Self-Help Group Movement and Women Empowerment-A Case Study of Birbhum District in West Bengal

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Abstract: The SHGs have been recognized in India as well as in many developing countries as an effective tool to empower the rural women folk. This study attempts to explore the impact of SHG membership status on women empowerment of the program participants. Experiences suggest that participation in SHGs not only benefits women economically but also it has some others indirect effects which help them become more empowered. It helps them solve their common problem collectively. Participation gives them more self-esteem, self-confidence and more decision making ability. The study is based on Birnbaum, one of the backward districts of West Bengal. Primary data has been collected from the field survey through the structured questionnaire. The impact has been measured by comparing the income of the Self Help Group (SHGs) members with the non-SHG members. The major finding of the study indicates that women SHG members have the higher level of empowerment compared to that of non-SHG members. The study also exhibits that duration of participation, employment, training, access to formal credit, family support do have also significant impact on women empowerment.
Keywords: SHG membership, Women Empowerment, Microfinance.

INTRODUCTION

Microfinance is the provision of thrift, credit and other financial services and products of very small amount to the poor in rural, semi-urban and/or urban areas for enabling them to raise their income levels and improve living standards [1]. It is of two type-relationship based on individual banking and group based microfinance. Self Help Groups (SHGs) are of second type. The primary objective of SHG is to generate livelihood and thereby to get rid of poverty. Apart from this there are socio-cultural, interpersonal, political and legal impacts also. There are various reasons such as poor economic base, illiteracy, social backwardness, lack of knowledge and information and motivation – either of them or combined together leads a rural poor to remain poor and unempowered; but in a group they are empowered to overcome many of these weaknesses.

Indian microfinance model started in 1992 with the guidelines passed by NABARD and RBI. It is mainly known as the SHG-Bank linkage program. Commercial banks are enabled to provide loans to SHGs without collateral. Since then SHG movement in India has travelled a long way. From 500 groups in 1992 to 6.9 million in 2010, show a tremendous growth in number of groups. "About 24.25 million poor household have gained access to formal banking system through SHG-Bank linkage Program and 90% of these groups are only women groups" [2]. "More than 400 women join SHG movement every hour and one NGO joins the Micro-Finance Program everyday" [3]. The clients of SHGs are benefitted in numerous ways. Now they have access to resources income and employment. There are some intangible benefits also. From various research studies and anecdotal evidences it has been observed that microfinance has influence in their decision making, participation, familial relation etc. participation in SHGs also have impact on economic, social, political and cultural sphere of their life. This study is going to explore the impact of SHGs on women empowerment among the rural women of Birbhum district.

Review of Literature

Going through various literatures it is evident that the term women empowerment has a multidimensional concept which embraces various factors like economic, social, political, legal, familial, interpersonal, cultural, regional

etc. The term is therefore difficult to assess objectively. However, Kabeer [1], Mayoux[4], Swain [5] in their celebrated articles try to define the term. In spite of these efforts the term still now called 'ill defined' 'illusive' and 'fuzzy' etc. Different scholars explore women empowerment from different perspective using different factors [6, 7]. Some scholars examine women empowerment with respect to particular outcome variable like calorie intake, total fertility rate, domestic violence, use of contraceptive etc. [8, 9, 10]. They unfortunately fail to capture the full connotation of the term. None of their exploration is comprehensive and complete. In recent time there is pretty much consensus regarding the measurement issue of women empowerment? Now women empowerment is equated with their involvement in decision making such as decision on fertility, children education and health care, and marriage, and women's freedom of mobility and access to and control over resources that are direct indicators of women empowerment. Despite the multidimensionality of the concept, these direct indicators are thought to be correlated regardless of locations as well as cultural and religious orientations [11].

Objective of the Study

The objective of the study is to estimate the impact of SHG membership status on the empowerment level of the women under study. The term Women Empowerment is subjective in nature. It involves various domains and dimensions e.g. economic, socio-cultural, political, legal, psychological etc. Defining the term and its measurement is therefore a difficult issue. At present there is however pretty much consensus among the scholars that decision making abilities of woman in all sphere of their day to day life is a good measure of Women Empowerment. These variables are applied regardless of socio-cultural orientations of the society. In this study, therefore, decision making abilities of woman are taken as measure of Women Empowerment.

