

Social Impacts of Micro-finance on Women Self Help Group Members: An Empirical Study of North Gujarat (India)

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ABSTRACT

Microfinance activity plays a vital role for socio-economic empowerment of the women. It is also believed that there is positive relationship between access to microfinance facility and increase in the status of women within households and communities. This paper reflects on findings from interviews with women members of bank linkage self-help groups. The paper examines the social impact of microfinance activities on selected women SHGs (self-help group) members of North Gujarat, India. Exploratory Factor analysis was performed on 20 variable statements of 510 women respondents. Three factors were extracted from exploratory factor analysis namely, development in personality, enhancement in social attentiveness and enhancement in decision taking ability. Subsequently, a regression model was performed to check the significance of microfinance on the increment in self-confidence of the women.

Keywords: Social empowerment, Social impact, North Gujarat, Self-help groups, Micro-finance

JEL Classification: C12, D63, G21

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INTRODUCTION

Microfinance is one of the tools that helps to alleviate poverty and also helps to empower rural women. It can contribute to the social and economic paradigms shift in the rural areas by bringing managerial abilities of women. As pointed out by Loyola Extension Services Report (2004) submitted to Ministry of Human Resource Department, 'SHGs (Self-help groups) are becoming one of the best means for the empowerment of poor women in almost all the developing countries including India'. SHGs and micro-finance are found to be efficacious instruments for empowering women. Women members especially

those who are mostly invisible in social structure will be socially empowered through microfinance with different social factors like improvement in standard of living, improvement in social status, awareness about social issues, confidence building, recognition in family, etc.

REVIEW OF LITERATURE

Gaonkar (2001) studied the impact of SHGs on women in Goa. For this purpose, the data was collected from 5 women SHGs situated in Bardez and Bicholim talukas in Goa. The study revealed that SHGs made a lasting impact on the lives of the poor and their quality

of life was improved in terms of increase in income, savings, consumption expenditure, self-confidence, productive use of free time, getting opportunity to improve hidden talents and getting more importance in the family. Myrada (2002) studied women empowerment through SHGs in southern India. The membership in SHGs and how it contributes to the social empowerment of women members was the objective of the study. While testing the confidence level of respondents, old group members were found more confident in dealing with other people and institutions. Old groups were observed to be more confident, aware about health, technological issues and economic issues as compared to young group members. Anitha and Revenkar (2007) analysed rural development using micro-credit, they found that SHGs are successful for the improvement of economic and social status of women. Yamuna (2007) studied the changes in the role and status of SHG participants in Solamadevi village of Coimbatore district. The results of the study showed that all the participants who received bank loans under this scheme started their own businesses. There was an increase in the income level, savings, value of assets and household durables after joining the SHGs. Women had got lot of courage and self-confidence to speak for their rights after becoming SHG members. Panda (2009) conducted study to understand the impact of microfinance interventions on change in income, asset position, and consumption pattern of the rural households. The study reveals that there was an increase in income and consumption pattern among rural households after the microfinance programmes. Shiralashetti (2010) studied women empowerment through SHGs by considering 150 sample members of 15 SHGs from 10 villages of Bijapur district. The study found that there is positive impact of SHGs on women's socio-economic empowerment. Lokhande (2010) examined women SHGs and women empowerment of Mahila Arthik Vikas Mahamandal. He studied socio-economic impact of SHGs on group

members. The result shows that there is a positive impact on socio-economic factors of SHGs on members. Radhika (2011) examined the impact of SHG based microfinance on the socio-economic characters like income, employment, literacy and migration of the rural households of Karur District. The study found that microfinance services have also had a positive impact on specific socioeconomic variables such as children's schooling, household nutrition status, and women's empowerment. The study also found that the low interest rate and sanctioning and processing cost are considered as two crucial variables used to enhance the growth of SHG. Rajendran and Raya (2011) studied microfinance and women empowerment in Vellore district of Tamil Nadu. The study found that rural women were able to vote independently without any direction from their husbands and there is a high level of participation in Grama Sabha meetings. They were able to express their views freely in the family and groups. There was a moderate increase of income and savings of members. Qasim Hamdani and Naeem (2012) examined the impact of microfinance on social mobility; they have pointed out the contribution of microfinance to the social mobility. Results showed that microfinance is one of the contributing factors on social mobility, and positive relationship was found between microfinance and social mobility that enriches him to find social mobility uplift including living of standard and financial opportunities. Revathy and Kailash (2012) studied role of microfinance in empowering women in Guntur district of Andhra Pradesh. The study reveals that microfinance has considerable positive impact on the respondents' self-confidence and courage; whereas self-esteem and asset creation requires attention. Singh and Singh (2012) examined the impact of microfinance programme on self-confidence level, ability to take decisions, social awareness and social responsibility, and skill development. They also found significant increase in the self-confidence level, ability to take decisions, social

awareness and social responsibility and skill development of the respondents.

