

IMPACT OF SELF-HELP GROUPS IN RURAL LIVELIHOOD: A CASE STUDY IN HOOGHLY DISTRICT IN WEST BENGAL

Dr. Soma Saha

Assistant Professor in Economics, Netaji Nagar College for Women, Regent Estate, Kolkata-700092

ABSTRACT

Self Help Groups (SHGs) have helped in the economic betterment of the rural poor, especially the women, in India. This paper, based on the primary data collected from the field survey in Pandua Block of Hooghly district in West Bengal, aims to examine the socio-economic impact of Self-Help Groups on the livelihood of the rural poor. Self Help Group programmes have helped the rural poor, particularly rural woman, to gain access to credit from various financial institutions. Further, the SHGs have become a vital tool to alleviate poverty to some extent and also improve the socio-economic conditions of the rural poor. The economic development of India and the socio-economic upliftment of the rural poor will largely depend on the entrepreneurship, employment and mobilization, utilization and generation of capital by this section of the society.

Keywords: Self Help Groups, Rural poor, Sustainable livelihood, Microfinancing

1. INTRODUCTION

The rural poor generally have restricted access to sustainable financial services. The conventional financial institutions do not often cater to the needs of these low-income rural families as the income of these households is often unstable and they do not possess collateral with a clear title. The banks also consider the low-income rural households a bad risk, thereby imposing high information monitoring cost in operation. In order to address the needs of the poor, especially the women, a participative model of microfinancing like Self Help Group can be of great help.

A Self-Help Group (SHG) is a village-based financial intermediary usually composed of 10–20 local members, who can be either only men, or only women, or only youth, or a mix of these, preferably from the same socio-economic background. A SHG is formed independently without

any political influences. They come together for the purpose of solving their common problems through self-help and mutual help. Here the members of the group make small regular savings contributions over several months until there is sufficient capital in the group to begin lending. Funds may then be lent back to the members or to others in the village for any purpose. The National Bank for Agriculture and Rural Development (NABARD) defines SHGs as "small, economically homogenous affinity groups of rural poor, voluntarily formed to save and mutually contribute to a common fund to be lent to its members as per the group members' decision". In India, the SHGs emerged in 1986-87 and were formed by the rural poor (mainly women) with the sole objective of improving their livelihoods through collective savings and investments in income-generating activities. Its primary goal was to become effective agents of change by serving as a platform to establish a reliable banking with the poor so as to enable livelihood opportunities for rural women through micro-credit with the existing rural banks in their area. The SHG members decide on the amount of savings per member, maximum size of loans and the guarantee mechanism during the sanction of the loan. These SHGs are supported by Non-Governmental Organisations (NGOs) and several Government agencies like NABARD, which is given the tasks of framing suitable policy for rural credit, provision of technical assistance backed liquidity support to banks, regulation of rural credit institutions and other development initiatives.

The Microfinance in India status report (2017-18) published by NABARD states that as on 31st, March 2018, there are 87 Lakhs SHGs covering over 11 crore households in India. Out of the total number of SHGs, 50.2 Lakhs SHGs have outstanding bank loans of Rs 75598 crores to the Banks. The total deposits of SHGs with banks is to the tune of Rs 19592 crores. There are more than 100 Scheduled Banks, 300 District Cooperative Central Banks (DCCBs), 27 State Rural livelihood Missions and over 5000 NGOs engaged in the Self-Help Group Bank Linkage Programme. The success of SHGs has attracted the attention of policy makers for attaining various objectives like poverty alleviation, women empowerment, social upliftment, financial inclusion, entrepreneurial development, etc.

SHGs have enabled the rural women to grow their savings and to access the credit from the banks. It builds a community platform from which women become actively involved in village affairs and take action in order to address the various social and community issues. The main objective of providing subsidized credit to the poor through the banking sector is to create self-employment through a self-help group approach. The NABARD report (2017-18) also states "The Self-Help Groups Bank linkage (SHGBLP) programme which started simply as a bank outreach programme, has through the passage of time slowly metamorphosed into a holistic programme for financial, economic, social and of late, technological capital building in rural areas. The SHG-Bank Linkage Programme has expanded at a fast pace in India to evolve into the

largest microfinance programme in the world, and undoubtedly, it is the main microfinance programme in India.”

Through access to finance, the Self-Help Groups have empowered the rural poor and given them the opportunity to liberate themselves from the clutches of poverty. Thus, the SHGs have played an important role in sustainable rural livelihood and overall socio-economic development. This study focuses on the positive role of SHGs in improving the standard of living of the rural poor.

2. REVIEW OF LITERATURE

Several literatures have dealt on the topic of micro finance and Self-Help Groups. Here a few International and National literatures have been reviewed:

Hashemi et.al. (1996) analysed the various rural credit programmes incorporated in Bangladesh through the extensive study of Grameen Bank and Bangladesh Rural Advancement Committee. Based on the survey of 1300 married women in 120 households residing in 6 villages of Bangladesh who had availed the loans, the authors opined that the success of the credit programmes in reaching out to the vast number of women can be attributed to the promotion of economic opportunities.

