Bank of India (RBI) regulation making it safe and legal.

In this study, a variety of aspects of microfinance approaches and SHGs have been analyzed. It has been found that financial inclusion has been achieved as a part of our study. The results are satisfactory and in sync with other studies in this area by different other researchers.

Statistical method of multiple regression has been used to analyze the data in this study. MS Excel has also been used to analyze qualitative data. The results are discerning and provide real suggestions that can be used on ground to enhance the viability of the SHGs.

Keywords: Microfinance, SHG, financing, poverty, low-income

INTRODUCTION

The existing academic literature, pertaining to the development of accurate insights into the financial inclusionary discourses, through propagation of microfinance-oriented business enterprises, has consistently emphasised upon the significance of the varied operational dynamics of the entire spectrum of the international financial sectors. However, the incremental magnitude of such academic literature on the varied aspects of global economic development, has desisted from the evaluation of implications of microfinance on the actual outcomes of investment-oriented business undertakings. This is the specific academic inquest, which, is required to be addressed appropriately, through evidence-oriented research.

The phenomenon of microfinance has assumed greater significance within the previous two decades, since comparatively greater attention has been accorded by the financial services management institutions to the prospects of management of microfinance oriented financial business expansion, within this specific duration. The international agenda of development of differential financial sectors, including that of microfinance assisted business domains, constitute the rationale for facilitating access to formal credit/finance, to disadvantageous segments of different populaces, within the purview of the existing financial institutions (Uddin *et al.* 2022). This specific attribute of the international economic scenario represents the comparatively extensive variance of investment capital accessibility for micro-finance-oriented businesses across the entire international commercial capital investment paradigms. The involvement of the Self-Help Groups (SHGs) within such discourses, has become the fundamental conduit of determination of the implications of microfinance and microcredit on the phenomenon of financial inclusion (Lamichhane, 2020). This particular phenomenon entails the conditions associated with availability of access by Self-Help Groups and other comparable enterprises, to appropriate and formal financial services and to required measures of microfinance credit by such microenterprises, including the SHGs, to address the requirements of the relevant business disciplines. Abrar, Hasan and Kabir (2021) have opined that such conditions could become evaluated, in the context of multiplicity of dimensions, including socio-economic (absence of bureaucratic inertia, time consuming documentation requirements and prohibitive administrative costs within the respective national governance dispensations) and geographic access (existing proximity of the SHGs to providers of institutional/formal financial services) to such formal financial credit facilities.

OBJECTIVES OF THE STUDY

In this context, the corresponding research endeavour has been constituted on the purpose of conducting academic assessment of the existing economic landscape, in the context of the implications of microfinance assisted SHGs on the phenomenon of financial inclusion of economically disempowered segments of different societies (Hansen, Huis and Lensink, 2021). To this effect, the fundamental objective of this research undertaking has been the conducting of evaluative analysis of implications of credit interventions, undertaken by financial institutions, through providing of microfinance-oriented investment capital to microenterprises. Such microenterprises have been represented through the SHGs at the household domains of underdeveloped/developing economies (Banto and Monsia, 2021). The ultimate objective has been the formulation of analytical insights into the landscape of inclusion of microenterprises, such as the SHGs, within the formal/institutional credit provisioning systems (both banking and non-banking financial services).

LITERATURE REVIEW

Maity (2023) has observed that the concept of microfinance entails the furnishing of financial services to micro-enterprises, including household-oriented business ventures, in the form of limited measures of credit/investment capital. Such micro-enterprises remain primarily excluded from the services provided by the traditional, commercial institutional financial services, including banks. Dubey *et al.* (2021) have foregrounded the fundamental attribute of such micro-enterprises as constituting limited income oriented informally self-employed individuals, with absence of any formalised titles of ownership, regarding the assets possessed by such individuals. In majority of the cases of SHGs, the documentary identification of formal proprietorship of such assets also does not exist. According to Sharma, Mishra and Rai (2021), it is of paramount significance to appropriately distinguish the conceptual attributes of microfinance from

the institutions providing microfinance services, since, such institutions are multiple in numbers and involve the most extensive array of organisational entities, including the commercial banks (attempting to extend services to the markets of microfinance with specialised commercial micro-credit lending processes, such as the Compartamos of Mexico), the cooperative banking organisations within India and the Non-Governmental Organisations (NGOs) such as the Grameen Bank in Bangladesh. The distinguishing aspect of commercial financial institutions, including banks, from other forms of financial services provisioning institutions, such as the credit-exclusive finance and leasing organisations, savings and credit cooperatives (such as the SACCOs operating within the Eastern African regions) and the postal savings banks, could become apparent through the fact that the commercial banking services are generally supervised and regulated through an independent regulatory authority, including through a central banking institution (**Karimu et al. 2021**).

Pal and Singh (2021) have emphasised on the significance of the implications of financial institutions governed and administered by the respective governments of different nations, within which, such micro-finance-oriented business domains have thrived. **Mahesh, Aithal and Sharma (2023)** have elaborated on the observations of **Bharti and Malik (2022)** in the context of arguing that, notwithstanding the fact that financial institutions governed and administered by respective governments, including the savings banks and postal savings services, have demonstrated reasonably credible performance to the respective population segments, which, have remained previously beyond the ambit of financial inclusion, the overarching performance paradigms of such governmental financial institutions, in the context of credit provision, have remained unremarkable. In case of facilitating the SHGs with required measures of credit, the traditional financial institutions generally resort to utilisation of procedures, such as subsidized interest rates, to institute credit rationing measures, in addition to demonstrate incremental forbearance and, occasionally, even debt forgiveness. Consequently, the credit culture and the process of private credit provision become jeopardised, culminating into inefficient allocation of credit assets (**Bharti and Malik, 2022**).

