

Construction of women empowerment index: an impact study of self-help group interventions in Jhajjar District of Haryana

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Abstract

Objectives: Present study focuses on the creation of women empowerment index in Jhajjar district of Haryana through the intervention of self-help groups. Study is intended to analyses women's role in socio-economic, and political sections of the society enhanced because of their energetic contribution in SHGs, therefore, the study has made it a goal to examine the social, political, economic and personal empowerment of women.

Methods & Analysis: A stratified multi-stage sampling was used to collect the data. Jhajjar district was chosen from Rohtak division and further three Blocks namely Badli, Bahadurgarh, Jhajjar were chosen and from each block one VO Kheri Khumar, Lowa Khard, and Kheri Jat were selected respectively. Total 90 women beneficiaries from SC and OBC with equal distribution were chosen to collect primary data through Likert scale. Composite index and factor analysis were used with 22 indicators to examine the empowerment of women in Jhajjar District.

Findings: Study found that PLEI (political empowerment) is most affected through SHGs intervention in Jhajjar district of Haryana. The foremost cause is that after joining the SHG, women are politically awake. Women are sure to make any decision because they are conscious of her civil liberties and laws. Women are well-known of their property rights. All SHG women have their own Aadhar card or Voter ID card. At the time of elections, women vote independently to their elected candidates. Women are actively participating in government programs. SHGs are government programs and every woman is actively participating to increase the performance of its groups. Rural women SHG members are known about the work of the local Panchayat and they are getting all the benefits from Panchayat.

Improvement: While examining the impact of each indicator on composite women empowerment it was found that economic empowerment is the most significant and registered highest value thus it can be stated that women's socio-economic status rise after joining SHGs in Jhajjar District of Haryana.

Keywords: SHGs, Women Empowerment, Economic Empowerment, Political Empowerment, Social Empowerment, Personal Empowerment.

1. Introduction

According to the study of the Indian government had announced the year 2001 to focus on "Women's Empowerment Year" on one sight, where there are equal partners like men [1]. Our country's position of women was very weak in society and many of them are not prepared to work for many reasons, such as family pressure and fear of husband, shame, male dominance, cultural barriers like parda system etc. But the truth is that now women are ready to come forward and want social and economic independence, to make their identity among society. There are several platforms where women are proving themselves, and making their own identities such as sports, media, space, politics, and entrepreneurship. SHG is one of the important platforms provided by the government and microfinance for proving them as an entrepreneur and making them independent. The purpose of SHG is to focus women on their socioeconomic independence, entrepreneurship development, and its powerful incentives for women are a decrease in poverty and enhance the women's empowerment. This study found that after joining the SHGs, women are much more empowered now in social awareness, savings, income, self-employment and debt repayment. These positive effects are possible due to the involvement of women in training and social awareness programs conducted by SHGs time to time [2].

This study revealed that after ninth five year plan, SHGs conducted several programs for women empowerment. Women in West Bengal were becoming financially empowered due to their active participation in SHGs. Study showed evidently that SHG members were improving socio-economically better than nonmembers of SHG in the selected groups [3]. This study analyzed caste and spiritual stage of empowerment of women in Paschim Medinipur district in this study. This study describes before joining SHG SC, ST, OBC and Muslim women were worst in comparison to the general caste women but later after joining the SHGs significant changes were observed in the social and economic condition of the rural women belonging to SC, ST, OBC and Muslim castes [4].

2. Objectives

1. To construct the women empowerment index for Jhajhar district of Haryana influenced through Self-Help Groups intervention.
2. To examine the major factor determining Women empowerment in Jhajhar district of Haryana influenced through Self-Help Groups intervention.

3. Sample, Data and Methodology

Present study is intended to examine the position of women and transform in condition after joining the SHG in Jhajhar district. Study is focused on social, economic, political and personal empowerment of women after joining the SHGs and attempted to analyze the significant changes brought by microfinance interventions in Jhajhar district. Studies chose both primary and secondary data to analyze the same. 90 SHG beneficiaries were taken in sample size belonging to the SC and OBC community. A Stratified multi-stage sampling was used to collect the data. Jhajhar district was chosen from Rohtak division and further three Blocks namely Badli, Bahadurgarh, Jhajjar were chosen and from each block one VO KheriKhumar, LowaKhard, and KheriJat were selected respectively. From each VO, 30 SHG women Beneficiaries were preferred to examine the impact SHGs on their socio-economic livelihood. In this study, women empowerment has developed some statistical tools and techniques to develop INEDX. This technique is implemented based on district wise and indicators. Social, economic, personal development and political empowerment have been reflected in the income index for the women empowerment in Haryana. Each indicator contains some statement that directly affects the indicators of objectives.