Econometric Models and Methodology

As mentioned in the previous section, in order to examine the impact of SHG membership status on women empowerment of the rural women of Birbhum district, we have proposed Model as follows.

Model- 1: Probit Model for Women Empowerment

WE=f (SHG membership status, individual/household characteristics, community characteristics, random disturbance term)

The specified model is:

$$WE = \beta_0 + \beta_1 SHGMS + \beta_2 DURSHGM + \beta_3 AGE + \beta_4 EDULVL + \beta_5 EMPL + \beta_6 TRNG + \beta_7 ACTOCRDT$$
$$+ \beta_8 SSTS + \beta_9 SSPART + \beta_{10} FSUPPORT + \beta_{11} RELIGION + \beta_{12} CASTE + ERRORTERM$$

The explanatory variables in the model are defined as follows

Women Empowerment (WE): In order to quantify empowerment level of women, we consider the decision making abilities of women in all sphere of their day to day life. These decision making variables are written as follows:

- DMA1: Decision making ability regarding spending her income
- DMA2: Decision making ability in large selling and purchasing
- DMA3: Decision making ability in exercising democratic right
- DMA4: Decision making ability in case of their free mobility
- DMA5: Decision making ability in case of children's health condition
- DMA6: Decision making ability regarding family planning
- DMA7: Decision making ability in sending their children in school
- DMA8: Decision making ability regarding marriage of their daughter/s
- DMA9: Decision making ability in case of physical and mental abuse

All these indicators have been used to access the empowerment level of women and thereby comparing between members and non-SHGs members. The variables have been measured in a four point scale e.g. very high decision making ability, high, low and very low decision making ability. The score will be given as very high = 3, high = 2, low = 1 and very low =0. If it is found that a woman solely takes decision in a particular indicator her empowerment level is very high. If she takes decision with her husband jointly her empowerment level is moderately high. If the husband solely takes the decision her empowerment level is low and if the decision is taken by other members of the family the empowerment level of a woman is very low. All the nine decision making variables are categorized into three component/factor using Principal Component Analysis. The number of components is determined on the basis of Eigen

value>1. The score of each component is also generated by using SPSS Software. After adding the scores of the three components it is converted in to percentage score by using the following formula.

$$WESCORE = \frac{(\text{Sec}ured\_Score - Minimum\_Score)}{(Maximum\_Score - Minimum\_Score)} \times 100$$

If we find that a particular respondent scores more than 50 percent we consider that the woman as empowered and if she scores less than 50 percent we consider her as unempowered. We assign value '1' for those who are empowered and '0' for those who are not empowered. In this way we convert the women empowerment variable into a binary response variable.

Since the dependent variable in the model is dummy variable, we can call it Linear Probability Model. We therefore cannot apply OLS method of estimation but the application of LPM will not be appropriate as it involves some inherent problem. We therefore go to apply Probit method of estimation.

SHG membership Status ($SHGMS$): $SHGMS$ = 1, if a woman hold SHG membership and $SHGMS$ = 0, if she does not hold membership.

Age (AGE): Age is simply physical age of a woman counted by years.

Level of Education ($EDULVL$): It is the formal education that a woman acquires by attending school, college and university etc. It is generally counted by years a woman involved in formal education. Here we counted it as an ordered variable. $EDULVL$ =0, if a woman is illiterate, $EDULVL$ =1, if she has only primary level of education, $EDULVL$ =2, if she completed upper primary level, similarly $EDULVL$ =3, 4, 5 was given for completion of secondary, Higher Secondary and Graduation respectively.

Duration of SHG membership ($DURSHGM$): The duration of SHG membership is the period of time a woman acts as a SHG member. It is counted by years. Family support ($FSUPPORT$): $FSUPPORT$ = 1, if the husband and other members of the family of the respondent support her and 0 otherwise.