However, **Beisland et al. (2021)** have presented vigorous counter arguments to the generally accepted academic notion that, absence of access to formal financial services, portends the deficiency of possession of any form of financial access amongst the financially disempowered segments of any society. Such counter arguments have emphasised upon the observation that the economically disempowered segments of any society generally access the entire spectrum of informal financial services providers, including deposit collectors, informal money lending businesses, private organisations such as stores undertaking informal credit provisioning and various other comparable informal financial services. This observation has been accentuated upon by **Gupta and Sharma (2023)** as illustrative of the varied dimensions of the phenomenon of financial inclusion, encompassing the apparently divergent domains of credit and investment capital-oriented practices. The materialisation of academic insights, derived from the research discourses performed during the previous two decades, in the context of expansion of the ambit of financial inclusion through development of access to investment capital and through poverty alleviation processes, has elucidated the fact that, reduction in aggregate poverty could become predicated upon facilitation of greater consumption thresholds at the general households and, consequently, upon the prospects of formulation of resilience against detrimental implications of income shocks at the general households. **Rasel and Win (2020)** have adjudged that this observation reinforces the previously adhered to theoretical notion that, through investment in cultivation of microenterprises, the economically disempowered segments of the society could become empowered to extricate themselves from the incidence of poverty.

The research of **Kandpal (2022)** has suggested that the most frequent indicators/paradigms of financial inclusion have been the accessibility to formal savings, insurances, remittances and investment credits. Incidentally, these indicators have also been considered by **Kar, Mishra and Tripathy (2022)** as the most significant components of micro-credit/micro-finance. As per the observations of **Nayak and Panigrahi (2020)**, the SHGs primarily contributes to the fostering of the regularised savings management predilection amongst members of specific groups of limited income-oriented individuals. These specific groups are generally promoted by the Non-Government Organisations (NGOs) and Cooperative Banks within India. The emphasis of the SHGs has mostly been concentrated on the portfolios of marginal and landless farming personnel, in comparison to various other groups of limited income-oriented population segments within countries of South Asia (Indian subcontinent), to furnish micro-credit loans. Within the SHGs, involvement of personnel within the localised business organisations and operational land holding profiles have greater propensity to impart sustained implications on the cumulative amount of per annum borrowings (**Kar, Mishra and Tripathy, 2022**). Within the totality of micro-credit received by any borrower as a member of any SHG, certain factors determine the extent of formal credit, which, might exist within the received cumulative credit amount by such a borrower. These factors are the percentage of finalised household income thresholds and familiarity with financial literacy of borrowing personnel. The synergistic correlation between the SHG and formal financial institutions, including the public and private sector-oriented banks, becomes emblematic of the general policy parameters of the institutional credit providing financial organisations, involving facilitating of access to the investment credit and formal savings to the economically disempowered segments of the populaces within various nationalities of the South Asian region (including the Indian Subcontinent). **Deshpande and Khanna (2021)** have delineated the significance of the empirical research conducted by **Mahato et al. (2023)** on the Kalanjiam Community oriented programme of banking services expansion, which, had occurred within the Indian state of Tamil Nadu. This research had exemplified that, individual members of SHGs, without possessing any form of formal savings, generally prefer to save with the banking institutions which, could become associated with the respective SGHs, on a regularised basis. **Hermes and Lensink (2020)** have posited that the SHGs have contributed to the process of inculcating of financial operations management and availing of banking services by mostly rural populaces of the state of Tamil Nadu in India. Additionally, **Milana and Ashta (2020)** have adjudged that, the SHGs within the Indian state of Orissa had also ensured that members of such organisation had been accorded adequate access to affordable and required measures of institutional credit. Consequently, **Kaushik (2022)** has postulated that participation within SHGs, by economically disempowered individuals, consistently accelerate the element of financial inclusion, which, is measurable through the availability of access to available formal credit for the individual members of such SHGs. Furthermore, this specific research has also established that SHGs assist in curtailment of the implications of financial exclusions of the members of such organisations, on account of reduction of the frequency of recurrent and informal borrowings, which, the members of the SHGs and the associated rural populaces, within various segments of India and other comparable nations.

RESEARCH METHODOLOGY

Data collection

In this study, primary data has been collected from people in India with an age ranging from 25 years to 55 years and above. The women were either students, employed part-time, employed full-time, retired from their jobs or unemployed. After a thorough literature review, a questionnaire was prepared, and a

survey was conducted by individually meeting the respondents. Random sampling method has been used here. Further the respondents were also requested to distribute the survey amongst their known people who could be potential respondents. Thus snow-ball sampling method was used as well.

The data has been gathered on a 5-point Likert scale as follows:

1. strongly disagree
2. disagree
3. neutral
4. agree
5. strongly agree

The very few missing data was filled up using strong conceptual understanding.

Four open-ended question was included in the questionnaire.