4. Questionnaire frameworks and Women Empowerment Indicators

Study used the five point likert scale (strongly agree to get 5, agree to get 4, get neutral 3, get disagreement 2 and strongly disagree 1) to analyze the data. Determinants/indicators were chosen based on past studies such as this study used mobility, financial status, income, financial decision making, property, confidence level, skill, voting, using indicators for key female empowerment through SHGs. Whereas used major social and economic women development indicators were saving, financial decision making, credit, employment, participation in local government programme, self-confidence, family violence, assets amenities, and community participation [5,6]. This study has used the indicators such as freedom from mobility, decision making, political participation, awareness, economic security and freedom from domination by husband and family members [7]. This study five major dimensions of the social economic impact of SHGs in women empowerment social impact, economic impact, personal development and political impacts. This study was elaborating each dimension in different sub-indicator [8]. This study used some basic or complex sign of women empowerment during SHG those are age-wise, family system wise, getting a loan, saving, social status, the purpose of loan availed, repayment of loan, income, expenditure, and assets [9] as shown in Table 1.

Table 1. Indicators of measuring women empowerment in Jhajhar District of Haryana

Economic Empowerment Indicators	Social Empowerment Indicators	Personal Empowerment Indicators	Political Empowerment Indicators
Ability To Generate Sufficient Income	Mobility	Self Esteem	Ownership of Rights And Status of Law
Ability To Spend Money Responsible/Wisely	Freedom From Domination	Autonomy	Political Participation
Effective Money Management	Exposure To Information Media	Decision Making Power	Property Rights
Saving	Participation Development Programme	Achievement Oriented Behavior	Contribution In Government Programme
Ability To Invest	Using Social Capital		
Assets	Social Awareness		
Attitude Towards Future Expenditure	Using Information And Following Rationality		
Buying Behavior And Rationality			
Purchasing Power Has Been Enhanced			
Employment Opportunity			
Living Standard			
Loan Frequency And Repayment Of Loan			
12 Indicators	7 Indicators	4 Indicators	4 Indicators

In order to develop the women empowerment index, PCA or factor analysis is used to reduce the current data set's mobility and factor loading. This weight is used to generate the overall index method of Jhajhar district of Haryana. This study used factors analysis for developed composite index methods. This study defined the weight of each indicator through weighted factor analysis. This study used weighted factor analysis for measured the urbanization index [10]. This study developed the Index to measure the change in agriculture and overall development state while comparatively analyzing both the indicators at district level and mapping out the disparities between them. This study developed the Index to explain level of rural development and speed of rural transformation given period of time.

5. Composite index methods

To develop the composite index, data has been determined using key component analysis. As a single interpretation of an index, it is still a general interpretation that captures information from multiple indicators in an overall measure, usually taking the form (Figure 1):

$$\text{Composite index} = \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \dots + \alpha_n X_n \dots \dots \dots \text{Eq (1)}$$

This equation interpreted the methods of the composite index, where the data represents the weight to be determined; the same is the appropriate subset of the N variables measured in the Xn survey [11].

Formula used to develop women empowerment index:

$$\dots\dots\dots (Eq. 2)$$

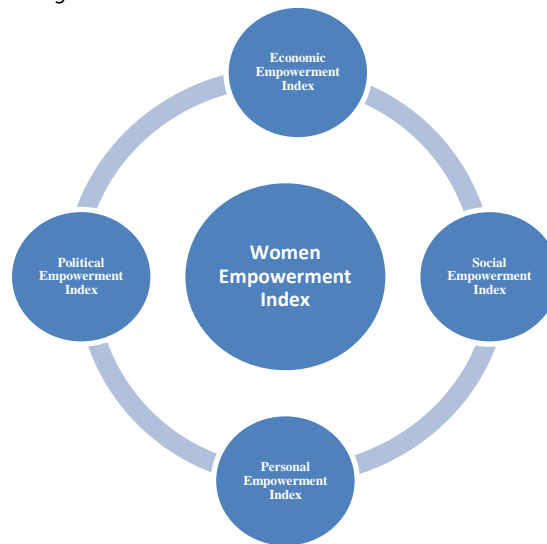
$$\dots\dots\dots (Eq. 3)$$

$$WEI = \frac{EEI + SEI + PLEI + PDEI}{4}$$

$$Z_{ij} = \frac{(x_{ij}) - \text{Min}(x_{ij})}{\text{Max}(x_{ij}) - \text{Min}(x_{ij})}$$

The above mentioned method is used to measure indicators-wise empowerment index, and for Jhajhar district as well.

Figure 1. The WEI and its contributor sub-indicators



For the creation of WEI, all the indicators shown in the upper graph are used. It is a high impact factor for the empowerment of women in economic, political, social and personal development. WEI is developed through the Economic, Political, Social and Personal Development Empowerment Index. The methods given below are used to develop the overall index of empowerment women through SHG. These techniques are applied to calculate the overall index indicator, which has been given WEI values for all the factors. High index value in this analysis means high level empowerment and low value means that the importance of women empowerment through SHG in Haryana is low. This index indicates that SHG is actually helpful in women empowerment in Haryana. A woman's empowerment depends on paramount importance like social empowerment (SE), economic empowerment (EE), political empowerment (PE) and personal development empowerment (PDE), physical-empowerment and other things. The current study has used four key indicators to measure female empowerment. These are explained below.

1. Economic empowerment (EE)

Economic empowerment means that women are capable of economic (wealth) approach. The current study used some key indicators to measure economic empowerment. It has the ability to generate enough income, ability to spend money responsibly, effective money management, savings, investment ability, property, attitude towards future expenses, improve behavior and rationality, increase in purchasing power, employment opportunities, living standards and debt frequency and Repayment of debt.

2. Social empowerment (SE)

Social empowerment defined that when women are free from social barriers and feel free and spend their lives without any burden. Some sub-indicators have been used to measure social empowerment in the current study: Mobility, freedom from supremacy, exposure for information media, participation development program, using social capital, social awareness and observance of information and rationality to use.

3. Political empowerment (PE)

Political empowerment implies that when women actively participate in politics, being conscious about their constitutional rights and basic rights; independently use their voting rights, which make women politically empowered. Some indicators have been used to measure political empowerment studies: Rights and government programs are owned by the status of the law, political participation, property rights and contributions.

4. Personal development empowerment (PDE)

Personal development empowerment means when women believe in self-belief for their work and survive life, women are capable to stand for them fearlessly among the society, women are asked to empower their personal and profession decisions, the personal development of women. Some indicators used to empower women to measure personal development are Self Esteem, Autonomy, Decision Making Power and Achievement-Oriented Behavior.

6. Period of the study

For analysis, the annual data was used for the period 2008-9 to 2017-18. The selection of the period was mainly influenced by the availability of data on the SHGs bank linkage program i. E., data is available from 2008 to 2017. The primary data collected for the analysis period has been selected for 2018-19 financial years.

7. Expression of consistency analysis

On the basis of the value of KMO, Haryana has defined the measurement of the adequacy of sample (MSA) to study the women's empowerment through SHG and in this study, different grades of KMO values have been found. According to Kaiser (Kaiser and Rice, 1974), the following guidelines were proposed to explain the Index: 9.99 times equivalent to Marvelus, equal to 8 Mercury, equal to 7.7th in parallel, 6 equal to MediCare 5. Sad and blown away Range out of the 5 unreachable of MSA. MSA values range from zero to one and the large value of the MSA is another form of evidence that there are variable factors.

Barlett's test of Sphericity is conducted to determine if the observed correlation matrix is statistically significant different from an identity matrix (i.e diagonal elements are 1 and off diagonal elements are 0). Statistically significant results for (Barlett's test) are desirable as they allow you to reject the null hypothesis, which states that the observed correlation matrix equals the identity matrix. Therefore we want this test to be significant (value less than .05). For these data Barlett's test is highly significant ($p < .001$) and therefore PCA is appropriate. In [12] this analysis value of variance explained coming from after component rotation. All the factors are overall clarify the percentage (%) of total variance in women empowerment after joined the SHGs in Haryana. Under PCA all the factors Eigen value is greater than one. The factors used to develop the overall index of women empowerment are considered correct [13].