Social Status ($SSTS$): Social Status is qualitative variable indicating whether a woman holds leadership status in any organization or not. $SSTS$ = 1, if a woman is leader in the group and 0 otherwise. Social participation ($SSPART$): Social participation is qualitative variable which indicate whether a woman take part in any social activity or not. Here we measure the variable as ordinal. $SSPART$ =2, if a woman take part in it regularly, $SSPART$ =1, if she participate occasionally and $SSPART$ =0, if she never participate.

Training ($TRNG$): Training enhances the productive capacity of a person leading to increase in income. $TRNG$ = 1, if a woman has training which helps in enhancement her productive skill and 0 otherwise.

Accessibility to Formal Credit ($ACTOCRDT$): $ACTOCRDT$ = 1, if a woman has access to formal credit and 0, otherwise. It is a binary variable. Employment ($EMPL$): $EMPL$ = 1, if a woman has access to any source of income and 0, otherwise. It is a binary variable.

Caste
Caste of a woman in this is considered as categorical variable. $CASTE$ = 1, if a woman belongs to General Caste and 0 otherwise. Religion ($RELIGION$): $RELIGION$ = 1, if a woman belongs to Hindu religion and 0 otherwise.

DATA COLLECTION
The study has been conducted in Birbhum district of West Bengal. The district is considered one of the backward districts of the state. The district comprises 19 blocks. Out of 19 two block namely Rajnagar and Dubrajpur has been selected purposively. Except Bakreswar Thermal Power there is no heavy and medium scale industry in the two blocks. Agriculture is totally dependent on monsoon. People are mainly involved in farming, fishing and as labours in farm and off-farm activities. In the second stage one Grampanchyat from each Block has been selected at random. This

two Grampanchyat are Tantipara Grampanchyat from Rajnagar Block and Gohaliara Grampanchyat from Dubrajpur Block and finally in the third stage two villages from each Grampanchyat has been selected depending on local condition. These villages are Tantipara and Khayradihi from Tantipara Grampanchyat and Gohaliara and Ekabbarpur from Gohaliara Grampanchyat. Suitable questionnaire was designed to collect primary data. Secondary data has been collected from Grampanchyat Office, Block Office, News Papers, internet, Periodicals etc.

ANALYSIS OF DATA

Data available from field survey was first of all tabulated and then analyzed carefully. Tables and graphs have been used to show the findings in a presentable manner. Simple averages and percentages have been used to analyze data. A number of statistical measurements namely t-test, F-test, probabilistic regression analysis has been used to find out the impact of SHG membership status. Statistical software SPSS and EVIEWS has been used to run the regression equations.

EMPIRICAL RESULTS AND DISCUSSION

Table-1: Socio-Demographic Profile of the Surveyed Women

SL. No.	Personal Information	No. of Respondents	Percentage	Mean
1	Age in Years (a) Below 25 (b) 26 – 40 (c) 41 – 60 (d) Above 60	35 271 188 06	7.0 54.2 37.6 1.2	38.4
2	Religion (a) Hindu (b) Non Hindu	466 34	93.2 6.8	
3	Caste (a) General (b) SC (c) ST (d) OBC	66 184 92 158	13.2 36.8 18.4 31.6	
4	Marital Status (a) Married (b) Widow (c) Unmarried (d) Separated	456 37 02 05	91.2 07.4 0.4 01.0	
5	Education (a) Illiterate (b) Primary (c) Upper Primary (d) Secondary (e) Higher Secondary	70 283 91 47 9	14.0 56.6 18.2 9.4 1.8	1.28
6	Family Type (a) Nuclear (b) Non-Nuclear	334 166	66.8 33.2	
7	Occupational Status (a) Unemployed (b) Agriculture (c) NFSE (d) Wage Employment	120 32 99 249	24.0 6.4 19.8 49.8	
8	Respondents' Income (a) Less than Rs.1000/- (b) Rs.1001/- Rs2000/- (c) Rs. 2001/-Rs.3000/- (d) Above Rs.3000/-	119 211 156 14	23.8 42.2 2 2.8	Rs.1741/-

Source: Field Survey 2016.