Research methods

- The questionnaire was divided into two scales 1 and 2. Reliability test was conducted, and results validated using Cronbach's Alpha.
- Demography of the sample population has been discussed.
- Descriptive statistics were detailed for the scale variables of 1 and 2.
- Multiple regression method has been used to resolve the research hypotheses from 1 to 4.
- The extent of influence of the independent variables on the dependent variables have also been found and noted.
- Bar chart has been used to the open-ended question.
- The data has been analyzed with the help of SPSS version 26 and MS Excel has been used to prepare the bar chart.
- For the survey, approximately 223 people were approached but certain responses were rejected due to incomplete data.
- Thus, a sample size of 204 has been studied here.

Hypotheses testing

Based on the objectives of this study, the following hypotheses have been formed:

H₀₁ - There is not a statistically significant relationship between 'Financial inclusion satisfaction' and 'Concept of SHG', 'SHG Participation', 'Microfinance oriented investment', 'Banking institutions support', 'Socio economic changes in status', 'Adequate awareness' taken together.

H_{A1} - There is a statistically significant relationship between 'Financial inclusion satisfaction' and 'Concept of SHG', 'SHG Participation', 'Microfinance oriented investment', 'Banking institutions support', 'Socio economic changes in status', 'Adequate awareness' taken together.

H₀₂ - There is not a statistically significant relationship between 'Microenterprise intervention' and 'Concept of SHG', 'SHG Participation', 'Microfinance oriented investment', 'Banking institutions support', 'Socio economic changes in status', 'Adequate awareness' taken together.

H_{A2} - There is a statistically significant relationship between 'Microenterprise intervention' and 'Concept of SHG', 'SHG Participation', 'Microfinance oriented investment', 'Banking institutions support', 'Socio economic changes in status', 'Adequate awareness' taken together.

H₀₃ - There is not a statistically significant relationship between 'SHG changes economic' and 'Concept of SHG', 'SHG Participation', 'Microfinance oriented investment', 'Banking institutions support', 'Socio economic changes in status', 'Adequate awareness' taken together.

H_{A3} - There is a statistically significant relationship between ‘SHG changes economic’ and ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together.

H_{O4} - There is not a statistically significant relationship between ‘Financial empowerment SHG’ and ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together.

H_{A4} - There is a statistically significant relationship between ‘Financial empowerment SHG’ and ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together.

H_{O5} - There is not a statistically significant relationship between ‘SHG significant role’ and ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together.

H_{A5} - There is a statistically significant relationship between ‘SHG significant role’ and ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together.

DATA ANALYSIS

Reliability tests

To gauge the internal consistency of the survey questionnaire, reliability test was conducted on the two scales of 1 and 2.

Cronbach’s alpha value based on standardized items is .956 for scale 1 and .965 for scale 2.

These values are acceptable according to the rule of George and Mallery (2019).

Demography of the sample population

Around 35.29% of the respondents were in the age group of 25 to 30 years, 33.33% were between the ages of 31 years to 36 years, 12.74% fell in the age group of 37 to 42 years, 9.8% were in the age group of 43 to 48 years and 0.98% were above 49-54 years and 7.84% were 55 years and above old. 49.01% of the respondents were males and the rest 50.98% females. Out of the respondents, 22.54% had studied high school, 28.43% had Diploma, 34.31% had a bachelor’s degree and 14.7% held master’s degree. In terms of employment, 4.9% were students, 21.57% were employed part time, 22.54% employed full time, 7.84% were retired, 9.87% were unemployed and 33.34% were self-employed in one way or the other. The respondents in terms of their marital status were varied such as divorced 16.67%, married 48.04%, separated 4.9%, single 22.55% and widow 7.84%. Most of them resided in urban areas i.e. 49.01% while 35.29% resided in the rural areas and 15.69% in the semi-urban areas. They had varied range of household income such as 2,00,000 - 3,00,000 - 26.47%, 3,00,001 - 4,00,000 - 49.01%, 4,00,001 - 5,00,000 - 18.63% and 5,00,001 and above 5.88%.

Descriptive statistics

The descriptive statistics were found out for the Likert scale variables as follows:

Table 1 Descriptive statistics

Variable	N	Mean	Standard Deviation
Concept of SHG	204	3.67	1.385
SHG Participation	204	3.70	1.359

Financial inclusion satisfaction	204	3.75	1.429
Microenterprise intervention	204	3.79	1.312
SHG changes economic	204	3.70	1.262
Microfinance oriented investment	204	3.85	1.327
Financial empowerment SHG	204	3.85	1.448
SHG significant role	204	3.81	1.388
Banking institutions	204	3.72	1.349
Socio economic changes	204	3.78	1.307
Adequate awareness	204	3.83	1.411
Valid N (listwise)	204		

Mean and standard deviation of the variables are given in table 1.

Hypotheses

Multiple regression

Dependent variable: FinIncSatis

Independent variables: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst

Table 2 Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’

Model	R	R Square	Adjusted R square	Std. Error of Estimate	Change statistics					
					R Square Change	F change	df1	df2	Sig. F Change	Durbin Watson
1	.945	.893	.890	.474	.893	274.883	6	197	.000	2.233
a. Predictors: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst b. Dependent variable: FinIncSatis										

The adjusted R square value is .890 which means that 89 % variation in the dependent variable is caused by the independent variables. It indicates that this is a robust model.

