



Impact Assessment of Self-Help Group Bank Linkage Programme on Women Empowerment in the State of Himachal Pradesh, India

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Abstract

Microfinance is one of the important tools for providing financial services to the poor and unprivileged section of the society. Women have become the focus point of these programmes in India. Self Help Group Bank Linkage Programme is one of the successful programmes for disbursing microfinance services and most of the Self-Help Groups (SHGs) are women SHGs. Therefore, assessing the effect of this programme on women empowerment is of great importance. This research paper examines the impact of the SHG Bank Linkage Programme on the empowerment status of the members. The five dimensions of the empowerment have been studied in this paper i.e. economic empowerment, social empowerment, personal empowerment, decision-making autonomy and political empowerment. In present study, the selection bias effect is considered and therefore Propensity Score Matching method has been applied to reduce such effect. Propensity score matching method helps in matching treated and control groups based on the propensity score calculated and excludes the unmatched cases for further analysis. Analysis shows that SHG Bank Linkage Programme has positively affected the empowerment level of SHGs members in Himachal Pradesh.

Keywords: Microfinance, SHG, SHG Bank Linkage Programme, Women Empowerment

JEL Classification: G2, G20, G21

Paper Classification: Research Paper

Introduction

The Microfinance involves significant practice of providing small loans or monetary help to the deprived and the under-privileged people who are unable to access the services of the formal banking sector (Khandker, 2005; Littlefield, Morduch, & Hashemi, 2003; Otero, 1999; Young, 2010). The financial services comprise not only facilitating savings and disbursement of the credit, but also include providing services such as insurance, leasing, money transfer, equity transaction, etc (Dasgupta & Rao, 2003). Credit and other finance related services are provided to the people to increase their income level and improve their status. It has emerged as a considerable concept; serving poor by setting them free from the shackles of poverty and vulnerability. This programme is altered according to the needs of the poor and unprivileged focussing specially on women

(Mishra, 2004). It acts as a mediator to bridge the gap by providing facilities such as saving and getting credit to become socially and economically independent.

Government of India has taken many steps to include rural sector in the mainstream financial system but has failed to do the same. Banking system fails to serve the rural people as their credit needs are very small. Therefore, in 1992, Pilot Project was introduced to link small groups formed at village level with formal banking sector. SHGs are groups of 10-20 people formed by some Self-help promoting institutions i.e. banks NGOs, Government. These groups are involved in mobilizing savings and then utilizing the collected saving amount for disbursing loan to the needy. They work on their own for a period of six months after which SHGs are linked to banks to get further financial assistance. The programme was named as SHG Bank Linkage Programme. This programme was a huge success and became one of the most valuable techniques for linking formal sector with informal groups at village level. Under this programme, around 225 SHGs were linked to the banking sector.

Women have proved to be the main stakeholders of microfinance programmes. With the help of these programmes, women have become an important part of development and are included in the core financial system. Financial services were provided to women through these microfinance programmes. This can help them engage in productive activities, become financially independent and support their family. Investment of credit amount in income generating activities improves the living standard as well as the empowerment level of the participants by making them financially independent. This helps women become economically empowered. Various services available to the participants under bank linkage programme helps them gain empowerment across different dimensions. The empowerment is not only limited to economic aspects, but is a process of making women empowered economically, socially as well as politically. One of the interesting effects of microfinance programmes in Himachal Pradesh is that now women are getting ample opportunities. In Himachal Pradesh, more than 80 percent of the SHGs are women SHGs showing that women are the focus in the microfinance programmes. Studies conducted to investigate the impact of microfinance revealed that it has positive effect on the empowerment level of women (Galab & Rao, 2003; Kabeer, 2001; Pitt, Khandker, & Cartwright, 2006; Swain & Wallentin, 2009). Some findings revealed that microfinance programmes have little or insignificant impact on the empowerment level as men intervened in the decisions related to the use and control over the credit (Goetz & Gupta, 1996; Leach & Sitaram, 2002; Kabeer, 2005; Rahman, 1999). No doubt microfinance improves the bargaining power of women but, they do not enjoy the freedom to take independent decisions related to the use of credit amount (Osmani, 2007). This is one of the negative effects of the microfinance programme on the members. Many studies show that the researchers did not pay attention to the selection bias issues. The members of the microfinance programmes compared to the non-members of such programmes for conducting impact analysis of programme on women empowerment. Thus, reducing selection bias issue will help in comparing participants and non-participants who have same skill and socio-economic background. In this study, an attempt is made to evaluate the impact of SHG Bank Linkage Programme on women's empowerment status in Himachal Pradesh while taking into consideration the selection bias.

