Depth and Impact of Microfinance with Special Reference to Uttarakhand

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Microfinance is a banking service through which the unemployed or the low-income earning group of the society becomes self-sufficient and they can save money or borrow money to fulfill their day to day requirements. It provides these services to these people as they have no formal means to access the financial services.

In the present study, an effort has been made to assess the level of participation of the poor in the microfinance programme and to find the factors influencing their level of participation and further the impact of microfinance on the income and expenditure pattern of households. The study has been taken up in Uttarakhand state. The administrative division of the state is into two regions namely Garhwal and Kumaon. Multistage random sampling was adopted for the selection of districts, blocks, SHGs and sample respondents in the present study. The total of 400 respondents were selected for study.

Keywords: *Microfinance, Financial Inclusion, Socio-Economic*

INTRODUCTION

Over time, microfinance has emerged as a larger movement whose object is "a world in which as everyone, especially the poor and socially marginalized people and households have access to a wide range of affordable, high quality financial products and services, including not just credit but also savings, insurance, payment services, and fund transfers." Many of those who promote microfinance generally believe that such access will help poor people out of poverty, including participants in the Microcredit Summit Campaign. For many, microfinance is a way to promote economic development, employment and growth through the support of micro-entrepreneurs and small businesses; for others it is a way for poor to manage their finances more effectively and take advantage of economic opportunities while managing the risks. The terms have evolved - from micro-credit to micro-finance, and now 'financial inclusion.

In India, the SHG-Bank Linkage Model (SHGBLM) and Microfinance Institution (MFI) Model are used to provide the MF. The SHG-BLM developed by NABARD is widely prevalent throughout the country. In SHG-BLM model, the SHGs are linked with banks. In MFI model, various MFIs reach the rural people in the locations which are not covered under formal banks. Financial services of MFIs are available for individuals or groups like SHGs, JLGs and Grameen groups.

The main aim of the involvement of Microfinance in the project in to build the trust for banking among the rural poor. It is meant to make the people their own institutions wherein they know the benefits of financial security and sustainability. Its other aim is to ensure that there is a financial flow from apex institutes and other sources like SHPIs and MFIs to the rural economy.

Different schemes are introduced by Uttarakhand too like many other states of India to make people more self-independent and socially and economically empowered. Main schemes are Swarna Jayanti Gram Swarozgar Yojana (SJGSY), JFM, Swashakti Project and Swayamsiddha programme. However, the success of these programmes largely depends on the success of community based organisations such as self-help groups (SHGs) and village forest management committee (VFMC), which work as conduit to facilitate micro-financing and management of the economic activities leading to effective transmission of the benefits of macroeconomic reforms.

In all these programmes SHG is considered as the key unit driving the programme. All the poverty alleviating programme provide the loans to people who are below poverty line or just above the poverty line. Also the rate of interest is also very less at 12%. Although this is not the desired rate of interest, but it is suitable because the poor people do not have some asset to keep as security to take loans from formal system of banking and also the private money lenders are about five to six time costly.

OBJECTIVES OF THE STUDY

The study was planned to understand the impact of microfinance on socio-economic development of poor. Keeping in view this idea, the research has concentrated upon the objectives

- To assess the level of participation of the poor in the microfinance programme and to find the factors influencing their level of participation.
- The impact of Microfinance on the income and expenditure of households.

LITERATURE REVIEW

Schuler & Hashemi (Schuler 1994) in their study in Bangladesh argued that if we target women, microfinance can improve economic conditions of women both in their household and in the wider community. They noticed the improvement in women in various aspects of their life like ability to make own decisions, physical movement, security, freedom from violence and public participation.

Montgomery et al (Montgomery 1996) in his study in Bangladesh, determined that successive loans brought about a construct-up of assets over the years, and that the shape of assets tends to favour productive assets, suggesting an emphasis amongst debtors on securing income.

Sebstad & Chen (Sebstad 1996) have found proof of elevated incomes leading to asset accumulation amongst program contributors. Their studies indicated positive effects of microfinance upon school enrolment levels, attendance at school or attaining education. This study has evidence of increase in household intake after participation in microfinance applications. Also it is observed that consumption of non-food items were increased as compared to food consumption, reflecting a shift in challenge past immediate survival. They checked out impacts of microfinance upon health and nutrition levels of individuals and discovered a few evidence of improvements in these areas however concluded that these linkages had been no longer sturdy or direct.