Table 3 ANOVA – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	370.492	6	61.749	274.883	.000
	Residual	44.253	197	.225		
	Total	414.745	203			

Here p-value < 0.05 in table 3. Hence ‘Financial inclusion satisfaction’ is determined by ‘Concept of

SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’.

Table 4 Coefficients - Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’

Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	-.416	.109		-3.801	.000
	ConceptSHG	.160	.048	.155	3.321	.001
	SHGParticipation	.255	.051	.242	5.043	.000
	MicroOrientInvnt	.370	.049	.344	7.499	.000
	BankInst	.038	.063	.036	.613	.541
	SocioEcoChanges	.177	.049	.162	3.651	.000
	AdeqAwareness	.102	.069	.101	1.493	.137

a. Dependent variable: FinIncSatis

From table 4, we have derived the following equation 1.

Equation 1:

$$y = a + bx$$

$$y = -.416 - .155 * ConceptSHG + .242 * SHGParticipation + .344 * MicroOrientInvnt + .162 * SocioEcoChanges$$

From equation 1, we can infer that the ‘Financial inclusion satisfaction’ of the respondents is only determined by ‘Concept SHG’, ‘SHG Participation’, ‘MicroOrientInvnt’ and ‘SocioEcoChanges’.

Dependent variable: MicroInt

Independent variables: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst

Table 5 Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Microenterprise intervention’

Model	R	R Square	Adjusted R square	Std. Error of Estimate	Change statistics					
					R Square Change	F change	df1	df2	Sig. F Change	Durbin Watson
1	.885	.783	.776	.621	.783	118.352	6	197	.000	1.999

c. Predictors: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst
d. Dependent variable: MicroInt

The adjusted R square value is .776 which means that 77.6 % variation in the dependent variable is caused by the independent variables. It indicates that this is a robust model.

Table 6 ANOVA – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Microenterprise intervention’

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	273.483	6	45.851	118.352	.000
	Residual	75.870	197	.385		
	Total	349.353	203			

Here p-value < 0.05 in table 6. Hence ‘Microenterprise intervention’ is determined by ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’.

Table 7 Coefficients – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Microenterprise intervention’

Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.252	.143		1.7555	.081
	ConceptSHG	.187	.063	.197	2.960	.003
	SHGParticipation	.105	.066	.109	1.585	.115
	MicroOrientInvnt	.253	.065	.256	3.914	.000
	BankInst	.238	.082	.245	2.913	.004
	SocioEcoChanges	.042	.064	.042	.659	.510
	AdeqAwareness	.117	.090	.126	1.307	.193

b. Dependent variable: MicroInt

From table 7, we have derived the following equation 2.

Equation 2:

$$y = a + bx$$

$$y = .252 + .197 * ConceptSHG + .256 * MicroOrientInvnt + .245 * BankInst$$

From equation 2, we can infer that the ‘Microenterprise intervention’ of the respondents is only determined by ‘Microfinance oriented investment’ and ‘Banking institutions support’.

Dependent variable: SHGChanges

Independent variables: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst

Table 8 Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGChanges’

Model	R	R Square	Adjusted R square	Std. Error of Estimate	Change statistics					Durbin Watson
					R Square Change	F change	df1	df2	Sig. F Change	
1	.807	.652	.641	.756	.652	61.420	6	197	.000	2.012
e. Predictors; AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvt, ConceptSHG, BankInst										
f. Dependent variable: SHGChanges										

The adjusted R square value is .641 which means that 64.1 % variation in the dependent variable is caused by the independent variables. It indicates that this is a robust model.

Table 9 ANOVA – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGChanges’

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	210.584	6	35.097	61.420	.000
	Residual	112.573	197	.571		
	Total	323.157	203			

Here p-value < 0.05 in table 9. Hence ‘SHGChanges’ is determined by ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’.

Table 10 Coefficients - Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGChanges’

Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.633	.175		3.623	.000
	ConceptSHG	.146	.077	.160	1.894	.060
	SHGParticipation	.184	.081	.198	2.287	.023
	MicroOrientInvt	.128	.079	.135	1.631	.104
	BankInst	.319	.100	.341	3.198	.002
	SocioEcoChanges	-.026	.077	-.026	-.330	.742
	AdeqAwareness	.069	.109	.077	.632	.528
c. Dependent variable: SHGChanges						

From table 10, we have derived the following equation 3.

Equation 3:

$$y = a + bx$$

$$y = .633 + 0.198 * SHGParticipation + .341 * BankInst$$

From equation 3, we can infer that the ‘SHGChanges’ of the respondents is only determined by ‘SHGParticipation’ and ‘Banking institutions support’.

Dependent variable: FinEmpSHG

Independent variables: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst

Table 11 Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘FinEmpSHG’

Model	R	R Square	Adjusted R square	Std. Error of Estimate	Change statistics					
					R Square Change	F change	df1	df2	Sig. F Change	Durbin Watson
1	.947	.897	.893	.473	.897	284.418	6	197	.000	1.786
g. Predictors: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst										
h. Dependent variable: FinEmpSHG										

The adjusted R square value is .893 which means that 89.3 % variation in the dependent variable is caused by the independent variables. It indicates that this is a robust model.