The Concept of Empowerment

Empowerment relates to the power or the ability to bring change. It is the process of achieving control over the decisions related to the life of people. People want to attain power to improve not only their own living standard but also for the transformation of the society. The concept of empowerment has different dimensions and flows through different levels (Page & Czuba, 1999).

Empowerment is all about decision-making, accessibility to the markets and opportunities as well as the ability to earn income for gaining status in the society. Empowerment process helps to improve financial sustainability and poverty status as well (Arul Paramanandam & Packirisamy, 2015). Economic development alone is insufficient to bring gender equality, therefore there is a strong need to focus on other dimensions of empowerment especially if it is talked about with reference to women. Economic development is closely related as well as associated to the phenomenon of women empowerment. Women empowerment also contributes to certain areas of development like improving health, sanitation, economic upliftment etc (Duflo, 2012). It is also about enjoying greater control over the resources of the family (Arul Paramanandam & Packirisamy, 2015). Participation in micro credit programmes helped women to improve their bargaining power (Osmani, 2007). If women have access to basic resources, it will help them to generate income. It not only improves their personal condition but also proves beneficial for their family (Kabeer, 1999). Empowering women is not their sole empowerment but, it also contributes immensely in improving the status of whole family. It is an important issue that is raised, studied and analysed in the developing countries (Chakrabarti & Biswas, 2012).

Various authors have defined the concept of women empowerment. According to Karmakar, Banerjee and Mohapatra (2011, p.55) the concept of empowerment is broad in nature. It is related to involvement and control over the decision-making power which helps in improving the position of women.

Prior researches give a clear proof of women becoming economically uplifted and socially aware through microfinance, thus achieving the level of the empowerment (Swain & Wallentin, 2009; Pitt and Khandker, 1998). While analysing the SHGs, it is found that there are various economic and non-economic factors which play a crucial role in empowering women. These factors include economic, social and political environment (Malhotra, Schuler & Boender 2005; Mayoux, 2000; Mayoux, 2002). Infact, the empowerment has been studied as a multidimensional concept (Kabeer, 1999). According to Hashemi, Schuler & Riley (1996) freedom of movement, say in making purchases of heavy amount for the family, decision-making freedom for the purchases related to home and children, awareness and information of political changes around them, are important indicators of women empowerment in microfinance. Control over the use of loan is an important aspect to be measured (Goetz & Gupta 1996; Hashemi, Schuler & Riley, 1996). Women should be aware of book keeping (Aukerly 1995). Dimensions like personal empowerment, collective action among the members are used to measure empowerment and it helps to achieve more concrete results (Rowlands, 1995). Access to a loan facility and control over utilization of loan amount and social empowerment are the key indicators of measuring empowerment (Cheston & Kuhn, 2002). Malhotra, Schuler & Boender, (2002) have identified economic, interpersonal, political, and legal as important dimensions while studying women empowerment.

A few studies also emphasise on the social impact of microfinance in terms of raising voice against dowry, drinking in public areas, child labour, political awareness and achieving greater autonomy in the society etc. Based on this perspective, five dimensions have been identified i.e. economic empowerment, social empowerment, personal empowerment, legal and political awareness, decision making autonomy.

Economic Empowerment

For the present study, the term economic empowerment has been taken in its simplest form i.e. access to facility of loan and control over the utilization of finance. It also included questions like their contribution to family income they have, their ownership over the immovable property,

if they have ownership over the other movable assets of the family, if they have free access to external employment or not. The responses were in the form of yes or no.

Personal Empowerment

Undoubtedly, these programmes help in developing the personality of the respondents. It has played an important role in improving their confidence level and other skills. Questions like freedom to move out of home without taking permission from their family members, freedom to raise voice against their husband when they are wrong. Other questions like involvement in community programmes, training and workshops organised by Government or NGOs, communication with others and awareness regarding banking rules and regulations are included in the schedule.

Empowerment and Autonomy in Decision-Making

This dimension includes questions whether the respondents are able to take daily small household decisions, whether they take part in large and considerable household decision making, whether they take decisions regarding schooling of their children, etc.

Social Empowerment

Women have been facing various social challenges since ages. Therefore, the respondents were asked questions like whether the respondents raise their voice against evils like dowry, domestic violence, whether they raise their voice against drinking and gambling in public places, whether they resist and raise voice against child labour, etc.