Zaman (Hassan, Assessing the Impact of Micro-credit on Poverty and Vulnerability in Bangladesh 1999) in his study used multivariate analysis to identify the characteristics which lead members to participate in a credit programme. As per the study the major determinants of the depth of participation are sex, main occupation of the Karta of the family, any other credit agency and duration of membership. The study revealed that people with large land holdings and few number of earning members were benefitted the most by micro-credit. Also, borrowings of non-targeted group is usually larger than the targeted group.

Elaine & Barton (Elaine 1998) advocated that social intermediation is a financial intermediation with a capacity building constituent geared toward those sectors of society that do not get access to credit and savings facilities. Technique of Social intermediation is an investment that is made for development of both human assets and institutional capital to make marginalized organizations self-reliant to ready them to have interaction in formal financial intermediation. It could be understood through transformation of beneficiaries into customers or clients and creation of local establishments that bridge the space between the formal financial institutions and marginalized agencies.

Evans Timothy (Timothy 1999) studied in Bangladesh that only 25% households participated in the programme and the participation rates were higher among the poorer sections. The major factors identified in the study, responsible for the non-participation in microcredit programmes were lack of education to females, small household size and landlessness.

A study by Puhazhendhi (Puhazhendhi V. 1999) advocated the functioning of SHG's, in overall performance, sustainability, empowerment of women, economic effect on the members, future potentials and many others. He observed that SHG's in Tamil Nadu are doing great towards social change and transformation. The rising movements are taken for the empowerment of women and promotion of micro-finance.

A case study by Ahmad (M. Ahmad 1999) on saving groups in Assam, found that women come to administrates directly for their simply rights and to cope with their grievances boldly. It is proved that SHGs are a hit in North East India even inside the midst of insurgency. In addition Gurumoorthy (Gurumoorthy 2000) maintained that SHG is a feasible opportunity to achieve the goals of rural improvement and to get participation from all rural poor in the development activities. The organization setup of SHG is good to distribute the microcredit to the poor and making the rural women a true entrepreneur. Credit desires of the rural women may be fulfilled wholesomely via the SHG's.

Through few case studies, Bhatia and Bhatia (Bhatia N. & Bhatia 2002) found that loan repayment is higher for SHGs than any other sources of credit. They observed that there has been noticeable improvements of the living standards of the SHG's individuals, in terms of possession of belongings, growth in savings and borrowing capability, profits generating activities and earnings levels.

In his study, Naggayya (Naggayya 2000) observed that an informal tie-up for supplying the credit to the poor with SHGs is increasing and acting as a great tool for profits-generating firms. He has reviewed the tasks taken on the countrywide level with a view of institutional arrangements to aid this programme for removing of poverty, with primary focus on women. The author concluded that NABARD and SIDBI are playing a vital role at diverse degrees of implementation of this programme. There are other bodies also which are assisting NGOs, namely, Rastriya Mahila Kosh (RMK), Rashtriya Gramin Vikas Nidhi (RGVN) and many others.

Rakesh Malhotra (Rakesh 2000) in his study of 174 women beneficiaries, in Rae Bareilly of the state of Uttar Pradesh, drawn and covered randomly from four formal agencies of credit i.e. CB's, RRB's, PACS, and ARDB's revealed that less than half a per cent of female population against 3.5 per cent of male population in the study area were clients of the banks. Furthermore, only 7.64 per cent of the total number of cases financed and only 6.96 percent of the total quantum of credit extended by RFI's have gone to women. It was observed that 83 per cent of loan cases availed by women; male members were primarily responsible for the end use of credit.

In his paper on informal journey through SHGs Dasgupta (Rajaram 2000) discovered that micro-financing through informal institution method has some advantages viz.: (i) savings mobilized via the poor; (ii)access to the specified amount of suitable fund (iii) appropriate the demand and supply of credit starting new market for FI's; (iv) reduction in transaction price for each creditors and borrowers; (v) awesome improvement in restoration; (vi) heralding a brand new consciousness of subsidyless and corruptionless credit, and (vii) extraordinary empowerment of rural poor women. He pressured that SHG's should be taken as a nice medium to counter social and monetary citizenship now not as an end to itself.

Datta and Raman (Datta 2000) found that SHGs are heterogeneous with respect to their social and economic status and still they are performing great. These SHGs have high rate of repayment. Women have a great social cohesion and thus they share a bonding with others in terms of diversity in knowledge base, secondary skills and income levels.