Table 12 ANOVA – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘FinEmpSHG’

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	381.543	6	63.590	284.418	.000
	Residual	44.045	197	.224		
	Total	425.588	203			

Here p-value < 0.05 in table 12. Hence ‘FinEmpSHG’ is determined by ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’.

Table 13 Coefficients - Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘FinEmpSHG’

Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	-.291	.109		-2.662	.008

	ConceptSHG	.047	.048	.045	.971	.333
	SHGParticipation	.111	.050	.104	2.207	.028
	MicroOrientInvnt	.376	.049	.345	7.636	.000
	BankInst	.169	.062	.158	2.717	.007
	SocioEcoChanges	.059	.048	.053	1.209	.228
	AdeqAwareness	.329	.068	.321	4.807	.000
d. Dependent variable: FinEmpSHG						

From table 13, we have derived the following equation 3.

Equation 4:

$$y = a + bx$$

$$y = -.291 + .345 * MicroOrientInvnt + .158 * BankInst + .321AdeqAwareness$$

From equation 4, we can infer that the ‘FinEmpSHG’ of the respondents is only determined by ‘MicroOrientInvnt’ and ‘Banking institutions support’ and ‘AdeqAwareness’.

Dependent variable: SHGSigRole

Independent variables: AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst

Table 14 Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGSigRole’

Model	R	R Square	Adjusted R square	Std. Error of Estimate	Change statistics					
					R Square Change	F change	df1	df2	Sig. F Change	Durbin Watson
1	.927	.859	.855	.528	.859	200.523	6	197	.000	2.380
i. Predictors; AdeqAwareness, SHGParticipation, SocioEcoChanges, MicroOrientInvnt, ConceptSHG, BankInst										
j. Dependent variable: SHGSigRole										

The adjusted R square value is .855 which means that 85.5 % variation in the dependent variable is caused by the independent variables. It indicates that this is a robust model.

Table 15 ANOVA – Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGSigRole’

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	335.919	6	55.986	200.523	.000
	Residual	55.003	197	.279		
	Total	390.922	203			

Here p-value < 0.05 in table 15. Hence ‘SHGSigRole’ is determined by ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘Financial inclusion satisfaction’.

Table 16 Coefficients - Model summary – Impact of ‘Concept of SHG’, ‘SHG Participation’, ‘Microfinance oriented investment’, ‘Banking institutions support’, ‘Socio economic changes in status’, ‘Adequate awareness’ taken together on ‘SHGSigRole’

Model		Unstandardized coefficients		Standardized coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	-.066	.122		-.538	.591
	ConceptSHG	.032	.054	.032	.591	.555
	SHGParticipation	.177	.056	.174	3.152	.002
	MicroOrientInvnt	.284	.055	.272	5.167	.000
	BankInst	.435	.070	.423	6.242	.000
	SocioEcoChanges	.002	.054	.002	.041	.968
	AdeqAwareness	.101	.076	.103	1.318	.189

e. Dependent variable: SHGSigRole

From table 16, we have derived the following equation 3.

Equation 5:

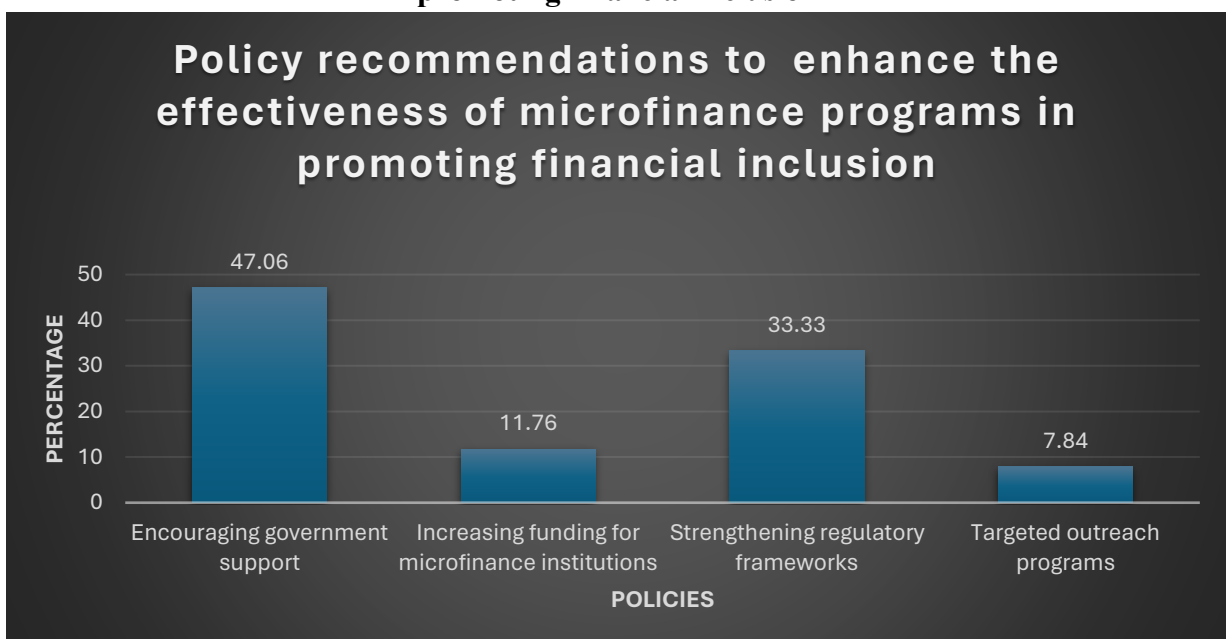
$$y = a + bx$$

$$y = -.066 - .174 * SHGParticipation + .284 * MicroOrientInvnt + .435 * SocioEcoChanges$$

From equation 5, we can infer that the ‘SHGSigRole’ of the respondents is only determined by ‘SHGParticipation’, ‘MicroOrientInvnt’ and ‘SocioEcoChanges’.