RESEARCH METHODOLOGY

The research design used in this study is descriptive. The study is confined to the bank linking women SHGs. The study uses both primary and secondary data. Total 510 samples were selected from Patan and Mehsana districts of North Gujarat, India using a multi-stage simple random sampling method. Primary data on different socio-economic aspects of the women members and details of micro-financial services availed by the SHGs were collected directly from the respondents through the structured questionnaire and personal interview. In this study, mainly factor analysis and multiple regressions have been used to interpret.

RESULTS AND DISCUSSIONS

It can be interpreted from Table 1 that majority of respondents 56.1% are housewife followed by animal husbandry 10.8%. After joining SHG, the perception of women have been changed towards the work and they left labour work and started their own business like garment sales shop, tea shop, village grocery shop, rearing goats, purchasing milking buffalo and milking cow, etc. With regards to education of the women members, more than 20% were having up to 5th standard primary school level literacy and 15.5% were illiterate. This indicates that higher education of girls is still not given priority in rural areas. Majority of rural parents permit girls education up to primary school because the school is in their village. While only 16.5% were up to secondary school and only 5.3% have taken higher education. Out of 510 women, more than 90% were married while 5.3% were unmarried. The widow and divorcee accounted for 3.9% and 0.2%, respectively. Out of 510 respondents, 52.7% respondents were from the OBC category followed by 38.2% and 9% of open category and SC category, respectively. The majority of the respondents belonged to Hindu (i.e. 90%) followed

Table 1: Profile of the respondents

	Respondents	Percentage
(i) Occupation of the member		
House wife	286	56.1
Tailor	13	2.5
Agriculture	3	0.6
Animal Husbandry	55	10.8
Gruh udyog	20	3.9
Service	49	9.6
Labour work	41	8
Small grocery shop	8	1.6
Education	18	3.5
Other	17	3.3
Total	510	100
(ii) Education of the member		
Illiterate	79	15.5
Can sign only	68	13.3
Up to 5 th std.	107	21
6 th –7 th std.	84	16.5
8 th –10 th std.	84	16.5
11 th –12 th std.	57	11.2
Up to graduation	27	5.3
Other	4	0.8
Total	510	100
(iii) Religion of the member		
Hinduism	459	90
Islam	51	10
Total	510	100
(iv) Marital status of the member		
Married	462	90.6
Unmarried	27	5.3
Widow	20	3.9
Divorce/separated	1	0.2
Total	510	100
(v) Type of family		
Joint/extended	370	72.5
Nuclear	140	27.5
Total	510	100
(vi) Social group of the member		
Open/general	195	38.2
OBC	269	52.7
SC	46	9
Total	510	100

Source: Field survey

by Islam (i.e. 10%). The majority of the respondents belonged to joint family (i.e. 72.5%) followed by nuclear family (i.e. 27.5%).

SOCIAL EMPOWERMENT FACTORS

The questionnaire contained 20 statements reflecting the social impact of microfinance services on women. These statements were rated based on five point likert scale of highly agree to highly disagree as to how they perceive the impact of social factors on social empowerment. Table 2 provides the list of statements asked.

Table 2: List of statements

S.No.	Statements
1	Able to discuss freely with official people
2	Improvement in communication skill
3	Physical mobility/moving to other places independently without the support of male members
4	Ability to take decision on household expenditure, savings, and child education
5	Ability to take decision on taking/use of loan
6	Ability to take decision on family matters/problems
7	Attending social/village/panchayat meetings
8	Recognition or respect in the society or family/ improvement in social status
9	Increment in social awareness (AIDS, family planning, govt. schemes, etc.)
10	Ability to take up social issues like abuse, violence, drugs, alcoholism, etc.
11	Development of leadership skills
12	Development of entrepreneurial skills
13	Development of book keeping and administrative skills
14	Awareness of health, sanitation and children education
15	Increased market knowledge
16	Increase in self-spending
17	Improvement in literacy level
18	Awareness of food and nutrition
19	Expressing views in family as well as in groups freely
20	Increased self-confidence

Source: Questionnaire.