Certain issues are raised by Satish (Satish 2001) in his paper related to the functioning of SHG's. Suitable care should be taken while making SHGs groups with respect to similarity in their socio-economic status. SHG formation should be a systematic process, whether an NGO forms it or Banks forms it. He stressed that SHG's experiment should not be limited to only few areas of the country but should spread to rural India too. It is crucial to strengthen NGOs and their resources because they are more suited to forming SHGs.

In the paper by Barbara and Mahanta (Barbara 2001) it is maintained that SHGs set up a number of micro-enterprises which are very active and have no political intervention. In Assam, the credit and saving programme by Rastriya Gramin Vikas Nidhi was very successful as its sole focus was on rural poor.

In their paper by Puhazhendhi, and Satyasai (Puhazhendhi 2001) tried to evaluate the performance of SHG's with respect to social and economic empowerment. They collected the primary data from 560 families in 223 SHGs operating out of 11 states representing 4 different regions of the country. It was found out that the SHG's as institutional arrangement ought to definitely add to the socio-economic empowerment of rural poor and the effect on the later became greater pronounced than on the former. It was also found that there is an uneven progress among all the regions. Southern region was found to be more progressing than the others. Older group of participants have better performance than the younger ones.

In their paper, Manimekalai and Rajeshwari (M. Manimekalai 2001) advocated that by introducing micro-finance to women SHG's by NGOs has helped the groups to obtain a degree of economic and social empowerment. It has advanced a sense of management, organizational ability, control of diverse activities of an enterprise, right from acquiring finance, identifying raw material, market and proper expansion and innovation.

Remarkably, D.K. Singh (Singh 2001) from his study in Uttar Pradesh highlighted that the SHG's is now performing the role of moneylenders due to the fact that borrowing can be so flexible that it can be taken as and when needed. There aren't any formalities involved and the transaction price is low. Others have attempted to look at the size, composition, characteristics of rural SHGs, to examine their capabilities and their effect on income and employment, to become aware of the important constraints and issues of the organization and propose measures to resolve these issues. They recommended that the banks and other financial establishments and state government must come forward to assist the rural poor through the SHG's and offer liberalized credit facilities at inexpensive rates of interest.

Zeller (M. Zeller 2001) studied the data from Bangladesh and verified the effect of Microfinance on income of household. They found that the impact varies as per the season. They found that the impact was much different than what was expected as per Pitt and Khandkar because the measures not only takes into account the actual borrowings but also the access of household to credit in the near future.

V.M. Rao (V.M. 2002) reviewed the origin and development of SHGs in India shows that the existing formal financial institutions never provide the money to homeless, and poor groups of the society. The origin of SHG's could be treated to mutually help the Indian village community. SHG's inspire savings and encourage income generating activities through small loans.

Kabeer (Kabeer 2002) argues that in a society where women are excluded from the monetary economy, women are provided access to financial services redefines their position from being economic dependents to economic actors. This further modifies the conventions of seeing women in economic development. She quotes proof of women becoming more active both socially and politically and becoming active to reach the local authorities for their rights.

Dash (Dash 2002) in his study in India, found that self-help groups established by microfinance programs can enhance public participation in the political process. It was found that as group members' capacity for collective action increases, their priorities change, leading to a consistent surge in the volume and precision of citizens' demands.

Chavan and Ramakuma (Chavan 2002) studied the impact of NGO based microfinance programmes which are implemented across many different developing countries. They had analyzed the performance of NGOs with respect to whether they target the poor, is any income increase for the poor, is employment generated for them, are any new skills developed. They have found that NGOs were more effective from their Government led other schemes.

Mosley (Mosley 2002) had done study on 6 microfinance programs in Africa. He found that there is an impressive qualitative proof that if we target microcredit at poor and especially to women, it improves the human capital as the expenditure done on consumption, education and health increases.

Coleman (Coleman 2006) argued that wealthy and approachable people have more access to microfinance compared to the poor. The procedure for obtaining the micro finance is easier to understand for the ones who are qualified and highly educated. Information regarding the borrowing depends largely upon the literacy, status and micro credit determination. Further, he found that demographic factors also play a significant effect on micro-credit constrained conditions.

Meyer (Meyer 2002) surveyed available evidence for Asian countries. Access to Microcredit results into positive effect on income and education, but the results vary significantly across countries with respect to magnitude and statistics both. Income and the expenditure are the basic measures of family welfare, so microfinance effect is studied to cover these two. In some studies it shows positive effects, other studies says there are no significant impacts.