The role of Microfinance institutions in the rural development has been discussed by Vetrivel & Kumarmangalam (2010). According to the authors, microfinance can help to solve the problem of inadequate housing and urban services as an integral part of the poverty alleviation programme. The authors also suggest that multi-purpose loans and composite credit should be provided to the rural poor for help in generation of income, improvement in housing and consumption support.

For the World Bank, Deininger & Liu (2009) have investigated the economic and social impacts of Self-Help Groups in the India state of Andhra Pradesh. The authors observe that the Self-Help Groups have had positive impacts on women empowerment and nutritional intake. The authors conclude that women’s social and economic empowerment has increased and there has been consumption smoothing and diversification of income sources rather than exploitation of new income sources.

Kumar (2009) describes the determinants of participation of Self-Help Group and its impact on household welfare. Based on the empirical survey data of 75 SHGs spread across 27 micro watersheds comprising of 375 households in seven blocks in Coimbatore district of Tamil Nadu, the author concludes that increased women participation in SHGs has enhanced the household’s income and improved their living standard. There has also been remarkable improvement in the

quality and quantity of food consumed, health of the household members and education of the children, thus helping in poverty alleviation.

The challenges and opportunities of the women participating in the Women Self-Help Groups (WSHGs) in Orissa have been discussed by Patel (2011). Based on the survey conducted in the districts of Khurda and Kandhamal in Orissa, the author suggests that a partnership with CSO/NGO is essential for strengthening the WSHGs. Further the author also suggests that several marginalised women groups including the disabled, single, widow and old age women need to participate in the WSHGs.

Batra (2012) has analysed the experiences, trends, pattern and schemes of the Self-Help Group movement in rural Haryana. Based on the study of micro-finance models like Swarnjayanti Gram Swarozgar Yojana and NABARD-SHG Linkage, the author observes that over burdening of responsibilities, inadequate manpower, less diversify income generation and provision of subsidy are few of the problems being faced in the state. According to the author, the subsidy to the SHGs should be withdrawn and a lot of focus should be given to the qualitative rather than quantitative aspects of the group.

An analysis on the functioning and sustainability of Women Self-Help Groups in Assam based on the credit system and income generation was done by Bora & Talukdar (2012). Based on the survey data of 25 women SHGs of Sivasagar district of Assam, the authors observe that these SHGs mobilized their resources through various income generating and entrepreneurial activities like weaving and embroidery, tailoring, preparation of sweets and snacks, pickles and juice, handicraft, poultry and piggery. This has helped the women to gain economic and social empowerment. The authors conclude that the Government and several other NGOs need to guide the SHGs to manage their activities and also to select different income generating activities that would be viable and profitable.

Factors affecting the participation and employment of women in SHGs were discussed by Ghosh & Banerjee (2010). The authors interviewed 290 women members of *Swarnjayanti Gram Swarozgar Yojana* (SGSY), Self-Help Groups from 24 Parganas of West Bengal, twice within a gap of four years. The authors observed that during the second round of interview, a large number of women members were unemployed. The authors conclude that local politics at the village level plays a very crucial role in determining the employment status as well as loan use of the women members.

An analysis of women's development in rural area through Self-Help Groups was done by Dutt & Samanta (2006). The authors examined the reasons for the failure of several Self-Help Groups in Burdwan, West Bengal under the Development of Women and Children in Rural Area

(DWCRA) scheme of the Government of India. The author observed that few of the problems faced by the SHGs were production and technology, organisation, raw material, infrastructure, finance and capital flow and marketing. However, the authors conclude that the main reason for the debacle of the SHGs was lack of coordination and communication between group members. The author concluded that the SHG groups in DWCRA need to work towards long term security and real empowerment of women.

Zakir (2011) under State Institute of Rural Development (SIRD), Assam examined the various management techniques of Self-House Groups. The author observes that the Self-Help Groups should be strengthened through capacity building. They should take decisions, reduce conflict and work towards long term sustainability.

The role of SHGs in socio-economic change of the vulnerable poor in Jammu region was examined by Mehta et.al. (2011). Based on the survey data of 10 SHGs consisting of 162 members in Kathua District of Jammu region, the authors conclude that through access to financial services as part of the SHG-Bank linkage program, the socio-economic conditions of the rural poor have improved drastically and helped to alleviate poverty. The SHGs have also played a critical role in women's empowerment and enhancement of their self-confidence in the study area.

The role of Distance Education in empowering women through Self-Help Group was analysed by Ghadoliya (2008). The author is of the view that in spite of the fact that Self-Help groups have played an important role in the upliftment of the rural women, lack of education has always been a hurdle in reducing their dependence on men. Distance education can not only help the rural women to improve their vocational skills, but also empower them so that they can play an important role in management of the SHGs.

Sundaram (2012) has analysed the impact of SHG in socio-economic development of the rural poor in India. Based on the study of SHGs from secondary data available through various Government reports, the author concludes that through SHG programmes, the standard of living and the food security of the rural poor has increased. Microfinance has also led to empowerment of women through economic independence and alleviation of poverty to some extent.