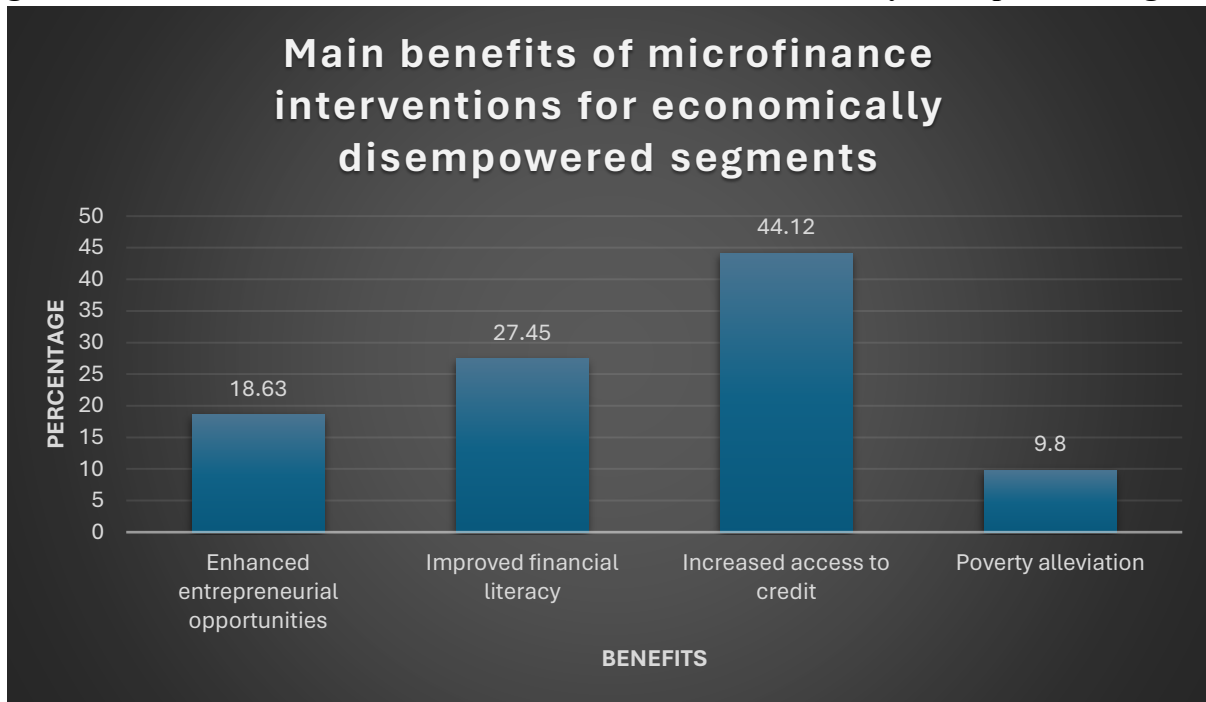
Open-ended questions

Fig. 1: Policy recommendations to enhance the effectiveness of microfinance programs in promoting financial inclusion



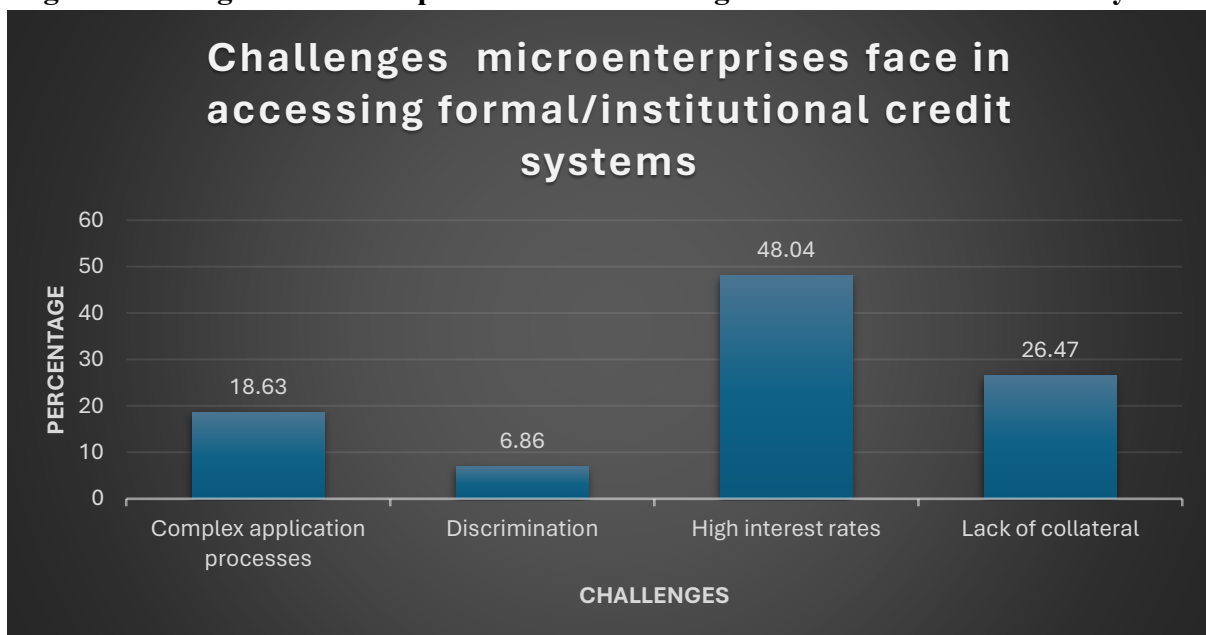
The above bar chart in Fig. 1 tells us about the percentages of different policy recommendations to enhance the effectiveness of microfinance programs in promoting financial inclusion