Morduch (Jonathan 2004) found that MFIs should carefully design their services to that they meets the needs of the poor. MFIs should understand the needs and the context within which the poor are living so that they can fulfill their requirements. MFIs are a failure in working for poorest of the society due to this.

Ajay Nair (Ajai 2005) focused on the advantages and limitations of Federations. He has case study method to study the three SHG Federations. The findings suggested that federations could help the self-help groups to become financially and institutionally strong for sustainable development. The study revealed that federations provide economies of scale which results in reduction of transaction cost and but the sustainability of federations themselves is constrained by several external and internal factors.

Basu and Srivastava (Basu Priya 2005) studied the pattern of access of finance to the rural poor of India. They found that SHGs have been playing a leading role in providing the finance to the poor. The formal modes of finance like banks are not accessible to the poor. The richer households are benefitted from rural banking but not the rural poor. They found that SHG Bank Linkage Model is doing well but it should be more cautious while choosing its beneficiaries.

Weiss et al (Weiss 2003) studied the impact of Microfinance on Asia Weiss and Montgomery provided an update on the impact of Microfinance on Latin America.Their studies show that microfinance services are not able to serve the poorest of the poor but are serving to only the better poor. So they concluded that we need to improve upon the design and outreach of microfinance products.

Gangaiah et al (Gangaiah C. 2006) explored the effect of self-help groups on employment and income in Chitoor district of Andhra Pradesh. For the purpose of study a total of 17 SHGs were selected on random basis and from those SHGs total 202 members were selected. The study revealed that on an average the credit received generated an employment of 184 days and an average income of Rs. 9,578 per family. Further the study revealed that the beneficiaries utilized their income in a productive manner i.e. 39 percent reinvested it on agriculture, 20 percent spent on education to children and around approximately 16 percent utilized for medical.

Josily (Samuel 2006) conducted a study on women empowerment through micro finance in Dindigul district of Tamil Nadu and concluded that the percentage change in income (45.99%), investment (20.09%), assets (53.43%), consumption (25.85%), employment days (112.48%) and savings (264.70%) of the SHGs after joining SHG. The t-value calculated for the above were found significant at 1 per cent level.

Meissner, J (Meissner 2006) carried out a study for the NABARD-GTZ Rural Finance program inspecting the feasibility of SHG lending in a regional rural bank branch, the Alwar Bharatpur Anchalik Gramin bank (ABAGB), Alwar (Rajasthan). The evaluation was primarily based on primary data accumulated in August and October 2005. Overall, it was found that the SHG loaning operations of the branch were feasible and sustainable. with reference to the staff cost (cost of staff needed for making and encouraging new SHGs) in the particular year 2004–05, the study reported that cost of staff became higher however risk of loan loss (1.5 % and 0.4% loan outstanding) was low. In normal lending operations, this turned into opposite -low staff cost and high threat of loan loss (0.9% and 1.5% loan outstanding). but, the study cited that the staff cost calculated over 6 years is less than for 1 year (1.3% as compared to 1.5%), however became nonetheless greater time and cost-intensive than ordinary lending (0.9%). The significance of SHG lending operations lies within the low threat costs of SHG lending in contrast to everyday transactions.

Devi et al (Devi 2007) investigated the effect of training on women SHGs in Cuddalore district, Tamil Nadu, India. Commercial banks, NGOs and government agencies had provided the required training to the members. This training programmes had a very positive impact on their employment pattern and assets. The SHGs had helped the members to be more profitably involved in the activities other than farming. The members should be provide with training so that they can try some new ventures

Cuong (Cuong 2007) studied the impact of micro-credit programmes on the poor in Vietnam. Poor people often find difficulties facing the formal systems of financing. So, this justifies the existence of Vietnam Bank for Social Policies to provide the poor with preferential credit. The author concluded that the ratio of poor versus non-poor was very less in the programme but overall this helped in reducing the poverty among the participants.

R. Bebczuk and F. Haimovich (Bebczuk 2007) studied the impact of microfinance on labour income in poor households of some Latin American countries. The author concluded that microfinance increased the hourly labour income in a significant manner.

Swaminathan (Madhura 2007) studied the microcredit potential in fulfilling the credit needs of the rural poor. The author found that NGO led programmes had greater transaction costs and so they do not solve the general problems of rural poor and that the banks could easily fulfill their needs by providing large number of products which are designed as per their needs.