To understand the relative significance of the empowerment indicators we have calculate the rotated component matrix of women's empowerment through SHGs in Jhajjar District. In this study rotated factors loading in case of women's empowerment level in Haryana. Here those indicators are more weight under the component-1 and those indictors more weight but less than component-1 under the component-2.

8. Empirics and Discussion

The Table 2 found that SC / OBC are between a large age group of women (30-40 years). In SC / OBC, 53% of women are in SHG for 30-40 years.

It was found through the Table 2 that a large number of 80% (SC / OBC) female members are married. Through the Table 2 it has been concluded that a large number of women members are engaged in the work of agriculture and daily wages. A large number of 46% OBC women work in agriculture and animal husbandry. In case of SC women, 42% of the women are engaged in daily wages.

The majority of SHG beneficiaries do belong to BPL families. A very few women can use the debit card. In case of OBC women, 13% of women and SC 8.9% women are able to use debit card. A large number of SHG women are uneducated. 33% OBC women have completed formal schooling, but in case of SC women it has been found that 44% of women are illiterate and they have never even attended school.

The upper writing table reported that after joining the SHGs, the monthly income level of women was up to 3001 to 5000 rupees the context of OBC women, the monthly income of 66% of respondents is between 3001 and 5000 rupees he context of SC women 68% female respondents are earning monthly 3001 to 5000 rupees.

Table 2. Sample profile of SHG Women Beneficiaries of Jhajjar district of Haryana

Personal profile in Jhajjar district women SHGs members			
age (in years)	% of total respondents	% of OBC respondents	% of SC Respondents
20-30	22.2	20	26
30-40	53.3	60	46
40-50	23.3	17.8	28
50-60	1.1	2.2	0
60 above	0	0	0
Total	100	100	100
MARITAL STATUS			
Single	2.2	4.4	0
Married	88.9	82.2	95.6
Divorced	2.2	4.4	0
Widow	6.7	8.9	4.4
Separate	0	0	0
Total	100	100	100
OCCUPATION			
Salaried	5.6	2.2	8.9
self-employed	14.4	11.1	17.8
Business	15.6	22.2	8.9
agriculture and animal husbandry	33.3	46.7	22.2
daily wage labour	31.1	20	42.2
Total	100	100	100
ECONOMIC GROUP			
APL	8.9	11.1	6.7
BPL	91.1	88.9	95.6
Total	100	100	100
DEBIT CARD			
uses of debit card	11.1	13.3	8.9
not use of debit card	88.9	86.7	91.1
Total	100	100	100
EDUCATION			
Illiterate	37.8	31.1	44.4
Literate but not formally educated	26.7	28.9	26.7
no. of years of formal schooling completed	27.8	33.3	22.2
graduate and higher	7.8	6.7	8.9
Total	0	0	0
Income of the respondents			
up to Rs. 1000	4.4	4.4	4.4
1001-3000	11.1	15.6	6.7
3001-5000	66.7	66.7	68.9
5001-7000	14.4	13.3	15.6
7001-9000	3.3	0	6.7
Total	100	100	100

Source: Author's own computation

Upper writing Table 3 shows that PCA outcome those are helping for developed women empowerment composite index. KMO value is 0.803 is meritorious. It is ensure that the sample size in this study is adequate for PCA. The Bartlett's Test value is highly significant at ($p < 0.001$). It is ensuring that the chosen indicators of empowerment are inter-correlated. Therefore here PCA is suitable technique for examine the consequence of the chosen indicators in measuring empowerment. All the factors are altogether 46% of total variation clarifies in the women empowerment. Present analysis developed to two factors after rotated analysis. In this analysis we can see that Cronbach's Alpha value is greater than 7 means is acceptable range. It is ensure that good internal consistency of the indicators in the scale.