Political Empowerment

Political empowerment is important dimension for measuring overall empowerment level of the women participants in such programmes. Questions like whether the respondents participate in political movements, whether they participate in 'Gram sabha' meetings, freedom to contest election, participation in local political governance and voting decision, etc.

Research Methodology and Sampling Design

In the present research, primary data is gathered from three districts of the State of Himachal Pradesh situated in India, namely Kangra, Solan and Sirmaur. Chinmaya Organization for Rural Development in Kangra, Ambuja Cement Foundation in Solan and Himalaya Awakening Society in Sirmaur were selected for the purpose of the study.

Himachal Pradesh is predominantly an agrarian state. Land holdings are very small which creates hurdle in the use of modern technologies, directly hampering the overall agricultural production and affects the income level of the farmers. Out of the total workers, 57.9 percent are cultivators. According to the Census of 2011, 90 percent people are living in rural areas and only 10 percent people are living in urban areas. According to a survey on poor families (2002-2007 Survey), out of total rural population, 23.87 percent is living below poverty line. Thus being an agricultural state and having around 23.87 percent rural population living below poverty line, it requires special programmes for the improvement of the livelihood. Himachal Pradesh with such kind of economic facts provides good opportunity for the growth of microfinance programmes. The concept of microfinance has flourished in Himachal Pradesh through Self Help Group Bank Linkage Programme.

Schedule was prepared having questions of dichotomous nature and it was pretested and validated. 360 members (treatment group) of SHGs and 180 non-members (control group) were included in the sample for the purpose of study. Based on their responses, propensity score matching method and weighted regression has been applied to analyse the extent of women empowerment achieved through microfinance in the state of Himachal Pradesh. Five constructs identified are economic empowerment, personal empowerment, decision-making autonomy and social and political empowerment. The items in the questionnaire were included after taking expert advice and pre-testing of the schedule. The reliability of this section of schedule is checked by applying Cronbach's Alpha on 27 items. It was found to be 0.60 which is considered satisfactory. This states that this section of schedule measuring the women empowerment is reliable.

Removing Selection Bias

The impact of microfinance can be studied by comparing the actual results obtained with the counterfactual outcomes obtained, had the particular participant not participated in the programme. However, in reality it is not possible to make such a comparison (Shahriar, 2012). Therefore, empowerment level of participants and non-participants are compared to consider the effect of the microfinance programme. However, both groups may differ in their observable characteristics like age and education qualification etc (Bhaumik & Bera, 2015; De Silva, 2012). Both groups may be different in terms of their unobservable characteristics like difference in entrepreneurial traits that may further show inflated benefits of the programme participation (Tedeschi, 2008). The MFI/NGOs may follow certain criteria for selection of participants which is known as selection bias (Shahriar, 2012). Therefore, it becomes important to remove the selection bias in order to compare the treated and control groups. The selection bias effect can be reduced by using Propensity Score Matching (PSM) technique. The variables that affect the participation as well as the outcome or the dependent variable must be incorporated in the outcome equation (Smith & Todd, 2005). Propensity scores help to measure the probability of participation in a programme (Bhattacharya & Banerjee, 2014; Rosenbaum & Rubin, 1983). The predicted probabilities calculated in logistic regression model are the propensity scores that are later used for matching the non-participants with the participants under the PSM. The following equation explains the probability of participation conditional on Y. It explains that the outcome in absence of intervention is independent on participation given all the covariates and their calculated probabilities (Jalan & Ravallion, 2003).

$$E(Y) = PR(X=1 | Y)$$

Codes 0 and 1 are assigned to the non-participants and participants in the programme respectively. In the next step, the participants are matched with non-participants who are similar in terms of propensity scores calculated under Propensity Score Matching (PSM) method. After obtaining matched cases and their respective weights, weighted regression is applied to find out the impact of Bank Linkage Programme (Ho, Imai, King, & Stuart, 2009; Kenny, 1975).

Logistic regression is used for calculating propensity scores for both members and non-members. Pre participation variables are included for calculating propensity scores of the respondents like Age of the Respondents (AGE), Category (CAT), Poverty status (BPLCAT), Marital Status (MARISTAT), Education Status (EDMEM), Education Status of the Head of the Family (EDHEAD), Size of the family, Infrastructure facilities available to the respondents (INFRAFACILITY), Service (SERVICE), Land holdings of the respondents.