Ruby (Ruby 2008) studied the role of Kudumbashree project in empowering the women in Kerala. The study was centered on the primary data collected from Alappuzha and Kottayam districts. It was revealed that Kudumbashree project has been active in the economic, political, social, personal and family empowerment of the poor in Kerala. The study accepted its role in improving the saving habits of the poor and making them free from the rules of the crooked money-lenders.

Tom, R. T. and Selvam, V. (Tom 2010) investigated the role of policy holders in relation to microfinance with respect to their products and services in Vellore Division, Tamil Nadu, India. The finding revealed that proper products must be developed by taking the need of the clients into account and should be commercially feasible, and have a good delivery medium. People should be educated of the policy so that when any agent approaches them, they are interested in engaging themselves.

Sarmah, G. N and Das, D. K. (Sarmah 2012) investigated the role of Microfinance and SHGs on the socio-economic aspects of folks in Lakhimpur District of Assam. They found that once associated with the SHGs the agricultural poor will increase their financial gain and improve their way of living by participating in economic activities independently.

RESEARCH METHODOLOGY

Depth of outreach of Microfinance Programme

In the act of reaching out to the poor means the number of people who are being served by microfinance now who were previously not in reach of formal financial services. In the present study, the degree of outreach of microfinance programme is assessed by certain factors like percentage of households involved in microfinance interventions, with no credit accessibility from formal systems during pre –microfinance and ratio of lower social class and OBC households, below poverty line households and households with women as its head of family, participating in the programme.

Extent of participation of Clients:

The extent of participation of members is determined by a number of factors like age, education status, social category, size of family, below poverty line and above poverty line family, women as their head family and duration of its participation in SHG.

Theoritical Framework

This study follows the model given by Baker and Hopkin (Baker 1969). This model of credit and capital, describes the relationship between equity capital and credit. This can be expressed through the following equation:

$$\Delta E/E = [(D/E)\,(r - i) + r]\,(1 - c), \qquad (4.1)$$

Here, D is the amount of loan; E is the amount of equity capital (own capital engaged in business); r is the income or profit from business; i is the rate of interest on the loan; and c is consumption expenditure out of the earned income. It is based on the assumption that as long as the return on assets acquired through loan was greater than the interest paid on loans, credit would increase the income of the household that availed the loan. The higher the share of total capital (D+E), the higher will be the growth of income of the household. If the marginal propensity to consume is unity, the amount of equity capital will be unchanged. But if it is less than one, the received loan will increase the net worth of the household. Under normal circumstances, due to large marginal susceptibility to consume and extreme pressure of poverty, it was really difficult for the poor to accumulate savings. However, if the credit programmes could be designed in such a way that poor have to repay in small installments and over a long time, the credit availed might force them to make compulsory regular savings in small amount

Many studies found that absence of credit is the biggest constraint for the poor to get rid of poverty conditions. Poverty is a structural problem due to the lack of capital and finance.

The requirement of finance is small at the lower income level, but the arrangement of that small is the biggest task. This situation reminds us about the famous saying by Adam Smith in this book "The Wealth of Nations", "When you get a little, 'it becomes easy to get more.' But the problem is to get that little".

Analytical Framework:

The extent of participation in microfinance programme has been assessed by using the model adopted by Pitt and Khandker (M. M. Khandker 1998):

$$C_{ij} = \alpha c X_{ij} + \beta c D_{ij} + \varepsilon_{ij}^{c} \qquad (4.2)$$

Here,

C_{ij} is the total amount of borrowings from the microfinance programme.

X_{ij} is the vector of exogenous household characteristics such as age, level of education, social caste, size of the family, and BPL/APL.

D_{ij} is the district.

α_c and β_c are unknown parameters,

ε_{ij}^{c} is the random error.

The impact of microfinance programme on various outcomes is measured by using the linear regression model (Toshio 2008). Specifically, the following equation was estimated:

$$Y_{ij} = F\,(\beta_1 X_{ij} + \beta_2 D_{ij} + \beta_3 M_{ij} + \beta_4 T_{ij} + \varepsilon_{ij}) \qquad (4.3)$$

Where,

Y_{ij} is the household outcome of interest

X_{ij} is the household characteristics namely level of education, caste, age, size of family, and BPL/APL.

D_{ij} is the district characteristics.

M_{ij} is the membership variable; 1 if the participating household; 0 otherwise.

T_{ij} is the treatment variable β_1, β_2, β_3 and β_4 are unknown parameters.