Adhikary (2010), while investigating the impact of SHGs on economic condition of the rural poor, had observed that the Self-Help Group movement has spearheaded the rural development in Burdwan district of West Bengal. The author however cautions that the continued success of the SHGs will depend on the resolution of few persistence issues like seasonal migration, family conservation and deficient communication.

3. OBJECTIVE OF THE STUDY

Self-Help Groups (SHGs) have played a major role in changing the living conditions of the rural poor, both on the economic and social side. SHGs also have a positive impact on the standard of living of the rural poor with the economic development of women. Under this backdrop, this paper attempts to explore the impact of SHGs on the rural livelihood. In specific terms the objective of the study are as follows:

1. To assess the impact of Self-Help Groups on the standard of living of the rural poor in the study area through analysis of food consumption and non-food consumption i.e. expenditure on fuel and energy, health care and education.
2. To investigate empirically the relevance of the Engel's law (i.e. as income increases, the proportion of income spent on food and other necessities decreases) by using our survey data of rural households that reflects the living standards of the rural households

4. DATA AND METHODOLOGY

This paper is an attempt to study the socio-economic development of the rural people through Self-Help-Groups in Hooghly district of West Bengal. For the purpose of this study both the primary and secondary data have been used. The primary data were collected from field survey through filled in questionnaire and direct interview method. The secondary data were collected from different journals, books, relevant documents, newspapers and records of National Rural Livelihood Mission (NRLM) under Ministry of Rural Development, Govt. of India.

The evidence presented in this paper is based on the primary data collected from field survey on SHG in Hooghly District in West Bengal during the period 2017-18. The field survey was undertaken in 5 villages of Pandua block in the district of Hooghly in West Bengal, India; viz Boichigram, Nuniagram, Dantsar, Berala, Sadkat. Total 200 households were surveyed. These villages were selected for the survey because they were economically backward and several active SHGs have been formed.

Model-I relates to the estimation of standard of living measured by the four indicators of the economic condition of the rural poor i.e. annual expenditure on food and nutrition, education, health and fuel & energy. We investigate on food as well as non-food products.

Model-II estimates the standard of living through the proportion of income spent on food and non-food consumption.

Model-I

We have used multiple regression technique to examine the impact of SHG membership on standard of living. In our model, we have considered four separate regression equations. We have further considered four dependent variables (i.e. expenditure on food and nutrition, expenditure on education, expenditure on health and expenditure on fuel and energy) for the regression equations. All the dependent variables are function of land, income, SHG membership, household and community characteristics and random disturbance term.

Our specified model is

$$EXPEFA = \alpha_0 + \alpha_1 AVGAGE + \alpha_2 CASTE + \alpha_3 EDULVL + \alpha_4 OWNLAND + \alpha_5 FAMSIZE + \alpha_6 FEMPER + \alpha_7 DEPRATIO + \alpha_8 SHGMEM + \alpha_9 AINCOME + \alpha_{10} ASAVING + u_1$$

..... (1A)

$$EXPEDA = \beta_0 + \beta_1 AVGAGE + \beta_2 CASTE + \beta_3 EDULVL + \beta_4 OWNLAND + \beta_5 FAMSIZE + \beta_6 FEMPER + \beta_7 DEPRATIO + \beta_8 SHGMEM + \beta_9 AINCOME + \beta_{10} ASAVING + u_2$$

..... (1B)

$$EXPHA = \gamma_0 + \gamma_1 AVGAGE + \gamma_2 CASTE + \gamma_3 EDULVL + \gamma_4 OWNLAND + \gamma_5 FAMSIZE + \gamma_6 FEMPER + \gamma_7 DEPRATIO + \gamma_8 SHGMEM + \gamma_9 AINCOME + \gamma_{10} ASAVING + u_3$$

..... (1C)

$$EXPENGA = \lambda_0 + \lambda_1 AVGAGE + \lambda_2 CASTE + \lambda_3 EDULVL + \lambda_4 OWNLAND + \lambda_5 FAMSIZE + \lambda_6 FEMPER + \lambda_7 DEPRATIO + \lambda_8 SHGMEM + \lambda_9 AINCOME + \lambda_{10} ASAVING + u_4$$

..... (1D)

Here the dependent variables are defined as follows:

(1A) Annual expenditure on Food (*EXPEFA*) in Rupees:

The household expenditure on food implies the spending for daily food items i.e. food grains, vegetables, edible oil, grocery, fish, egg, meat, etc. of all the family members in the household

(1B) Annual expenditure on Education (*EXPEDA*) in Rupees:

The household expenditure on education implies the expenditure for school fees, tuition fees, cost of purchasing books, notebooks, etc. for all the members of the household who are studying in school or college.

(1C) Annual Expenditure on Health (*EXPHA*) in Rupees:

The expenditure on healthcare include all the medical cost i.e. expenditure for medicine, doctor's fees, charges for diagnostic test as well as expenditure for hygiene i.e. sanitary facility and safe drinking water, etc.