Fig. 2: Main benefits of microfinance interventions for economically disempowered segments



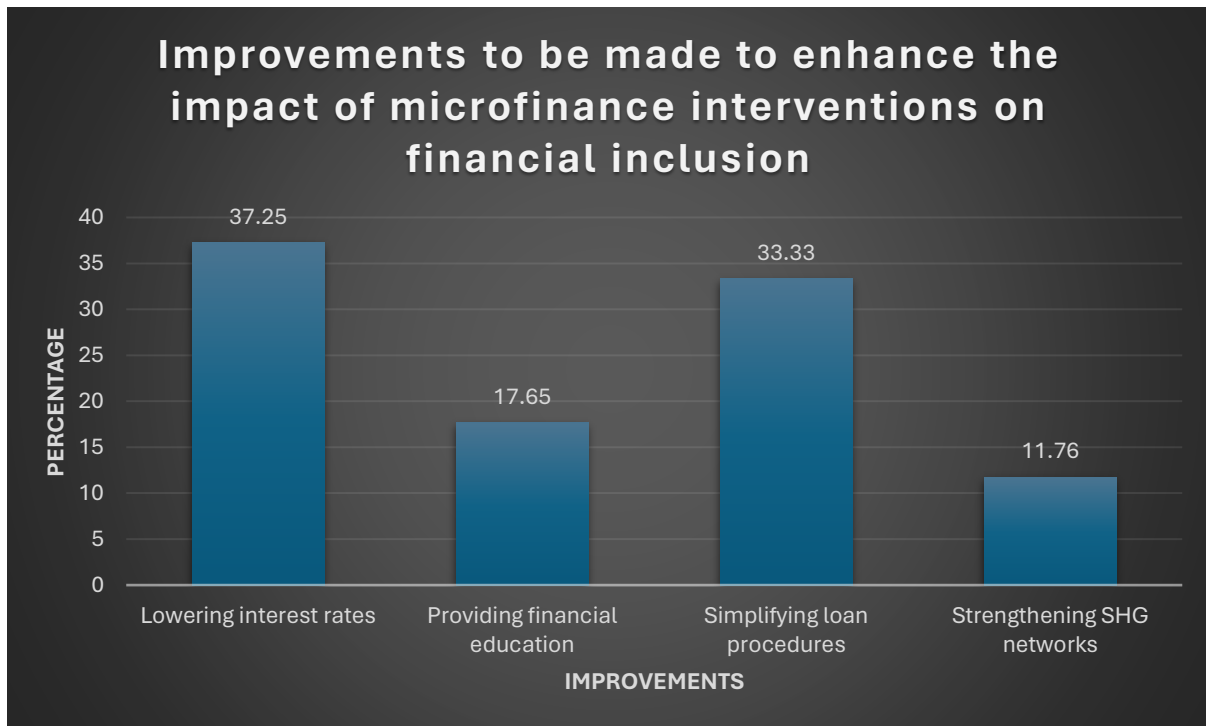
The above bar chart in Fig. 2 tells us about the percentages of benefits of the different microfinance interventions for the economically disempowered segments

Fig. 3: Challenges microenterprises face in accessing formal/institutional credit systems



The above bar chart in Fig. 3 tells us about the percentages of challenges the microenterprises face in accessing formal/institutional credit systems

Fig. 4: Improvements to be made to enhance the impact of microfinance interventions on financial inclusion



The above bar chart in Fig. 4 tells us about the percentages of improvements to be made to enhance the impact of microfinance interventions on financial inclusion.

FINDINGS

- Null Hypothesis (HO1) is rejected and has been concluded that ‘Financial inclusion satisfaction’ of the respondents is only determined by ‘Concept SHG’, ‘SHG Participation’, ‘MicroOrientInvnt’ and ‘SocioEcoChanges’.
- Null Hypothesis (HO2) is rejected and has been concluded that ‘Microenterprise intervention’ of the respondents is only determined by ‘Microfinance oriented investment’ and ‘Banking institutions support’.
- Null Hypothesis (HO3) is rejected and has been concluded that ‘SHGChanges’ of the respondents is only determined by ‘SHGParticipation’ and ‘Banking institutions support’.
- Null Hypothesis (HO4) is rejected and has been concluded that ‘FinEmpSHG’ of the respondents is only determined by ‘MicroOrientInvnt’ and ‘Banking institutions support’ and ‘AdeqAwareness’.
- Null Hypothesis (HO5) is rejected and has been concluded that ‘SHGSigRole’ of the respondents is only determined by ‘SHGParticipation’, ‘MicroOrientInvnt’ and ‘SocioEcoChanges’.
- Amongst policy recommendations, 47.06% are encouraging government support, 11.76% are increasing funds for microfinance organisations, 33.33% is strengthening regulatory frameworks and 7.84% is targeted outreach programs.
- With regards to main benefits of microfinance interventions, 18.63 % is enhanced entrepreneurial opportunities, 27.45% is improved financial literacy, 44.12% is increased access to credit and 9.8% is poverty alleviation.