Table 1 depicts the personal profile of the respondents. It can be seen that 7% respondents are under age 25. More than half that is 54.2% respondents belong to the age group 26 - 40 years and 37.6% respondents belong to the age group 41 – 60 years. All the respondents except very few belong to the productive age group. The average age of the respondents is 38.44 years. Most of the respondents (93.2%) by religion are Hindu. Among the respondents 13.2% belong to General Caste, 36.8% belong to SC category, 18.4% belong to ST category and 31.6% belong to OBC category. It is to be noted that all the Muslim respondents are included in OBC category. Most of the respondents (91.2%) are married women. A tiny percentage of women are widow (7.4%) and separated (1.0%). Only two women are unmarried. Among the respondents 14% have no formal education, 56.6% respondents attend only primary level of education and 18.2% respondents have upper primary level of education. Only 9.4% respondents have passed matriculation examination and 1.8% respondents have passed higher secondary examination. No one respondents have attend higher level of education. There are 66.8% respondents who belong to nuclear family whereas 33.2% belongs to large family. Unemployed respondents in the sample are of 24%. They have no income. Half of the surveyed women (49.8%) engaged in wage employment. There are 19.8% self-employed women engage in non-farm activities. Only 6.4% of the total respondents engaged in agricultural activities. The average income of respondents are Rs. 1741/-. Respondents who earn within Rs. 1001/- to Rs. 2000/- is 42.2% of the sample whereas 23.8% respondents earn less than Rs. 1000/- and 31.2% respondents earn higher than Rs. 2000/- but less than Rs. 3000/-. Only 2.8% respondents earn more than Rs. 3000/-.

Table-2: Percentage Distribution of Categorical Variables in the Sample

Categorical Variables	% of Sample Observations with Values	
	0	1
SHG Membership (SHGMS)(1=Yes)	38.8	61.2
Access to Formal Credit (ACTFCRDT)(1=Yes)	61.8	38.2
Literacy (LIT) (1= Primary or Above)	14	86
Employment (EMPL) (1=Yes)	19.4	80.6
Training (TRNG) (1=Yes)	67.6	32.4
Social Status (SSTS) (1=Leader or Asstt. Leader)	82	18
Social Participation (SSPART) (1=YES)	36.2	63.8
Family Support (FSUPPORT) (1=YES)	29.2	70.8
Religion (REG) (1= Hindu)	6.8	93.2
Caste (GEN) (1= General Caste)	86.4	13.6

Source: Field Survey, 2016

Table 2 depicts the percentage distribution of categorical variables. Among the respondents 61.2 percent belong to SHGs where as 38.8 percent of respondents had no association of any kind of groups. Respondents who had no access to formal credit consist 61.8 percent of sample size. Literacy rate of surveyed population is 86 percent. One fourth of the respondents (19.4%) are house wife and they did not have any kind of sources of income. Rests of them (80.6%) are engaged mainly three kinds of occupation namely farming, non-farm self-employment and wage employment. Respondents had access to training to increase their productive capacity comprise 32.4 percent of total sample. Only 18 percent of sample women are either group leader or assistant leader. Among the sample women 63.8 percent participate in social works of any kind. A significant portion of surveyed women (70.8%) have family support in participating in SHGs. Most of the sample women (93.2%) belong to Hinduism. Only 13.6 percent of the sample women belong to General Category.

Table-3: Descriptive Statistics of Quantitative Variables in the Sample

Variables	N	Minimum	Maximum	Mean	Std. Dev.
Monthly Income (Rs)	500	0.00	4000	1741.03	964.4
Duration of Membership (DURSHGM) (Year)	306	2	15	5.801	3.756
Age (Year)	500	21	71	38.44	8.718
Land Holding (AGRILAND) (Bigha)	500	0	14	1.182	2.04
Existence of SHG Program in Village (ESHGV) (Year)	500	6	14	10.428	3.353

Source: Field Survey.