(1D) Annual Expenditure on Fuel and Energy (*EXPENGA*) in Rupees:

By the expenditure on fuel and energy we mean expenditure on fuel for cooking, lighting, vehicle, etc.

The Explanatory variables are defined as follows:

AVGAGE = Average age of the household in years;

We hypothesized that younger members have more willingness and the capability to work hard and thus improve their standard of living.

CASTE = Caste of the household;

There are four legal castes namely General caste, Other Backward caste, Schedule Caste and Schedule Tribe. We have considered caste as a binary variable indicating:

$CASTE = 1$, if the individual belongs to General caste

$CASTE = 0$, if the individual belongs to any caste other than General caste (viz. Schedule Caste, Schedule Tribe or Other Backward caste)

It is generally presumed that people in the rural area belonging to General caste get more facilities from SHG and other economic activities as compared to people belonging to Schedule caste, Schedule Tribe or Other Backward caste. Therefore it is hypothesized a positive relationship between caste and standard of living.

EDULVL = Educational Level of the household;

We have considered the highest educational level of the household in a five-point scale, viz. 1-Illiterate; 2-Primary; 3-Secondary; 4-Higher Secondary; 5- Degree; in order to capture the effect of education on standard of living and we hypothesized that the relationship to be positive.

OWNLAND = Total land owned by the household in *bigha* (1 *bigha* = 1333 m²);

Land is one type of asset of the individual and helps both directly and indirectly in rural livelihood. Therefore, we hypothesized a positive relationship between standard of living and land property

FSIZE = Family size of the household;

Family size is an important determinant of rural livelihood. The larger the family size, the higher is the labour time available for farming and non-farming activities and this increases the family income. Therefore we hypothesized a positive relationship between rural livelihood and family size.

FEMPER = Percentage of female members in the household;

In rural area, we observe that mostly female members join the SHG activities which help them earn money. The participation of women in Self-Help Groups made a positive impact on their empowerment aspects. Hence we hypothesized a positive relationship between female percentage and rural livelihood.

DEPRATIO = Dependency Ratio;

Here, Dependency Ratio indicates the employment condition of the household i.e. ratio of number of non-working members to the number of working members of the household. As the number of non-working members increases in the family, the burden on the working members increases and this leads to fall in the standard of living.

SHGMEM = Duration of Self-Help Group membership (in months);

Membership of Self-Help Group is an important determinant of rural livelihood. Self-Help Group membership elevates the social status of the member and also increases access to different Government or NGO schemes. Poor households in rural area take loan from *Gramin Mahajans* (money lenders) at a high cost of borrowing. However, after joining SHG program, it becomes easier for them to access formal loan with an affordable cost of borrowing in order to meet their most critical expenditures. Therefore we hypothesized a positive relationship between SHG membership and rural livelihood.

AINCOME = Total annual income of the household measured in Rupees;

Income is an important determinant of standard of living. As income increases, actual expenditure on food and non-food products rises. So, we hypothesized the relationship between income of household and standard of living to be positive.

ASAVING = Annual savings of the household in Rupees;

If the household desires to improve standard of living by increasing expenditure on food and non-food products, then their saving will decrease. Hence it is hypothesized that there is a negative relationship between expenditure on food and non-food products and annual saving of the household.

Here $\alpha_0, \beta_0, \gamma_0$ and λ_0 are constants. Further $\alpha_i, \beta_i, \gamma_i$ and λ_i are the constants coefficients associated with the explanatory variable ($i = 1, 2, \dots, 10$) and u_i ($i = 1, 2, 3, 4$) are the random disturbance term.

MODEL-II

A multiple regression model has been used to examine the relevance of Engel’s Law. We now turn to the consumption pattern and standard of living of the household. Engel’s law is an observation in Economics stating that as income rises, the proportion of income spent on food and other necessities falls, even if the actual expenditure of these items rise i.e. consumers increase their expenditure for food and other necessary products in lesser proportion as compared to their increase in income.

The basic function for investigating the Engel’s Law includes expenditures on food and non-food items as a regressand and income as the only regressor. However, in accordance with the theory of consumer behaviour, the function for estimation also includes demographic factors namely family size, average age of the household, education level, and dependency ratio.

Our specified model is:

$$EXINRF = A_0 + A_1AVGAGE + A_2FAMSIZE + A_3EDULVL + A_4DEPRATIO + A_5AINCOME + e_1 \dots\dots\dots (2A)$$

$$EXINRED = B_0 + B_1AVGAGE + B_2FAMSIZE + B_3EDULVL + B_4DEPRATIO +$$

$$B_5 AINCOME + e_2 \dots\dots\dots (2B)$$

$$EXINRH = C_0 + C_1 AVGAGE + C_2 FAMSIZE + C_3 EDULVL + C_4 DEPRATIO + C_5 AINCOME + e_3 \dots\dots\dots (2C)$$

$$EXINRENG = D_0 + D_1 AVGAGE + D_2 FAMSIZE + D_3 EDULVL + D_4 DEPRATIO + D_5 AINCOME + e_4 \dots\dots\dots (2D)$$