Table 3. Outcome of PCA with respect to economic empowerment in Jhajjar district of Haryana

KMO=0.803 Bartlett's Test of Sphericity (sig.)= .000			
S.n	Economic empowerment Factor (1)	Reliability	Variance Explained
1	x1	.757	46%
2	X3		
3	X5		
4	X8		
5	X6		
6	X4		
7	X7		
8	X10		
	Economic empowerment Factor :2	Reliability	
4	X12	.707	
5	X11		
6	X9		
7	X2		

Source: primary survey.

Author own computation: Where: X1= Ability To Generate Sufficient Income, X2= Ability To Spend Money Responsibly, X3= Effective Money Management, X4= Saving, X5= Ability To Invest, X6= Assets, X7= Attitude Towards Future Expenditure, X8= Buying Behavior And Rationality, X9= Purchasing Power Has Been Enhanced, X10= Employment Opportunity, X11= Living Standard, X12= Loan Frequency And Repayment of Loan.

Table 4. Outcome of PCA with respect to economic empowerment in Jhajjar district of Haryana

KMO= .817 Bartlett's Test of Sphericity (Sig.)=.000			
S.no.	Social empowerment factors (1)	Reliability	Variance Explained
1	x15	.813	48%
2	x17		
3	x16		
4	x13		
5	x19		
6	x18		
7	x14		

Source: primary survey

Author own computation: Where: X13=Mobility, X14=Freedom From Domination, X15=Exposure To Information Media, X16=Participation Development Programme, X17=Using Social Capital, X18=Social Awareness, X19=Using Information And Following Rationality

Upper writing Table 4 shows that PCA outcome those are helping for developed women empowerment composite index. KMO value is 0.817 is meritorious. It is ensure that the sample size in this study is adequate for PCA. The Bartlett's Test value is highly significant at ($p < 0.001$). It is ensuring that the chosen indicators of empowerment are inter-correlated.

Therefore here PCA is suitable technique for examine the consequence of the chosen indicators in measuring empowerment. All the factors are altogether 48% of total variation makes clear in the women empowerment. Present analysis developed to single factors after rotated analysis. In this analysis we can see that cronbach's Alpha value is greater than 8 means is good range. It is ensure that good internal consistency of the indictors in the scale. Upper writing Table 5 shows that PCA outcome those are helping for developed women empowerment composite index. KMO value is 0.78 is meritorious. It is ensure that the sample size in this study is adequate for PCA. The Bartlett's Test value is highly significant at ($p < 0.001$). It is ensuring that the chosen indicators of empowerment are inter-correlated. Therefore here PCA is suitable technique for examine the consequence of the chosen indicators in measuring empowerment. All the factors are altogether 67% of total variation gives details in the women empowerment. Present analysis developed to single factors after rotated analysis. In this analysis we can see that cronbach's Alpha value is greater than .8 means is good range. It is ensure that good internal consistency of the indictors in the scale.

Table 5. Outcome of PCA with respect to economic empowerment in Jhajjar district of Haryana

KMO= .788 Bartlett's Test of Sphericity (Sig.)=.000			
S.n	Political empowerment factors	Reliability	Variance Explained
1	x20	.833	67%
2	x21		
3	x22		
4	x23		

Source: primary survey. Author own computation

Where: X20=Ownership Of Rights And Status Of Law, X21=Political Participation, X22=Property Rights, X23=Contribution In Government Programme

Upper writing Table 6 shows that PCA outcome those are helping for developed women empowerment composite index. KMO value is 0.75 is meritorious. It is ensure that the sample size in this study is adequate for PCA. The Bartlett's Test value is highly significant at ($p < 0.001$). It is ensuring that the chosen indicators of empowerment are inter-correlated. Therefore here PCA is suitable technique for examine the consequence of the chosen indicators in measuring empowerment. All the factors are altogether 66% of total variation clarifies in the women empowerment. Present analysis developed to single factors after rotated analysis. In this analysis we can see that cronbach's Alpha value is greater than .8 means is good range. It is ensure that good internal consistency of the indictors in the scale.