Table 3 depicts the descriptive statistics of the quantitative variables. The average income of the sample women is Rs. 1741.03/-. Their ages vary from 21 years to 71 years. The average age of the respondents is 38.44 years with standard deviation 8.718 that is most of the respondents belong to the productive age group. There are 306 sample

women who are the members of SHGs. Duration of membership in SHGs of them varies from 2 to 15 years. Average duration of membership is 5.8 years. The average land holding of the respondents' households is 1.182 bigha. The average year of experience of microfinance program for all villages is 10.428 years.

Principal Component Analysis of the Decision Making Variables of Women

Principal Component Analysis is a statistical technique which helps reduce a set of large variables into small set of artificial variables which retain maximum amount of variance of the original data set. In this study Principal component analysis was performed to reduce nine decision making variables into a smaller set.

Table-4: Descriptive Statistics

DMA	DMA1	DMA2	DMA3	DMA4	DMA5	DMA6	DMA7	DMA8	DMA9
Mean	1.73	1.85	2.28	1.83	1.66	1.61	1.77	1.17	1.12
Std. Dev.	0.696	0.606	0.646	0.653	0.708	0.653	0.989	0.922	0.676
Analysis N	500	500	500	500	500	500	500	500	500

Table 4 describes the descriptive statistics of decision making variables. Table 5 exhibits the diagnostic check of the data set used in measuring empowerment. KMO measures of sampling adequacy statistic test whether the partial correlation among the variable are small. In the SPSS we have overall KMO statistic. The value of KMO is 0.677 which is mediocre but acceptable. The result suggests us no variable is needed to drop from the principal component analysis. Bartlett's Test of Sphericity indicates that whether the correlation matrix is an identity matrix or not. The value of Chi-square is highly significant point to the non-identity correlation matrix.

Table-5: Diagnostic Check of data

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.677
Bartlett's Test of Sphericity	Approx. Chi-Square	1.046E3
	Degrees of freedom	36
	Level of Significance	.000

From the table 6 of total variable explained it is seen that only three components have the Eigen value higher than one. The first component explained 30.183% of total variance and it is the largest variance explained. The second and third component explained 19.484% and 13.083% of total variance respectively. Total variance explained by the three components is 62.750%.

Table-6: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.716	30.183	30.183	2.716	30.183	30.183	2.429	26.987	26.987
2	1.754	19.484	49.667	1.754	19.484	49.667	2.019	22.436	49.423
3	1.177	13.083	62.750	1.177	13.083	62.750	1.199	13.328	62.750
4	.750	8.337	71.087						
5	.729	8.095	79.182						
6	.636	7.064	86.246						
7	.587	6.517	92.764						
8	.343	3.811	96.574						
9	.308	3.426	100.000						

From the table 7 of rotated component matrix it can be seen that in the first component DMA5, DMA6, DMA7 and DMA8 have the higher loadings. This component can be termed as decision making ability regarding family matter. In the second component DMA1, DMA2 and DMA4 have higher loadings. This component can be termed as economic and political decision making ability. In the third component DMA3 and DMA9 have the higher loadings. This component can be termed as sense of freedom. Score of the each component has been generated by using SPSS software.

Now transformation of DMA data set into binary response variable of women empowerment has been described in the section 4 of this paper.

Table-7: Principal Components

DMA		DMA1	DMA2	DMA3	DMA4	DMA5	DMA6	DMA7	DMA8	DMA9
Component	1	0.037	0.043	-0.181	0.402	0.82	0.714	0.726	0.707	0.152
	2	0.799	0.879	0.365	0.573	0.207	0.099	-0.156	0.167	-0.203
	3	0.009	0.026	0.665	0.011	-0.166	0.162	-0.077	0.06	0.832

Probit Model for Women Empowerment

The coefficient of SHG membership status in the Probit model indicates that how likely women SHG members in Birbhum district are empowered compared to that of non-SHG members. The coefficient of SHG membership status in the probit model of women empowerment is 0.972 which is statistically significant at 1% level. This implies that log of odds in favour of empowerment of women of the SHG members' increases by 0.97 point compared to that of non-SHG members. We therefore conclude that SHG membership status ensures more empowerment to the rural women SHG members.