Here the variables are defined as follows:

EXINRF : The proportion of income spent on food and nutrition for all the household members in Rupees

EXINRED : The proportion of income spent for educational purposes in Rupees

EXINRH : The proportion of income spent for hygiene and health care in Rupees

EXINRENG : The proportion of income spent on fuel for cooking, lighting, vehicle, etc. in Rupees

AVGAGE : Average age of the Household in years

FAMSIZE : Total number of members of the household

EDULVL : Educational level of the household

DEPRATIO : Dependency Ratio that indicates proportion of non-working members to the total members of the household which indicates employment condition of the household

AINCOME : Total annual income of the household measured in Rupees

Here A_0, B_0, C_0 and D_0 are the constants. Further A_i, B_i, C_i and D_i are the constants coefficients associated with the explanatory variables ($i = 1, 2, \dots, 5$) and e_i ($i = 1, 2, 3, 4$) are random disturbance term.

5. EMPIRICAL RESULTS AND DISCUSSION

A. Socio-Economic characteristics of the respondents in the study area:

The socio-economic characteristics of the respondents in the study area who were all SHG members is analysed in Table 1 as follows:

TABLE 1

SI No.	Variables and Categories	Frequency (nos.)	Percentage (%)	
1	AGE	Young adults (18 to 30 years)	66	33
		Middle age (31 to 50 years)	122	61
		Old age (above 50 years)	12	6
		TOTAL	200	100
2	EDUCATION	Illiterate	51	25.5
		Primary	38	19
		Secondary	36	18
		Higher Secondary	64	32
		College/University	11	5.5
		TOTAL	200	100
3	MARITAL STATUS	Married	163	81.5
		Unmarried	16	8
		Separated	7	3.5
		Widow	14	7
		TOTAL	200	100
4	CASTE	General	44	22
		SC	128	64
		ST	16	8
		OBC	12	6
		TOTAL	200	100
5	FAMILY SIZE	Small (1 - 4 members)	126	63
		Big (> 4 members)	74	37
		TOTAL	200	100
6	FAMILY LAND HOLDINGS	Landless	19	9.5
		Marginal (0 - 0.25 hectare)	132	66
		Small (0.25 - 0.50 hectare)	41	20.5
		Medium (0.50 - 1.0 hectare)	6	3
		Large (>1 hectare)	2	1
		TOTAL	200	100
7	ANNUAL INCOME OF THE FAMILY	Below Rs 0.5 Lakh	109	54.5
		Between Rs 0.5 - 1 Lakh	44	22
		Above Rs 1 Lakh	47	23.5
		TOTAL	200	100

Source: Field Survey (2017-18)

From the above Table 1, on the demographic category of age of the respondents, we can observe that majority of the SHG members i.e. 61 percent are in the mid age group (31 to 50 years), while 33 percent are in the young age group (18 to 30 years) and the balance 6 percent are in the old age group (above 50 years).

On the education front, we observe that 25.5 percent of the respondents were illiterate, 19 percent in the primary level, 18 percent in the secondary level, 32 percent in the higher secondary level, 5.5 percent in the graduate level.

On the category of marital status, 81.5 percent of the respondents were married, 8 percent were unmarried, 3.5 percent were separated and 7 percent were widow.

On the basis of caste categorisation of the respondents, 22 percent were General, 64 percent were Schedule Caste, 8 percent were Schedule Tribe and balance 6 percent were Other Backward Caste (OBC).

On the categorisation of family size of the respondents, 63 percent belongs to Small family size (1 - 4 members) whereas 37 percent belongs to Large family size.

Based on the categorisation of family land holdings of the respondents, we observe that 9.5 percent are landless, 66 percent are marginal (0- 0.25 hectare) land holders, 20.5 percent are small (0.25- 0.50 hectare) land holders, 3 percent are medium (0.50- 1 hectare) land holders and remaining 1 percent and 3 percent respectively are large (> 1 hectare) land holders.

On the basis of annual income of the family of the respondents, we observe that 54.5 percent of the respondents earn below Rs 5 Lakhs, 22 percent earn between Rs 0.5 Lakh to Rs 1 Lakh and balance 23.5 percent earn above Rs 1 Lakh.

B. Regression Results

Model –I

The results of our eight regression estimates are presented in the following Table 2:

Table 2A: Determinants of Expenditure on Food in Pandua Block

Dependent Variable: EXPFA

Method: Least Squares

Sample: 1 200

Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	79.17621	37.17293	2.129943**	0.0345
CASTE	-406.6929	1074.794	-0.378391	0.7056
EDULVL	-321.2258	316.1180	-1.016158	0.3109
FAMSIZE	568.0243	250.8789	2.264137**	0.0247
FEMPER	-22.86113	18.73730	-1.220086	0.2240
DEPRATIO	462.3808	437.3468	1.057240	0.2918
OWNLAND	1075.044	180.9592	5.940811*	0.0000
AINCOME	0.748824	0.023867	31.37472*	0.0000
ASAVING	-0.677411	0.062496	-10.83922*	0.0000
SHGMEM	-94.19839	17.56493	-5.362869*	0.0000
R-squared	0.957846	Mean dependent var	43328.53	
Adjusted R-squared	0.955817	S.D. dependent var	28048.20	
S.E. of regression	5895.653	Akaike info criterion	20.25125	
Sum squared resid	6.50E+09	Schwarz criterion	20.41791	
Log likelihood	-1984.748	Hannan-Quinn criter.	20.31871	
Durbin-Watson stat	1.532290			