The nature of the treatment variables and outcome variables considered in the study is listed below:

(a) Treatment Variable: Two treatment variables that has been used in the study to assess the impact of microfinance on household welfare, were duration of participation and average borrowing of members

(b) Other Independent variables: The other independent variables used in the control functions include household characteristics such as age of the reference person (household head) or respondent; education of the reference person; caste; family size; BPL/APL and district.

(c) Dependent or Outcome Variable: The dependent variables used include:

(1) Household monthly income

(2) Household monthly expenditure on food.

(3) Household monthly expenditure on non-food.

DATA ANALYSIS

Depth of Outreach of Microfinance Programme

Outreach of microfinance programme signifies the number of persons now served by the microfinance programme who were previously denied access to financial services. Under the depth of outreach, the study examines the ability of microfinance programmes to reach various economic and social sections of the society. In the present study, the depth of outreach of microfinance programme is assessed on the basis of certain indicators such as percentage of members with no formal credit and savings in the pre-microfinance period and proportion of SC/ST and OBC households, illiterate households and women headed households participating in the programme.

Table1: Depth of Outreach of Microfinance Programme

Member Households	Frequency	Percentage
No Formal Credit	364	91%
No Formal Savings	161	40.25%
SC/ST/OBC	99	24.75%
Education (0-Class 5)	148	37%
Women Headed	66	16.5%

Source: Primary Data

The data in Table 1 indicates that the majority of the member households did not have access to formal banking credit service in the pre-microfinance period. It is also evident that 40 percent of the members did not have formal savings. The ability of the microfinance programme to reach the illiterate and least primary educated is apparent as a significant percentage had belonged to that category.

Determinants of Participation in Microfinance Programme

The extent of participation in microfinance programme is represented by the cumulative amount of borrowings availed from microfinance programme. The level of participation of members in the microfinance programme is determined by a host of factors. The main factors influencing their level of participation considered in the study are their age, sex, social category, level of education, type of microfinance programme, duration of membership, type of ration card, and number of family members and karta of family.

The variables which appear significant from the above regression estimate are age and the type of microfinance program, SGSY. The age has a positive role in total borrowing for the households. The value of coefficient suggests that 1 year increase in age of the participant raises the total borrowing by 759.38 rupees. Participation in microfinance programme “SGSY” has a negative role in total borrowings for the household. The value of coefficient suggests that participation in “SGSY” microfinance programme decreases the total borrowing by 10893.48 rupees.

It could be noted that multiple regression co-efficient R2 is .07804 signifying that 7.8 percent of variations in total borrowings of the members is explained by the above independent variables.

Impact Evaluation

In the present study an attempt has been made to study the impact of microfinance interventions on the socio-economic conditions of the households through regression analysis. The impact of microfinance programme on various outcomes is measured by using the linear regression model.

Impact of Microfinance on Monthly Income

To calculate effect of microfinance on household monthly income the total of farm and non-farm income has been taken.

Table 2: Determinants of Participation in Microfinance Program: Regression Estimate			
Explanatory Variables	**Regression Co--efficient**	**t value**	**Pr(>|t|) Significance**
(Intercept)	-10465.88	-0.566	0.57204
`Name of MF Prog.`SGSY	-10893.48	-1.982	0.04848 *
Name of MF Prog.` ILSP	-8320.36	-1.698	0.09067 .
`Duration of Membership (Years)`	713.79	0.596	0.55181
Sex Male	-1387.42	-0.394	0.69407
Social Category`SC	-1393.36	-0.266	0.79051
`Social Category`ST	634.04	0.077	0.93858
Education10TH+	.10	1.555	0.12117
Education5-10TH	-2540.69	-0.634	0.52661
Age	759.38	3.305	0.00108 **
Type of Ration Card`APL	6658.56	0.547	0.58478
Type of Ration Card`BPL	10640.00	0.863	0.38915
Number of Family Members`	-40.51	-0.029	0.97723
`Karta of Family`Male	-8910.78	-1.830	0.06832

Dependent Variable: Total Borrowings
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 25680 on 266 degrees of freedom
Multiple R-squared: **0.07804,**
Adjusted R-squared: **0.03298,**
F-statistic: 1.732 on 13 and 266 DF,
p-value: 0.05452