Data Analysis

The Logistic regression is applied to calculate the predicted probabilities or the propensity score of all the 540 respondents out of which 360 are members of the programme and 180 are the non-participants of the programme.

Results based on Logistic Regression

The application of logistic regression generated propensity score of each respondent in the data. In Table A1, the Nagelkerke R Square value is 0.190 of the model. These propensity scores depict the probability of the person to participate in a microfinance programme. The independent variables are the pre-treatment covariates that do not affect the outcome and it helps to fulfil assumption of Conditional Independence.

Table A1: Logistic Regression results of the factors affecting the Participation and Women Empowerment

Parameter	Analysis of Maximum Likelihood Estimates		
	Estimate	Standard Error	Sig
AGE	-.024	.018	.181
CAT	-.552	.237	.020**
MARISTAT	.108	.406	.791
BPLCAT	.192	.231	.406
MEMFAM	-.086	.150	.565
CHILDREN	.558	.173	.001***
INFRAFACILITY	1.094	1.168	.349
LAND	3.447	.739	.000***
SERVICE	-.085	.530	.873
EDMEM1	-.304	.544	.577
EDMEM2	-.698	.305	.022**
EDHEAD1	-.307	.588	.602
EDHEAD2	-.629	.316	.047**
Intercept	-.375	1.402	.789
No of Treatment	360		
No of Control	180		
Nagelkerke R Square	.190		
Hosmer and Lemeshow Goodness-of-Fit Test	Chi-Square	DF	Sig
	11.941	8	.154

***significant at 1%, ** significant at 5%

The results of logistic regression show that the category has negative relation with participation. It means that the people belonging to backward classes, schedule caste and schedule

tribe are participating more in the microfinance programmes as compared to people belonging to general category. Age and marital status of the respondents does not affect the decision related to participation in the microfinance programmes. People having high education levels have higher probability to participate in the microfinance programmes. The land holdings also show a positive relation with the participation level in the microfinance programmes. It also affects the decision of participation in microfinance programme.

Propensity Score Matching

The area of the common support is ascertained based on propensity scores generated through logistic regression. The cases lying below or above this support area are not included in the study for analysis purpose. In the study, the common support area is calculated by taking the highest value out of minimum values of propensity scores of both, members and non-members. Upper boundary of the common support area is identified as the lowest value out of the maximum values of the propensity scores of the treated and the non-treated participants calculated using logistic regression. Thus, in the study the common support area is (0.19007, 0.90946). 22 cases from the members and 3 cases from non-members lie outside the common support area. Thus, these 25 cases are removed for analysis purpose. Therefore, only 515 cases are used for conducting matching procedure under propensity score matching method.

Nearest neighbour matching method is used out of various matching methods available in propensity score matching. This matching procedure has been applied using the Matchit Package in R software.

After discarding the cases lying outside the common support area and application of logistic regression for calculating the propensity scores, the balance check between the treated and control group cases is done subsequently. The balance summary provides balance in terms of covariates before and after applying the matching process. Many researchers have used 't' test to check whether the covariates significantly differ between the treated and control group cases. However, this is not considered valid by some researchers and standardised mean difference is used for checking the balance summary of covariates (Cohen, 1988, Austin, 2009).

Table B2 provides the summary of the total cases discarded lying outside the common support area. The table shows that out of 180 control cases, three cases are discarded and 22 treated cases are discarded out of 360 cases. Matching procedure is applied using replacement option in which 44 control cases and 2 treated groups are unmatched.

Table B2: Results obtained from Matching procedure

	Control	Treated
All	180	360
Matched	133	336
Unmatched	44	2
Discarded	3	22

Source: Results obtained using Matchit package of R software

Table B2 shows that 133 cases matched out of 180 control groups and 336 out of 360 treated cases.

Figure A1 shows the histogram representation of propensity scores of treated and control group before and after the matching process. Figure B2 shows the distribution of the propensity scores calculated based on logit model for the respondents. The propensity score lies between 0 to 1.