Source: Estimated using Eviews 10 Software package based on field survey data

*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 2B: Determinants of Expenditure on Education in Pandua Block

Dependent Variable: EXPEDA

Method: Least Squares

Sample: 1 200

Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	0.200110	15.32840	0.013055	0.9896
CASTE	-411.3562	443.1955	-0.928160	0.3545
EDULVL	0.139332	130.3524	0.001069	0.9991
FAMSIZE	96.94453	103.4509	0.937107	0.3499
FEMPER	2.308133	7.726399	0.298733	0.7655
DEPRATIO	-198.2294	180.3416	-1.099188	0.2731
OWNLAND	-84.50859	74.61920	-1.132531	0.2589
AINCOME	0.054429	0.009842	5.530440*	0.0000
ASAVING	-0.024186	0.025771	-0.938494**	0.0492
SHGMEM	54.78630	7.242964	7.564072*	0.0000
R-squared	0.793495	Mean dependent var	6256.708	
Adjusted R-squared	0.783556	S.D. dependent var	5225.521	
S.E. of regression	2431.095	Akaike info criterion	18.47950	
Sum squared resid	1.11E+09	Schwarz criterion	18.64616	
Log likelihood	-1810.231	Hannan-Quinn criter.	18.54696	
Durbin-Watson stat	1.542652			

Source: Estimated using Eviews 10 Software package based on field survey data
 *Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 2C: Determinants of Expenditure on Health Pandua Block

Dependent Variable: EXPHA
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	-60.83976	25.54716	-2.381469**	0.0182
CASTE	386.4603	738.6542	0.523195	0.6015
EDULVL	22.87381	217.2526	0.105287	0.9163
FAMSIZE	-440.8986	172.4169	-2.557165**	0.0113
FEMPER	13.00073	12.87724	1.009589	0.3140
DEPRATIO	20.15799	300.5674	0.067066	0.9466
OWNLAND	916.5111	124.3645	7.369556*	0.0000
AINCOME	0.134770	0.016403	8.216303*	0.0000
ASAVING	-0.164267	0.042951	-3.824556*	0.0002
SHGMEM	7.621353	12.07153	0.631350	0.5286
R-squared	0.815117	Mean dependent var	7138.355	
Adjusted R-squared	0.806218	S.D. dependent var	9204.314	
S.E. of regression	4051.797	Akaike info criterion	19.50114	
Sum squared resid	3.07E+09	Schwarz criterion	19.66780	
Log likelihood	-1910.862	Hannan-Quinn criter.	19.56860	
Durbin-Watson stat	1.740469			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 2D: Determinants of Expenditure on Energy in Pandua Block

Dependent Variable: EXPENGA
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	-18.53656	13.76906	-1.346248	0.1799
CASTE	431.5887	398.1097	1.084095	0.2797
EDULVL	298.4913	117.0918	2.549208**	0.0116
FAMSIZE	-224.0702	92.92690	-2.411252**	0.0169
FEMPER	7.552268	6.940400	1.088160	0.2779
DEPRATIO	-243.9934	161.9957	-1.506173	0.1337
OWNLAND	243.0418	67.02826	3.625960*	0.0004
AINCOME	0.061978	0.008841	7.010681*	0.0000
ASAVING	-0.134136	0.023149	-5.794450*	0.0000
SHGMEM	31.79073	6.506144	4.886263*	0.0000
R-squared	0.783771	Mean dependent var	4649.239	
Adjusted R-squared	0.773364	S.D. dependent var	4587.174	
S.E. of regression	2183.782	Akaike info criterion	18.26493	
Sum squared resid	8.92E+08	Schwarz criterion	18.43159	
Log likelihood	-1789.096	Hannan-Quinn criter.	18.33240	
Durbin-Watson stat	1.803903			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

From the above Tables we observe that in most of the cases, the results are consistent with our hypothesis. As expected, income (*AINCOME*) has been found to have a positive and significant influence on food expenditure and non-food expenses viz. health, education and energy. Most of our sample household belong to low income group. Hence as income increases their actual expenditure on food as well as other products i.e. on health, education and energy also increases and thereby improves their standard of living. We observe from the Table that coefficient of saving (*ASAVING*) have negative and significant impact on expenditure of food, health, education and energy. It is quite natural that if expenditure on food and non-food products increases then savings of the household decreases.