In order to explore the underlying dimensions of social impacts of microfinance, a Principle component factor (PAF) with a Varimax (orthogonal) rotation of the 20 Likert scale variables was performed on data gathered from 510 women respondents. The result of factor analysis is shown in Table 3. The Kaiser–Meyer–Olkin measure of sampling adequacy for the various factors of social empowerment measurement is 0.940, which indicates that the scale is appropriate and helps in extracting the factor. The ideal measure for this test ($KMO > 0.50$) (Malhotra, 2004) and here the KMO measure is 0.940 indicating that the variables are measuring a common factor. Bartlett's test is another indication of the strength of the relationship among variables. Bartlett's test of sphericity is significant that is, its associated probability is less than 0.05. In fact, it is actually 0.00 which indicates that the inter-correlation matrix is factorable and inter-correlation matrix comes from a sample population in which the variables are non-collinear.

All the factors extractable from the analysis along with their eigenvalues greater than 1, the percent of variance attributable to each factor and the cumulative variance of the factor and the previous factors are considered. The first factor accounts for 42.61% of the variance, the second 10.47% and the third 5.51%. All the remaining factors are not significant. It is also inferred that three components cover 58% of the data under the Principle Component Analysis method and cover considerable variation. Again rotated component matrix makes the situation clearer and helps in identifying the crucial factors.

The study suppressed all loadings less than 0.5. The idea of rotation is to reduce the number factors on which the variables under investigation have high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easier. Decision ability on household expenditure, savings and child education, ability to take decision on taking or use of loan, ability to take decision on family matters or problems, recognition or respect in the society or

Table 3: Factors of social empowerment of women as perceived by women respondents

Factor No.	Variable No.	Name of the variable	Score	Factor name
1	1	Able to discuss freely with official people	0.681	Development in personality
	2	Improvement in communication skill	0.796	
	3	Attending Social/village/panchayat meetings	0.790	
	4	Development of leadership skills	0.822	
	5	Development of entrepreneurial skills	0.799	
	6	Development of book keeping and administrative skills	0.643	
	7	Improvement in literacy level	0.672	
2	8	Increment in social awareness	0.624	Enhancement in social attentiveness
	9	Awareness of health, sanitation and children education	0.562	
	10	Increase in self-spending	0.705	
	11	Awareness of food and nutrition	0.704	
	12	Expressing views in family as well as in groups freely	0.651	
	13	Increased self-confidence	0.787	
3	14	Decision ability on household expenditure, savings, and child education	0.702	Enhancement in decision taking ability
	15	Ability to take decision on taking or use of loan	0.752	
	16	Ability to take decision on family matters or problems	0.569	
	17	Recognition or respect in the society or family	0.602	

family are substantially loaded on Factor (component) 3, while increment in social awareness, awareness of health, sanitation and children education, increase in self-spending, awareness of food and nutrition, expressing views in family as well as in groups freely, increased self-confidence are substantially loaded on Factor 2. All the remaining variables like able to discuss freely with official people, improvement in communication skill, attending social/village/panchayat meetings, development of leadership skills, development of entrepreneurial skills, development of book keeping and administrative skills, improvement in literacy level are substantially loaded on Factor 1.

The factors were extracted on the basis of common dimensions reflected by the variables. First factor which emerges from the combination of different variables of component 1 is *Development in personality*. Second factor which emerges from the combination of different variables of component 2 is *Enhancement in social attentiveness*. Third factor which emerges from

the combination of different variables of component 3 is *Enhancement in decision taking ability*. These factors can be used as variables for further analysis

Application of Multiple Regression Analysis

The technique of multiple regressions has been used to analyse the impact of microfinance services on women empowerment as perceived by them. Table 4 provides the list of variables used in multiple regression analysis.

Dependent Variable

Dependent variable taken was the increment in self-confidence of women with microfinance services as perceived by them and the same was rated on five point Likert scale.

Independent Variable

All the three factors were taken as independent variables that were extracted from factor analysis out of the list of 17 variables as provided in Table 3.

Table 4: Multiple regression analysis

	Name of the variable	Definition	Label
Dependent variable	Impact of micro finance services on women empowerment	Microfinance services lead to the increment in self-confidence of women as perceived by them	Y
Independent variable	(1) REGR factor score1	Development in personality	X_1
	(2) REGR factor score2	Enhancement in social attentiveness	X_2
	(3) REGR factor score3	Enhancement in decision taking ability	X_3

Model Formulation

Before formulating model for regression analysis, it is necessary to validate the data by checking whether the multi-colinearity exists in data. For this purpose, estimated partial correlation between dependent and independent variables was calculated which measures the correlation among factors for social empowerment and increment in self-confidence of women. Moreover, the Pearson correlation matrix (Table 5) also indicates the nonexistence of colinearity as no correlation is too high.

Table 5: Pearson regression of correlation between dependent and independent variables

	X_1	X_2	X_3	Y
X_1	1	–	–	–
X_2	0.023	1	–	–
X_3	0.787	0.000	1	
Y	0.191	0.000	0.000	1

*Correlation is significant at 0.05 level (2 tailed).