The logic behind this as follows. Joining in SHGs, help women to act collectively. It helps them to break social norms and customs which discriminate women in the society. Participation helps them to get self-respect in the society. Visiting to the Block office, Banks, cooperatives, NGOs and local leaders increase their level of confidence. In SHG they have to save regularly which generate among then sound economic discipline. After a particular time period they are eligible for getting loan from the formal financial institutions such as commercial banks, Regional Rural Banks and Co-operatives etc. They can use the loan amount to start any enterprise jointly or they invest the amount in their own economic activities. All these help them generate their livelihood. They spend their income for their family. The respect in the family for them also increases. They now enjoy more decision making abilities in their family matter. They could spend more money for their children in the field of education and health. Participation in SHGs therefore definitely helps them to become more empowered.

Not only participation, duration of participation in SHGs has also significant impact on women empowerment. The coefficient of duration of SHG membership of a woman in the model is 0.059 and it is statically significant at 10% level. This implies that as the duration of SHG membership of a woman increases, the empowerment of woman also increases. The change in the odd ratio suggests that one year increase in the duration of participation in the SHG, the odd ratio in favour of women empowerment status increases by $\{\exp(0.059) - 1\} \times 100 = 6.07\%$. Therefore, long term participation in SHG helps women to become more empowered over time. Long term participation helps women to become more experienced. They are now more effective in operating their groups. They now know how to continue economic activities more successfully. Over time they become more confident to tackle the odds come in the way of them and greater hold in both inside and outside of their family.

Table-8: Probit Model for Women Empowerment

Dependent Variable : Women Empowerment (WE)				
Method : ML-Binary Probit				
Sample : 1 500				
Included observation : 500				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.128	0.654	-4.779	0.0000[*]
SHGMS	0.974	0.251	3.887	0.0001[*]
DURSHGM	0.059	0.036	1.697	0.0896[***]
AGE	0.002	0.009	0.223	0.8234
EDULVL	0.212	0.134	1.58	0.1141
EMPL	1.962	0.291	6.726	0.0000[*]

ACTOCRDT	0.339	0.202	1.678	0.0933***
TRNG	0.515	0.229	2.246	0.0246**
SSTS	0.911	0.471	1.932	0.0533***
SSPART	0.463	0.138	3.345	0.0008*
FSUPPORT	0.444	0.186	2.381	0.0172**
RELIGN	-0.042	0.405	-0.105	0.9159
CASTE	0.01	0.116	0.091	0.9276

Mean dependent Var.	0.654	S.D. dependent var	0.476
S.E. of regression	0.303	Akaike info criterion	0.628
Sum squared resid.	44.847	Schwarz criterion	0.737
Log likelihood	-144.027	Hannan-Quinn criter.	0.671
Restr. Log likelihood	-322.467	Ave. Log likelihood	-0.288
LR Statistics (12df)	356.88	McFadden R-squared	0.553
Prob. (LR Stat.)	0.000		

Source:Authors' own calculation based on primary data * significant at 1 % level ** significant at 5 % level ***significant at 10 % level.

We know that with the increase in age, the knowledge and experience of any individual increases. These factors help women to become more empowered. So, we incorporate age as an explanatory variable in this regression analysis. We found that with the increase in the age empowerment level of women increases but the result is not statistically significant. We cannot therefore say with confidence that age level of the SHG participants really increases the level of empowerment in our surveyed areas.