The most important finding of this study is impact of Self-Help Group Membership (*SHGMEM*) on expenditure of food and non-food products and we hypothesized a positive relationship between the two. In contrary to our hypothesis, the relationship between Self-Help Group membership and expenditure on food was found to be negative and significant in our

study area. However, we have a positive effect of SHG membership on expenditure on education, health and energy. In cases of expenditure on education and energy, the results are positive and significant in the surveyed area. However, in the case of expenditure on health, although the coefficient is positive but it is not statistically significant. In fact, Self-Help Group is considered to be a vital tool for improvement of the standard of living in rural areas. SHG has a positive impact on non-food consumption. It is known fact that it is the women members who participate in the Self-Help Group activities and thus the SHG membership actually helps to improve the status of the women in the family as well as in the society. By becoming a member of the SHG, the women are empowered and they understand the importance of education, health and other non-food expenditures. Thus, the relationship between Self-Help Group membership and expenditure on non-food consumption is found to be positive and significant.

The educational level (*EDULVL*) was found to be one of the most important determinants of rural livelihood. The results indicate a positive relationship between education level and expenditure on education, health and energy and negative effect on food expenditure. However, the result is significant only in the case of Energy expenditure. Education helps the rural households to get better job opportunities and alternate income. Hence educated people improve their standard of living in a better way as compared to low-educated and illiterate people. On the contrary to our hypothesis we observed negative relationship between education level and food expenditure. However, the result is insignificant in this case. We hypothesized a positive relationship between standard of living and land property (*OWNLAND*). We observed expected result i.e. positive and significant in the case of food, health and energy expenditure. However, we find contradictory result in the case of expenditure on education, although the result is insignificant in this case. We hypothesized that family size (*FAMSIZE*) was found to be positively related to expenditure on food and non-food consumption. It is expected that larger the family size, the higher is the labour time available for farming and non-farm activities which increases their food and non-food expenditure through increased income. However, result is positive and significant only in the case of food expenditure. We have negative and significant effect on expenditure on health and energy. It may be due to the fact that in our surveyed villages number of dependent members are high in the family. Here larger family size does not mean larger income. Therefore, in our surveyed households as family size increases only expenditure on food increases.

As expected, the coefficient of female percentage (*FEMPER*) is seen to be negative in case of expenditure on food and positive on education, health and energy. Since the women are mainly involved in SHG activities, as the number of female members in the family increases relative to the male members, the importance of expenditure on education, health and energy increases in

the household. Average age (*AVGAGE*) of the household has been found to have a positive influence on expenditure of food and education and negative impact on expenditure of health and energy in the study area. This can be explained in two ways; on one hand, with increase in age, the experience of the person increases which in turn increases their employment opportunities and income and thus improves their standard of living; on the other hand, young and energetic members are more capable of improving their standard of living.

Dependency Ratio (*DEPRATIO*) is positive in case of expenditure on food and health and negative in case of energy in the study villages. In case of expenditure on education we observe negative results in the study area. As dependent member increases in the family, major portion of income is spent on food and health purposes. This leads to shortage of money for the household resulting in lower expenditure on education and other non-food products. However, the result is insignificant. In contrary to our hypothesis, caste (*CASTE*) is negatively related to expenditure on food and education. However, in this case also we observe that the result is insignificant.

Model-II

According to Engel's law consumers increase their expenditure for food and other necessary products less than their increase in income i.e. income elasticity of demand for food and other necessary products was relatively low. Therefore, we hypothesized negative relation between income and proportion of income spent on food, education, health and energy

Table 3A: Determinants of Expenditure Income Ratio (Food) in Pandua Block

Dependent Variable: EXINRF
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	0.010153	0.000844	2.024300*	0.0000
EDULVL	-0.031779	0.008046	-3.949606*	0.0001
FAMSIZE	0.038713	0.006290	6.154185*	0.0000
DEPRATIO	0.043562	0.011361	3.834407*	0.0002
AINCOME	-5.79E-07	2.24E-07	-2.584016**	0.0105
R-squared	1.090075	Mean dependent var		0.657475
Adjusted R-squared	1.133393	S.D. dependent var		0.107494
S.E. of regression	0.157008	Akaike info criterion		-0.840117
Sum squared resid	4.757716	Schwarz criterion		-0.757080
Log likelihood	88.17160	Hannan-Quinn criter.		-0.806507
Durbin-Watson stat	1.686433			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 3B: Determinants of Expenditure Income Ratio (Education) in Pandua Block

Dependent Variable: EXINRED
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	0.001514	0.000280	5.399001*	0.0000
EDULVL	0.003032	0.002672	1.134639	0.2579
FAMSIZE	0.007314	0.002089	3.501066*	0.0006
DEPRATIO	-0.000869	0.003773	-0.230261	0.8181
AINCOME	-4.62E-08	7.44E-08	-0.621102	0.5353
R-squared	0.080882	Mean dependent var		0.091869
Adjusted R-squared	0.103284	S.D. dependent var		0.049639
S.E. of regression	0.052139	Akaike info criterion		-3.044872
Sum squared resid	0.524669	Schwarz criterion		-2.961835
Log likelihood	306.4423	Hannan-Quinn criter.		-3.011261
Durbin-Watson stat	1.127724			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 3C: Determinants of Expenditure Income Ratio (Health) in Pandua Block