Table 6. Outcome of PCA with respect to economic empowerment in Jhajjar district of Haryana

KMO= .751 Bartlett's Test of Sphericity (Sig.)=.000			
s.no	Personal development empowerment factors	Reliability	Variance Explained
1	x24	.820	66%
2	x25		
3	x26		
4	x27		

Source: primary survey

Author own computation: Where: X24=Self Esteem, X25=Autonomy, X26=Decision Making Power, X27=Achievement Oriented Behavior

9. Women empowerment index

Below given equation used for developed post joined SHGs women empowerment index.

$$EE (1)_i = .73_{x11i} + .65_{x31i} + .61_{x51i} + .58_{x8i} + .53_{x6i} + .51_{x4i} + .49_{x7i} + .4_{x10i} \quad \text{Eq5}$$

$$EE (2)_i = .84_{x12i} + .79_{x11i} + .55_{x9i} + .55_{x2i} \quad \text{Eq6}$$

$$EE(1)_i^* = \left(\frac{EE(1)_i}{EE(1)_{\max}} - \frac{EE(1)_{\min}}{EE(1)_{\min}} \right) \times 100\% \quad EE(2)_i^* = \left(\frac{EE(1)_i}{EE(1)_{\max}} - \frac{EE(1)_{\min}}{EE(1)_{\min}} \right) \times 100\%$$

$$EEI = \frac{EE(1)_i + EE(2)_i}{2}$$

$$SE(1)_i = .80_{x15i} + .73_{x17i} + .73_{x16i} + .70_{x13i} + .62_{x19i} + .62_{x18i} + .60_{x14i} \text{ Eq7}$$

$$SE(1)_i^* = \left(\frac{SE(1)_i}{SE(1)_{\max}} - \frac{SE(1)_{\min}}{SE(1)_{\min}} \right) \times 100\%$$

$$PLE(1)_i = .808_{x20i} + .87_{x21i} + .83_{x22i} + .76_{x23i} \text{ Eq8}$$

$$PLE(1)_i^* = \left(\frac{PLE(1)_i}{PLE(1)_{\max}} - \frac{PLE(1)_{\min}}{PLE(1)_{\min}} \right) \times 100\%$$

$$PDE(1)_i = .679_{x24i} + .87_{x25i} + .85_{x26i} + .83_{x27i} \text{ Eq9}$$

$$PDE(1)_i^* = \left(\frac{PDE(1)_i}{PDE(1)_{\max}} - \frac{PDE(1)_{\min}}{PDE(1)_{\min}} \right) \times 100$$

Upper righting equation comes through PCA factor rotated value. Rotated component matrix of women empowerment indicators use understands the relative importance of the indicators. First factor have more weight and another factors weight are lesser than first factor. In this equation shows that every given factors weight. To develop the composite index used the methods gives equation wise in upper equation. This method gives indicators wise index values.

Table 7. Women empowerment index in Jhajjar

INDEX	Estimation of Women Empowerment Index				
Jhajjar	EE1	SE1	PLEI	PDEI	WEI
WEI	60.60	60.49	66.99	64.15	63.05
<p>Author own computation $WEI = \frac{EEI + SEI + PLEI + PDEI}{4}$</p> <p>Where: EEI = economic empowerment Index, SEI= social empowerment Index, PLEI= political empowerment Index and PDEI = personal development empowerment Index</p>					

The upper writing Table 7 shows that WEI values. This table also shows that women are knowledgeable about the value of empowerment. We can see that all indicators or WEI values exceed the limit of 60. It shows that after joining the SHG, women are empowered. It is ensured that women are empowered after joining SHG due to SHG efforts. WEI is 63.05 in Jhajjar district, i.e. SHG positively influences female empowerment in this district.

In this table, we can see that PLEI (political empowerment) is most affected in increasing the WEI in Jhajjar district. The major cause is that after joining the SHG, women are politically awake. Women are sure to make any decision since they are alert of her human rights and laws. Women are conscious of the SHG meeting and awareness program because they are trying to make their women friends, family and relatives aware. Women are highly aware of their property rights. All SHG women have their own Aadhar card or Voter ID card. At the time of elections, women vote independently to their elected candidates. Women are actively participating in government programs. SHGs are government programs and every woman is actively participating to increase the performance of its groups. Rural women SHG members are known about the work of the local Panchayat and they are getting all the benefits from Panchayat.