Table 3: Effect of Microfinance on Household Monthly Income Regression Estimates			
Explanatory Variables	**Regression Co—efficient**	**t value**	**Pr(>|t|) Significance**
(Intercept)	4325.605461	2.796	0.00555 **
`Name of MF Prog.`SGSY	82.089225	0.177	0.85931
Name of MF Prog.` ILSP	-197.653995	-0.480	0.63159
`Duration of Membership (Years)`	-195.895718	-1.955	0.05161 .
Sex Male	54.259492	0.184	0.85400
Social Category`SC	-306.789137	-0.700	0.48426
`Social Category`ST	-6.587952	-0.010	0.99236
Education10TH+	243.254079	0.669	0.50434
Education5-10TH	496.662707	1.482	0.13956
Age	8.465254	0.432	0.66607
Type of Ration Card`APL	-270.815916	-0.266	0.79038
Type of Ration Card`BPL	258.335637	0.250	0.80260
Number of Family Members`	1354.124297	11.426	< 2e-16 ***
`Karta of Family`Male	-275.623909	-0.673	0.50142
Borrowings	0.014133	2.758	0.00622 **

Dependent Variable: Household Monthly Income
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 2147 on 265 degrees of freedom
Multiple R-squared: **0.3815,**
Adjusted R-squared: **0.3488**
F-statistic: 11.68 on 14 and 265 DF,
p-value: < 2.2e-16

The regression estimates show that variables such as average amount of borrowings per year and number of family members are found to be significant. The total number of family members has a positive role in total monthly income of households. The value of coefficient suggests that increase of 1 family member in the family raises the total monthly income by 1354.124297 rupees. The average total borrowings have a positive role in total monthly income of households. The value of coefficient suggests that increase of 1000 rupees in average total borrowings raises the total monthly income by 14.133 rupees.

The coefficient of regression R2 is 0.38, showing that 38.1 percent of variation in the household monthly income is explained by the above independent variable.

Impact of Microfinance on Food Expenditure.

The expenses on food covered cereals, pulses, vegetables, edible oils, milk and milk products, meat and fish and other food items.

The regression estimates show that variables such as type of microfinance programme, number of family members and duration of membership are found to be significant. Participation in microfinance programme "SGSY" has a negative role in total food expenditure for the household. The value of coefficient suggests that participation in "SGSY" microfinance programme decreases the total food expenditure by 643.281692 rupees. Participation in microfinance programme "ILSP" has a negative role in total food expenditure for the household. The value of coefficient suggests that

Table 4: Impact of Microfinance on Monthly Expenditure on Food Regression Estimates

Explanatory Variables	Regression Co—efficient	t value	Pr(>|t|) Significance
(Intercept)	822.053280	1.421	0.156635
`Name of MF Prog.`SGSY	-643.281692	-3.717	0.000246 ***
Name of MF Prog.` ILSP	-664.547528	-4.315	0.0000226 ***
`Duration of Membership (Years)`	84.959839	2.267	0.024206 *
Sex Male	121.069807	1.099	0.272871
Social Category`SC	-147.378379	-0.900	0.369181
`Social Category`ST	-353.588518	-1.376	0.170046
Education10TH+	40.149216	0.295	0.768223
Education5-10TH	-84.118592	-0.671	0.502842
Age	8.326776	1.136	0.256954
Type of Ration Card`APL	135.955523	0.357	0.721306
Type of Ration Card`BPL	248.885563	0.644	0.519820
Number of Family Members`	894.763634	20.182	< 2e-16 ***
`Karta of Family`Male	287.192693	1.875	0.061873 .
Borrowings	0.001524	0.795	0.427313

Dependent Variable: Monthly Expenditure of Food
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 803 on 265 degrees of freedom
Multiple R-squared: **0.7034,**
Adjusted R-squared: **0.6877**
F-statistic: 44.89 on 14 and 265 DF,
p-value: < 2.2e-16

participation in "SGSY" microfinance programme decreases the total food expenditure by 664.547528 rupees.

The total number of family members has a positive role in total food expenditure of households. The value of coefficient suggests that increase of 1 family member in the family raises the total food expenditure by 894.763634 rupees. The duration of membership has a positive role in total food expenditure of households. The value of coefficient suggests that increase of 1 year of membership raises the total food expenditure by 84.959839 rupees.

The coefficient of regression R2 is 0.703, showing that 70 percent of variation in the household food expenses income is explained by the above independent variables.

Impact of Microfinance on Non-Food Expenses

Expenses on non-food covered clothing, footwear, expenses on health, expenses on education and expenses on household like repair and maintenance of durables, travel, ceremonies, and other expenses like expenses on pan, beedi, cigarettes and alcohol.