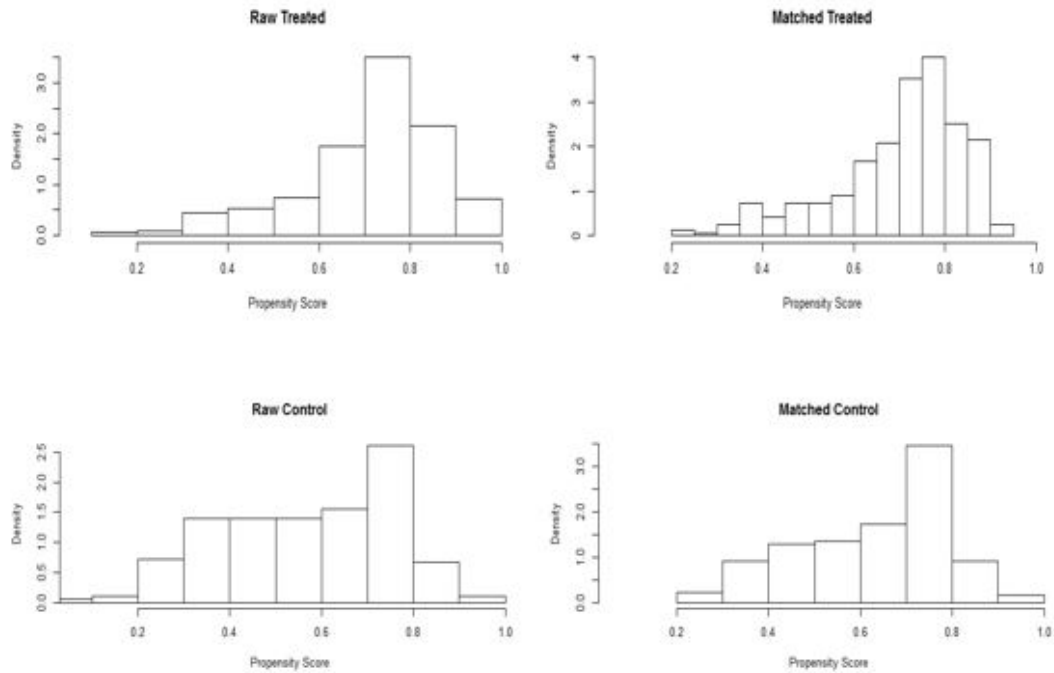


Figure 1: Histogram of the unmatched and matched cases

Source: Results obtained using Matchit package of R software

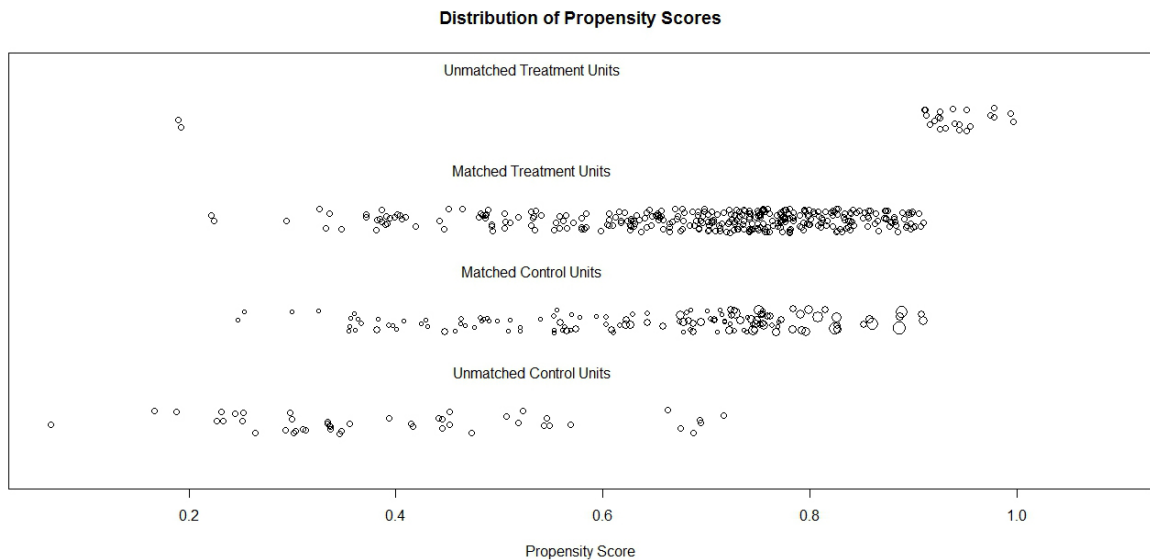


Figure 2: Distributions of the Propensity Scores

Source: Results obtained using Matchit package of R software

Balance check for all the covariates. Balance test is used for checking the difference between the treated and control group based on covariates included in the study. There should be least variation among the treated and control group in terms of covariate or the independent variables in the study. Table C3 showed the balance check of the cases before applying the matching process.