- When it comes to challenges faced by microenterprises in accessing formal/institutional credit systems, 18.63% faced for complex application processes, 6.8% discrimination, 48.04 high interest rates while 26.47% lacked collateral.
- To enhance the impact of microfinance interventions on financial inclusion, 37.25% were lowering interest rates, 17.65% was providing financial education, 33.33% was simplifying loan procedures and 11.76% was strengthening SHG networks.

DISCUSSION

Financial literacy is an important feature of the economic well-being of families, especially for the poor and the marginalized (Angrisani et al. 2023). It has been noted that SHG is one of the most reliable models of financial inclusion (Kandpal, 2020).

Our study is notable in many aspects. The demographic details of all the participants have been painstakingly noted and the questionnaire circulated amongst respondents with a variety of backgrounds. We have noted from the results that the financial inclusion satisfaction is determined by the concept of SHG, participation in SHG, Microfinance oriented investment and socio-economic changes. This conclusive observation is consistent with the findings of **Mukhopadhyay (2023)**, **Hundekar (2019)** and **Balliester Reis (2022)**. The microenterprise interventions are determined by the microfinance-oriented investment and banking institutions support. However, it is important to understand that this effect may not always be significant despite the positive impact of microfinance institutions' financial services on the microenterprise development. This can be understood in light of the argument put forward by **Buera et al. (2017)**. The SHG changes depended on SHG participation and the support from banking institutions. We also tried to find out the factors of financial empowerment of the SHGs and it can be inferred that microfinance-oriented investment, support from the banking institutions and adequate awareness helped SHGs financially. This finding is aligned with the observations of **Shanthi and Savaraiah (2023)**, **Russel et al. (2024)** and **Pradhan and Misra (2020)**. Finally, the significant roles by the SHG were impacted by the SHG participation, microfinance-oriented investment, and the socio-economic changes (**Ray and Misra, 2023; Prabhakar, 2016; Vachya and Kamaiah, 2015; Mondal, 2018**).

A sizeable 47.06% of the respondents voted for government encouraging support to SHGs, 11.76% wanted increase in funding for micro-finance organisations, 33.33% wanted to strengthen regulatory frameworks and 7.84% wanted to implement targeted outreach programs.

With regards to benefits of micro finance interventions for economically disempowered segments, the majority, 44.12% thought it was increased access to credit, 27.45% believed it was improved financial literacy, 18.63% agreed it to be enhanced entrepreneurial opportunities and 9.8% said that it was poverty alleviation.

The survey also enquired about what the respondents thought were the challenges that the microenterprises face in accessing formal/institutional credit systems and about 48.04% believed it to be the high interest rates, 26.47% said it was the lack of collateral, 18.63% said that the application process was very complex 6.86% said it was discrimination.

The researchers were curious to know what improvements could be made to enhance the impact of microfinance interventions on financial inclusion and the suggestions were quite interesting. 37.25% said that lowering the interest rates would help while, 33.33% mentioned that simplifying loan procedures was the solution. 17.65% said that financial education should be provided while 11.76% opined that the SHG networks should be strengthened.

Thus, we can infer from our study that the SHG has had a positive impact on the respondents and their families. In this regard, the research works of **Brody et al. (2015)**, **Raj et al. (2021)** and **Mallick et al. (2020)** can be referred according to which participation in SHG has been instrumental in facilitating socio-economic and psychological empowerment of women along with their enhanced access to financial resources and improvement in decision-making skills. It can also be argued that participating in SHG helps ease the seasonal income and shocks that come with consumption and this argument can be validated in light of the research findings of **Demont (2022)** **Menon (2006)** and **Pitt and Khandker (2022)**. Some other researchers have also tried to conduct similar studies. Some studies like **Abidin et al. (2023)**, **Bhateja et al. (2023)** and **Kumari (2023)** have been majorly focused on women since mostly around the world women are still financially less literate as compared to their male counterparts. Some other studies similar topic to ours focused also on social exclusion along with financial inclusion (**Ozili, 2023; Jha et al. 2022**). The studies also concluded that as the SHG participation went higher, social and financial inclusion increased too (**Mukhopadhyay, 2023; Pradhan and Misra, 2020**).

Our study can be enhanced to study 'social cohesion' along with the existing variables and factors. Cross-sectional data is a limitation of our study. Also, a locational study in terms of focusing on a region might be helpful.

CONCLUSION

Micro-finance programs are used to bring in financial inclusion and equality to the people in the rural and remote areas. They act as an alternative to the banking systems. While in the relevance to our study, it indicates that financial inclusion is achieved by SHG, the actual outcomes of microfinance programs depend on where and how it is implemented and the will of the participants. The loans from SHGs bring in the convenience of informal credit. The main aim of the microfinance programs is to encourage development for everybody.

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