The regression estimates show that variables such as type of microfinance programme (ILSP), duration of membership, number of family members, education (5th-10th), Karta of Family-Male and Borrowings of family are found to be significant.

Participation in microfinance programme "ILSP" has a positive role in total non-food expenditure for the household. The value of coefficient suggests that participation in "ILSP" microfinance programme increases the total non-food expenditure by

Table 5: Impact of Microfinance on Monthly Expenditure on Non-Food Regression Estimates

Explanatory Variables	Regression Co--efficient	t value	Pr(>|t|) Significance
(Intercept)	3253.578248	2.989	0.003062**
`Name of MF Prog.`SGSY	201.305215	0.618	0.536861
Name of MF Prog.` ILSP	1723.798162	5.950	0.00000000845***
`Duration of Membership (Years)`	-251.706386	-3.570	0.000423***
Sex Male	55.564145	0.268	0.788840
Social Category`SC	-137.726438	-0.447	0.655303
`Social Category`ST	-239.028718	-0.494	0.621397
Education10TH+	150.772811	0.589	0.556386
Education5-10TH	809.391310	3.432	0.000695***
Age	0.221466	0.016	0.987195
Type of Ration Card`APL	-939.434156	-1.312	0.190721
Type of Ration Card`BPL	-993.010245	-1.367	0.172770
Number of Family Members`	426.820324	5.118	0.00000059294***
`Karta of Family`Male	-585.373455	-2.032	0.043157*
Borrowings	0.007128	1.977	0.049099*

Dependent Variable: Monthly Expenditure of Non-Food
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 1510 on 265 degrees of freedom
Multiple R-squared: 0.4484,
Adjusted R-squared: 0.4193,
F-statistic: 15.39 on 14 and 265 DF,
p-value: < 2.2e-16

1723.798162 rupees. The duration of membership has a negative role in total non-food expenditure of households. The value of coefficient suggests that increase of 1 year of membership decreases the Total non-food expenditure by -251.706386 rupees.

Education (5-10th) has a positive impact on total non-food expenditure of households. The value of coefficient suggests that education till 5-10th class increases the total non-food expenditure by 809.391310. The total number of family members has a positive role in total non-food expenditure of households. The value of coefficient suggests that increase of 1 family member in the family raises the total non-food expenditure by 426.820324 rupees. The karta of family-male has a negative role in total non-food expenditure of households. The value of coefficient suggests that if the karta of the family is male, the total non-food expenditure decreases by 585.373455 rupees.

The average total borrowings have a positive role in Total Non-Food Expenditure of households. The value of coefficient suggests that increase of 1000 rupees in average total borrowings raises the total non-food expenditure by 7.123 rupees.

The coefficient of regression R2 is 0.448, showing that 45 percent of variation in the household non-food expenses income is explained by the above independent variables.

FINDINGS

The major findings of the present study listed below:

- Around one-third of the participants have membership for more than 3 years and females are more in number as compared to male which shows that officials of the programme plays an active role in spreading awareness about the programme. Majority of the microfinance loans are availed by the age group of 31-40 years whereas females are better in repaying the loan as compared to men.
- Around three-fourth of the members belong to general category, which shows that involvement of SC and ST category in microfinance interventions is very low in Uttarakhand. There are members, who are well-off and APL, their involvement in group creates confusion and reduces self-confidence in needy and BPL members.
- The participants' main reason of joining the SHGs were to increase their income and to generate avenues for employment. Microfinance programme generates self-employment opportunities in rural areas. The programme participants utilise bank loans to start small business activities and generate income
- The depth of outreach of microfinance to the poor and weaker section is more evident as:
  - Around 69% of the households possess the below poverty line ration card and majority of the members are female.
  - More than 35% of the respondents are illiterate or got education till primary only.
  - Majority of them have no formal credit and savings in the pre microfinance period.
- As per this study the variables which appear to be significant among various determinants of the level of participation of the clients are age, karta of the family and type of microfinance programme.
- The borrowings of ST households are significantly lower than the households belonging to the other category (General/ Others). The borrowings of male members are lower than the female borrowers.
- The coefficient of total number of family members turns out to be negative, showing that higher number of family members reduces total borrowings from microfinance programme.
- The borrowing of BPL family seems to be higher than the APL family. A one-year increase in duration of membership programme raises the total borrowings.

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