Table C3: Balance Test of the Covariates before Matching process

	Means Treated	Means Control	SD Control	Std. Mean Difference*
Distance	0.7141	0.5718	0.1873	0.9279
AGE	38.6278	39.1778	5.6024	0.0902
CAT	0.3056	0.3889	0.4889	0.1807
BPLCAT	0.2611	0.2333	0.4241	0.0632
MARISTAT	0.9444	0.9167	0.2772	0.1211
EDMEM1	0.0667	0.0778	0.2686	0.0445
EDMEM2	0.2139	0.4333	0.4969	0.5344
EDMEM3	0.7194	0.4889	0.5013	0.5125
EDHEAD1	0.05	0.0611	0.2402	0.0509
EDHEAD2	0.1889	0.3944	0.4901	0.5244
EDHEAD3	0.7611	0.5444	0.4994	0.5074
MEMFAM	4.5639	4.5111	0.7436	0.0575
CHILDREN	2.2944	2.0944	0.5253	0.2294
INFRA FACILITY	0.9771	0.9615	0.1062	0.1855
SERVICE	0.0333	0.0389	0.1939	0.0309
LAND	0.2076	0.137	0.1305	0.3241

*negative sign in standardised mean difference is ignored

The balance check is done with the help of the standardised mean difference. Table 4 shows the balance check after applying the matching process.

Table D4: Balance Test of the Covariates after Matching process

	Means Treated	Means Control	SD Control	Std. Mean Difference*
Distance	0.7022	0.7005	0.1411	0.0116
AGE	38.8452	38.2262	4.9554	0.1016
CAT	0.2827	0.3185	0.4676	-0.0774
BPLCAT	0.2619	0.244	0.4311	0.0406
MARISTAT	0.9464	0.9464	0.226	0
EDMEM1	0.0685	0.0625	0.243	0.0238
EDMEM2	0.2143	0.1726	0.3793	0.1015
EDMEM3	0.7173	0.7649	0.4257	-0.1058
EDHEAD1	0.0506	0.0536	0.226	-0.0136
EDHEAD2	0.1935	0.1548	0.363	0.0987
EDHEAD3	0.756	0.7917	0.4077	-0.0836
MEMFAM	4.5506	4.5149	0.6925	0.0389
CHILDREN	2.2857	2.2232	0.5538	0.0717
INFRA FACILITY	0.9784	0.9705	0.0945	0.0935
SERVICE	0.0357	0.0387	0.1936	-0.0166
LAND	0.1743	0.1705	0.1444	0.0177

* negative sign in standardised mean difference is ignored

According to Cohen (1988), the value of the standardised mean difference in each covariate should be less than the 0.20. Table 4 shows that the balances check of the all the cases after applying matching test. It clearly shows the value of standardised mean difference in each covariate is less than 0.20. This highlights that the matching process has helped in reducing disparity between treated and control cases with regard to observed covariates. This matching process reduces the mean difference by eliminating the highly unmatched cases, thus improving the balance of covariates between these two groups. Standardised mean variation between the groups is now minimum here, further analysis can be conducted after attaining balance.

The process of eliminating highly unmatched cases can be shown with the help of the jitter plots in Figure C3.