10. Influences of each factor outlines by PCA on WEI

To measure the influence of each factor outlines in women empowerment Index in Jhajjar district of Haryana used multiple regression models.

$$WEI = \alpha + \beta_1 EE1 + \beta_2 EE2 + \beta_3 SOE1 + \beta_4 PLE1 + \beta_5 PDE1 + \mu$$

Table 8. Influence of each factor outlines by PCA on WEI

WEI (JHAJJAR)	COEF.	T VALUE
EE2	.31	17.7*
SE1	.211	7.3*
PLI	.201	8.87*
PDI	.171	9.75*
_CONS	5.39	2.23*
R-Square= .90, Prob> F= 0.00		
One factor EE1 is removing due to problem of Multicollinearity.		

Source: Author's own computation

Where: WEI= women empowerment index, EE1= economic empowerment factor 1, EE2= economic empowerment factor 2, SE1= social empowerment factor 1, PLE= political participation empowerment, PDE= personal empowerment.

The Table 8 shows all the factors affecting the women empowerment index in Jhajjar district. This study shows that all factors have important and positive impact on the WEI. This table also states that EE2 factor (economic empowerment) is the mainly affecting factor to enlarge the WEI in Jhajjar district.

11. Conclusion and Discussion

After joining the SHGs, women are the economic empowerment indicators which are the most impacting factors. The reason is that SHGs provide the amount of their member loan with a lower interest rate. A furthermaincause is the standard of living was raised. For all economic, political social and personal and empowerment of women in Jhajjar district of Haryana was raised due to their participation in SHGs. After joining SHGs, women were able to start income generating activity; they were buying assets, and were using voting rights in elections. It was significantly found that their Decision making power and self-esteem was increased. Women are aware of rights and development policy. Jhajjar is strong in terms of achievement oriented behavior after involvement in women's SHG in the district. Women are worried about keeping their social status right in people they have now started learning from their influences after experiencing some problems. She is now responsible for the environment, is conscious about security issues, and is aware of the surrounding issues. It's found from the survey that women beneficiaries of Jhajjar district are mainly from the age group 20 to 40 years relatively young and active group aware of their political and social rights.

12. References

1. S. Prema. Women empowerment through self help groups (shgs) with special reference to sattur Taluk, Tamilnadu. *International Journal of Research and Analytical Reviews*. 2018; 5(3), 1-3.
2. R. Nandini, N. Sudha. A study on women empowerment through self help groups—with special reference to Ramanagar District, Karnataka. *BIMS International Journal of Social Science Research*. 2016; 1(1), 7-15.
3. R. Saha. Microfinance and socio economic empowerment of women: a case study of two regions of West Bengal. *ShrinkhlaEk Shodhparak Vaicharik Patrika*. 2017; 4(10), 17-24.
4. Pali Bhattacharya. Microfinance and women's empowerment: a study using survey data. *Vidyasagar University Journal of Economics*. 2013; 18.
5. J. Mehra, S. Choudhary, N.K. Punjabi, K.L. Dangi. Role of self help groups (SHGs) in empowerment of rural women in Indore block of Madhya Pradesh. *Rajasthan Society of Extension Education*. 2009; 17, 118-120.
6. A. Sundaram. Impact of self-help group in socio-economic development of India. *IOSR Journal of Humanities and Social Science*. 2012; 5(1), 20-27.

7. L. Sahu, S.K. Singh. A qualitative study on role of self help group in women empowerment in rural Pondicherry, India. *National Journal of Community Medicine*. 2012; 3(3), 473-9.
8. S.S. Patil. Self help groups promote rural women empowerment-a study of selected villages in Kolhapur District. *BVIMSR's Journal of Management Research*. 2013; 2 (2).
9. A. Sahoo. Self Help group & woman empowerment: A study on some selected SHGs. *International Journal of Business and Management Invention*. 2013; 2(9), 54-61.
10. M.A.C.S.S. Fernando, S. Samita, R. Abeynayake. Modified factor analysis to construct composite indices: illustration on urbanization index. 2012; 23 (4), 327-337.
11. S. Abeyasekera. Chapter XVIII Multivariate methods for index construction. *Reading (UK): University of Reading. Household Sample Surveys in Developing and Transition Countries*. 2005; 377-378.
12. L. Debbie, V. Hahs. V. Applied multivariate statistical concepts. Research Gate. 2016.
13. A.J. Richard, W.W. Dean. Applied multivariate statistical analysis. Pearson Prentice Hall. 2007.

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