Dependent Variable: EXINRH
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	0.000901	0.000237	3.805274*	0.0002
EDULVL	0.008949	0.002257	3.964716*	0.0001
FAMSIZE	-0.000566	0.001765	-0.320542	0.7489
DEPRATIO	0.001712	0.003187	0.537186	0.5918
AINCOME	-3.83E-07	6.28E-08	-6.105778*	0.0000
R-squared	0.108390	Mean dependent var	0.089747	
Adjusted R-squared	0.089911	S.D. dependent var	0.046167	
S.E. of regression	0.044043	Akaike info criterion	-3.382380	
Sum squared resid	0.374376	Schwarz criterion	-3.299343	
Log likelihood	339.8556	Hannan-Quinn criter.	-3.348769	
Durbin-Watson stat	1.537793			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

Table 3D: Determinants of Expenditure Income Ratio (Energy) in Pandua Block

Dependent Variable: EXINRENG
Method: Least Squares

Sample: 1 200
Included observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
AVGAGE	0.000770	0.000164	4.684883*	0.0000
EDULVL	0.007548	0.001566	4.820460*	0.0000
FAMSIZE	0.002474	0.001224	2.021009**	0.0447
DEPRATIO	0.001619	0.002211	0.732408	0.4648
AINCOME	-5.61E-08	4.36E-08	-1.288220	0.1992
R-squared	0.049851	Mean dependent var	0.066263	
Adjusted R-squared	0.071610	S.D. dependent var	0.029517	
S.E. of regression	0.030555	Akaike info criterion	-4.113625	
Sum squared resid	0.180191	Schwarz criterion	-4.030588	
Log likelihood	412.2489	Hannan-Quinn criter.	-4.080015	
Durbin-Watson stat	1.590371			

Source: Estimated using Eviews Software package based on secondary data
*Significant at 1% level; **Significant at 5% level, ***Significant at 10% level

As observed from the above tables, in line with our expectation, income (*AINCOME*) has been found to have a negative influence on expenditure of food, and non-food products. Therefore, the relevance of Engel's Law was established. The relation is significant in cases of expenditure on food and health in the surveyed villages in the study area.

The size of the household is expected to be negatively related to proportion of income spent on food. The larger family size (*FAMSIZE*) indicates higher labour time for earning activities and higher income. Hence, as family size increases, expenditure income ratio for food and non- food products decreases. In contrary to our expectation, family size was found to be positively related with the proportion of income spent on food, education and energy and the result is statistically significant. In our surveyed villages larger family size did not mean larger income as number of dependent members are high in the family. Therefore, in our surveyed households as family size increases only expenditure on food and non-food products increases. In line with our expectation, the regression result shows that family size has negative impact on the proportion of income spent on health. However, the coefficient was not statistically significant. We hypothesized younger household have more energy and capability to work hard and improve their standard of living. As expected in our hypothesis, we observe from our regression result that Average age (*AVGAGE*) of household has positive and significant result in all the cases.

Education (*EDULVL*) also influence consumption pattern of the household. Educated people get better job opportunities and alternative income. Education induces preference for quality products over the quantity of food consumed. Therefore, proportion of income spent on food would be inversely related to the level of education. As expected, we observe a negative and significant influence of education on expenditure income ratio for food and positive influence for education, health and energy in both the blocks. It was expected that number of dependent members in the family increases household expenditure on consumption items, especially that of food items. In line with our expectation, dependency ratio (*DEPRATIO*) has positive and significant impact on proportion of income spent on food in the study villages.

Thus, the analysis of the empirical results in the study area indicates that the participation of the rural women in SHG have helped them in gaining entrepreneurship, employment and income, thereby leading to the overall socio-economic upliftment of their livelihood.

6. CONCLUSION

Self-Help Groups membership has had a significant impact on the socio-economic development of the rural poor. SHG programmes have helped the rural poor to gain access to credit from various financial institutions. SHGs have provided them the opportunity to open a bank account, save and invest money. This has helped to raise their income and thus alleviate poverty to a large extent.

Female households are mostly engaged in SHG programme which enables them to become active, knowledgeable and economically independent. SHGs play a vital role in changing saving pattern of the household. Therefore, we may conclude that SHG membership improves food security and non-food expenditure and thereby enhance the standard of living of the members.

7. POLICY PRESCRIPTIONS

SHG programmes play a very crucial role in rural livelihood. There are few suggestions for better implementation of the SHG activities:

- Proper emphasis should be given to formulate SHGs to improve the lives of the poor and alleviate poverty.
- There should be proper regulating authority at each level (i.e. saving, depositing, money lending, etc.) in order to avoid any misuse of money.
- Training programme to all the member participants should be imparted regularly by the NGOs and other Government officials in order to make them aware about bank loan, proper accounts, decision making etc.
- The NGOs and the State Government should efficiently monitor the performance of SHG at regular intervals.
- SHGs member should participate in every meeting and workshops.
- Member of SHGs especially the women should be properly educated so that they can manage the programme very efficiently.
- A computerised MIS for SHGs and SHG federations should be established for better performance at a regular basis.

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