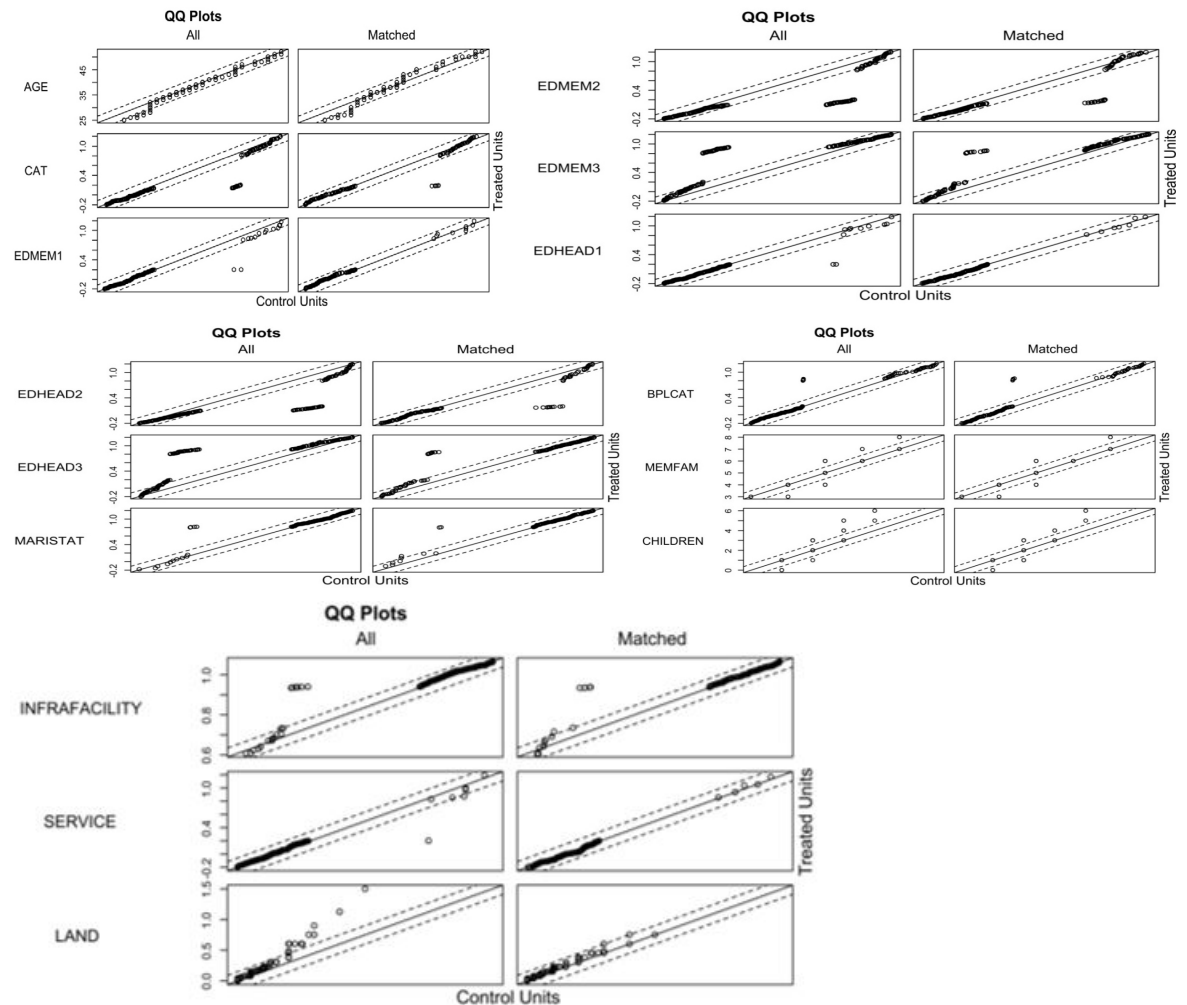


Figure 3: Jitter plots

Weighted Regression Analysis

Before applying regression, all the assumptions were checked and satisfied. After applying the matching method and making the cases comparable, the next step is to find out if there is any significant difference between these groups with regard to empowerment. When treated units are matched with the control group more than once with replacement, the frequency weights should be utilized in the research (Dehejia & Wahba, 1999; Stuart, 2010). Weighted regression can be applied by using these weights (Ho, Imai, King & Stuart, 2009). Therefore, weights generated for each case using Matching process in R software are further used for applying weighted regression.

Table E5 and F6 shows the results of weighted linear regression.

Table E5: Results of ANOVA table in Weighted Regression

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1393.761	13	107.212	10.186	.000c
Residual	4787.237	455	10.521		
Total	6180.998	468			

Table E5 depicts the analysis of variance i.e. ANOVA statistics of weighted regression model. This model highlights that the F value is 10.186 which is marginally greater than 1 and has a significance level of 0.000. The F value is significant in this ANOVA table. This means that the current model is very good at predicting the dependent variable.

The R Square variable shows how the independent variables explain or predict the value of dependent variable. In the current data set, the R Square value is 0.225. This means that the independent variables explain 22.5 percent of variation in the dependent variable. The adjusted R Square tells the model fitness and how well it can be generalized (Field, 2009). The difference between R^2 and adjusted R^2 should be less. Here the value of adjusted R^2 is 0.203 which is closer to the value of R^2 . It shows that the cross validity of this model is very good.