Education is also very powerful source of empowering any individual whether the person is male or female. It gives them access to knowledge, information and communication. It helps them to change their mind set, give them power to get rid of all kind of prejudice, superstition and untouchability. It generates a sense of self-respect and respect to other fellow members of the society. Education make them confident as its gives them crystal clear idea regarding their personal, familial and social issues. The coefficient of level of education in the probit model states us that with the increase in educational level, empowerment of women also increases but the result is statistically significant at 12% level which is quite high significance level we generally not consider in the statistical analysis. It therefore could be said that level of education has the positive impact on women empowerment with marginally high probability of occurring type-I error. The reason behind that majority of women respondents has only primary level of education. From the demographic profile of the respondents it is found that 14 percent of them are illiterate, 56.6 percent of them having only primary level of education, and 18.2 percent of the respondents have the upper primary level of education. So, out of the total sample 89 percent belong to these three categories. Since they belong to the poor and needy family they have no scope to nurture their educational knowledge which they acquire from formal education system. That is their minimum formal education wane out over time.

The coefficient of employment in this probit model is positive and statistically significant at 1 percent level. This means that the women who are employed are more empowered than unemployed women. In other words with the increase in employment of women, there is probability of higher empowerment status. This observation is practically true as we know that employment help individual to generate their livelihood, it helps them to access to the resources. In other words employment empowers women economically. Economic empowerment in turns impacts other aspect of women empowerment.

The coefficient of accessibility to formal credit in this model indicates that how more likely access to formal credit in this district of the rural women ensures them to become more empowered. The coefficient of this explanatory variable is 0.339 which is statistically significant at 10 percent level. This implies that the log of odds in favour of empowerment of women respondents in the district increase by 0.34 point for those who have formal access to credit compared to that of respondents who have no access to formal credit. The change in the odd ratio suggests that the ratio in favour of women empowerment status increases by $\{\exp(0.34) - 1\} \times 100 = 40.5\%$ for those who have the access

to credit compared to the women who have no access to formal credit. We therefore confirm that access to formal credit helps rural women to become more empowered.

Productive capacity building training has the significant impact on women empowerment. These type of training help them to acquire better skill and technical knowledge. All these type of skill development come out of better economic activity practice. Better entrepreneurship skill, better business generate more income which has significant impact on women empowerment. The coefficient of training in this model is 0.516 and it is statistically significant at 5 percent level. This implies that the change in the odd ratio in favour of women empowerment is $\{\exp(0.516)-1\}\times100=68\%$, which means that there is 68 percent rise in women empowerment for those who have training than the women who have no training.

Social participation is also significant explanatory variable. The coefficient of it is 0.91 which is significant at 10 percent level. This implies that the women who actively participate in social activities are more empowered than the women who do not participate in it. Social participation in village level means participation in social works, community development program, participation in Gram Shava and Gram Samsad, health awareness program etc. These types of activities increase women's' communication in the society. It helps them think about the common problems in their local areas and their way out collectively. It therefore definitely empowers women.

Family support of surveyed women has significant impact on their women empowerment status. The coefficient of the variable family support is 0.444 and it is statistically significant at 5 percent level. The change in the ratio suggests that the ratio in favour of women empowerment status increases by $\{\exp(0.444)-1\}\times100=56\%$, for the women who enjoy family support compared to the women who have no family support in participating credit program. We therefore conclude that the probability of women empowerment increases with the increase in family support. There are some liberal families where women have the access to education, they enjoy free mobility. Women of these types of family are naturally more empowered than the other family.

The study also shows that religious status of women has no significant impact on women empowerment. It therefore can be said that the religion of a particular woman respondent does not give her extra advantage nor discriminate her in the society.The caste status of surveyed women has no significant impact on women empowerment. It therefore cannot be said that woman of a particular caste are more empowered than the other caste. So, we conclude that in the surveyed area there is no discrimination on the basis of caste and religious status against women.

CONCLUSION
This empirical study has measured the impact of SHG membership on the empowerment of the women. The findings of the study show that empowerment status of the SHG members is higher than the non-SHG members and their level of empowerment increases over time with the association in SHG. The results of the study also show that access to formal credit, social status, social participation and family support also have significant impact on women empowerment. It therefore can be concluded that SHG based microfinance should be implemented more intensively and extensively in the Birbhum district to improve the financial, economic and social position and to avoid the problem of social exclusion of disadvantaged section of the society.

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