In order to obtain more accurate results, tests such as VIF (variance inflation factor) and $1/VIF$ (tolerance level) were measured to test the multi-colinearity. VIF equivalent or below 10 is said to be acceptable (Hair *et al.*, 1998) as it reflects that data is free from multi-colinearity. In this case, the value of VIF and tolerance level came out to 1 (Table 6) for each independent variable, which is less than 10; hence it can be accepted from the analysis that there exists no colinearity among the data.

After checking the multi-colinearity, it can be estimated the regression model. To meet the objective, the perceived impact of social empowerment variables

on the increment in self-confidence of women has been studied. Following model was used for studying the relationship between dependent and independent variables:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \delta_t$$

where

Y = Dependent variable;

α = Intercept term;

$\beta_1, \beta_2, \beta_3$ are regression coefficients;

X_1, X_2, X_3 represent independent variables;

δ_t = Error term

The degree of correlation was 0.810 which indicates very significant relationship with R square and adjusted R square values of 0.656 and 0.654 which indicates that all the variables extracted could explain 65.4% of the variation in the dependent variable explained by independent variables. Hence, the model can be confidently said to be a generalised model. The difference between R square and adjusted R square is also satisfactory ($0.656 - 0.654 = 0.002$), which is interpreted as the 0.2% less variation in the outcome if it is derived from the actual population. To check whether the model fulfills the assumption of independent errors, a Durbin–Watson test was applied. The result of the Watson test (1.792) is found to be near 2, which is considered to be significant. It has been proved through the test that the data meets the assumption of independent errors. To crosscheck the assumption of normal distribution of the standard errors, it is confirmed through normal probability curve and histogram.

The significance of the model is measured through ANOVA (analysis of variance) to test the following null hypothesis:

$$H_0 = \beta_1 = \beta_2 = \beta_3 = 0$$

The null hypothesis explains mean values of regression coefficient are equivalent to zero. The value of *F*-Statistic is 292.988 (df – 463, p – 0.000) which reveals that it is significant at 1%; hence the null hypothesis cannot be accepted i.e., there is no significance difference between the mean values of coefficient. It is evident that the value of one or more regression coefficient is not equal to zero. All these favorably support the argument that the model is significant and can predict the outcomes.

Table 6 reveals the coefficient for regression variables. The beta value coefficient allows us to test the strength of relationship between increment in self-confidence and social factors. Independent variables i.e., X_1 , X_2 and X_3 have positive correlation as well as significant values at 5% level of significance.

Regression Equation

The estimated equation is as follows:

$$Y = 4.151 + 0.020X_1 + 0.686X_2 + 0.167X_3$$

This equation can be used to know whether the social factors are instrumental in increment in self-confidence of the women given the values of the factors determining the impact of such variables on women respondents. The equation has been obtained by capturing the values of beta coefficient through Table 6.

The significant *t*-value corresponding to each variable confirms the significant contribution of each independent variable to the model. All factors have significant values. Larger the value of *t*-statistics, greater the contribution of the respective variables. The same fact has been shown through beta values.

The value of beta coefficient is highest in case of X_2 (enhancement in social attentiveness) revealing that 78.7% followed by X_3 (enhancement in decision taking ability) 19.1% of the variation in the increment in self-confidence can be explained by this variable. The smallest beta in case of X_1 i.e., 0.023 shows that development in personality factor contributes least to the increment in self-confidence of women members.

CONCLUSION

The study was carried out of 510 women respondents, where 56.1% were housewife, almost 49.8% who are educated below 5th Standard and only 5.3% were graduates. 90% of the respondents were Hindus and rests are Islam and 90.6% were married. 72.5% of respondents were living in joint family and rests are in nuclear and 61.7% of the respondents are from the reservation, which includes OBC and SC category. From the study, three factors were extracted from the exploratory factor analysis namely development in personality, enhancement in social attentiveness and enhancement in decision taking ability. Results of multiple regressions indicate that personality, social attentiveness and decision taking ability lead the women empowerment. The study reveals that most

Table 6: Multiple regression analysis on increment in self-confidence

Variable	Unstandardised coefficients		Standardised coefficients Beta	<i>t</i>	Sig.	VIF statistics
	<i>B</i>	Std. error				
X_1	0.020	0.024	0.023	0.824	0.030	1.000
X_2	0.686	0.024	0.787	28.796	0.000	1.000
X_3	0.167	0.024	0.191	7.004	0.000	1.000

Source: SPSS output

of the respondents get involved in decision making after joining SHG. The women social status has increased after joining SHG. Women feel fearless, open and self-confident after joining SHG. It can be

concluded that there is positive impact of micro-finance activity on social indicators of women members.

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