Table F6: Coefficients of the Models

Model	Unstandardized Coefficients			
	B	Std. Error	T value	Sig
AGE	-.054	.028	-1.909	.057*
CAT	-.772	.381	-2.027	.043**
BPLCAT	-.192	.348	-.550	.583
MEMFAM	.144	.244	.591	.555
CHILDREN	-.497	.265	-1.871	.062*
INFRA FACILITY	2.031	1.941	1.047	.296
LAND	-.126	1.140	-.111	.912
SERVICE	.341	.807	.423	.672
EDMEM1	-1.012	.834	-1.214	.225
EDMEM2	-1.338	.492	-2.718	.007**
EDHEAD1	-.823	.908	-.906	.365
EDHEAD2	-.060	.522	-.115	.909
GROUP	3.142	.334	9.398	.000***
(Constant)	14.596	2.224	6.564	.000***
R square	.225			
Adj R square	.203			

*** significant at 1 percent level, ** significant at 5 percent level, * significant at 10 percent level

In the present study, empowerment scores are taken as dependent variable. Participation in the SHG programme (dummy variable) and all other covariates used in the logistic regression model are incorporated in the regression model as independent variables. The main aim of running regression is to find out whether the participation in the programme has any effect on the women empowerment or not. Table F6 provides important information about the model summary. It provides the value of R^2 and Adjusted R^2 . Adjusted R^2 tells how the model fits and generalises (Field, 2009). Table F6 also explains the beta values and standard error of each variable.

The age is showing negative relationship with empowerment. It means that the younger women members are more empowered than older women. Beta value of age is negative which indicates inverse relationship between age and empowerment. Younger women enjoy more freedom related to their mobility, decision making related to small and large issues and decision-making related to children education etc.

The category variable is also measured as dummy variable where value 1 is assigned to the general category and 0 to others. The negative β value of -0.772 denotes that the category of the respondents is negatively related to the empowerment. Study reveals that the respondents belonging to OBC category, SC and ST category are more empowered than the general category respondents. The number of children in family showed significant impact on the empowerment level of the respondents. The negative β value shows that lesser the number of the children in the family, higher is the empowerment level of the respondents. There was insignificant difference in empowerment status of participants belonging to BPL and APL category. The land holdings of the respondents (measured in hectares), size of the family and the employment status of the women has insignificant impact on the dependent variable. The infrastructure facilities (measured using variables like road facility, public vehicle transport and distance to the banks) are showing insignificant impact on the empowerment status of respondents.

Education level of the respondents and their family head is also an important variable for studying the impact on the women empowerment level. The variable is divided into three categories. First category includes respondents who are illiterate, second category includes the respondents who are educated up to primary level and third category includes the respondents having received education up to middle level and above. As there are three categories of educational level of the respondents, the third category i.e. respondents having education upto middle level and above has been taken as reference category. The other dummy variables are compared against this reference category. The respondents who are illiterate have insignificant impact on the empowerment. The β coefficient value for respondents having education level upto primary level (EDUMEM2) is -1.338. The respondents having education level upto primary level are less empowered than the respondents having educational qualification upto middle level and above. The significance value of 0.007 level shows that the respondents having education qualification upto middle level and above affected the empowerment stating the fact that, as the education level of the members increases their empowerment improves.

The education level of the household head out of the respondents showed insignificant impact on the empowerment level. The β coefficient value of both dummy variables is -0.823 and -0.060 which shows that respondents who are illiterate and the respondents who have educational qualification of primary level are less empowered than the ones having educational qualification upto middle level and above.

Participation in microfinance programme is treated as dummy variable where value of 1 is assigned to participation and zero is assigned to non-participation in the programme. This variable showed highly significant impact on the level of empowerment. The t value is very high i.e. 9.398

and is significant at 1 percent level. There is significant impact of group participation on women empowerment level of the members. Group participation is a factor which plays great role in empowering women. Here the beta value shows that the group participation has a positive relation with the empowerment scores. The t value is very high which states that group participation has greater impact on the empowerment scores as compared to other variable used in the study.

Conclusion

Based on the findings, it can be concluded that SHG Bank Linkage Programme helped in improving the empowerment status of the women economically, personally, socially as well as politically. It also enhanced the decision-making power of the women participants. Based on the overall statistics of Himachal Pradesh, it can be stated that the participants of microfinance programme are more empowered than non-participants. As the 't' value of the group participation variable is highest in the results, members of SHGs have more access to the economic opportunities as compared to non-members. The weighted regression analysis investigated that involvement in microfinance programme helps to improve the empowerment level of the participants as compared to the non-participants. Group participation is the key factor which leads to higher empowerment. Variables like age of the respondents, category and number of children in the family also play a significant role in increasing the empowerment level of the respondents.

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