CHAPTER-III
RESEARCH METHODOLOGY

Research methodology is the structure or plan that is used as a guide for carrying a research. It has mainly two aspects. Firstly, it includes research methods and secondly, it consists of preconception behind the selection of study and methods to be used in the content of the research scheme. It provides a direction for organized processing of the research problem.

To build the preconception for the study, we need to have social background for the subject of research, awareness, education of the subject and practical knowledge. Therefore, it is not possible to conduct without being influenced by the prior information of the subject. So preconceptions in case of microfinance are the theoretical base knowledge that needs to be gained on the subject of research.

As microfinance is one of the best poverty eradication techniques in the world, preconceptions were naturally directed towards the study of microfinance and its implementation for the empowerment of women.

3.1 NEED FOR THE STUDY

General Assembly of United Nations passed a resolution (No. 52/194) and emphasized on sinking the poverty with national and international assistance. The policy focus was on the impact of microfinance throughout the developing countries of the world. It has been recognised that the poor people who are competent of coming out of poverty with self-esteem and can improve their living standard, when the right surroundings and opportunities exist. There are so many countries that have succeeded in generating creative self-employment through different microfinance programs. They have put stress on the improving empowerment of the women, who live in absolute poverty and practice the constant difficulty to grow. Generally, in the developing or underdeveloped countries, to set up a miniature scale firms based on any area like agriculture, poultry and fisheries, there is a need to have their own land as they cannot give any security for the

loan. In such cases microfinance organizations like NGOs, MFIs and a few of the government schemes help them to spread out the business by offering them different kinds of small loans with no collateral, which is a familiar feature of microfinance supporting institutions.

Microfinance sector has made important development in extending credit to small groups especially the poor people all over the world, and India is no exception. SHGs, NGOs and MFIs have been mushrooming all over the country and emphasizing on self employment. It has emerged as a cost efficient instrument for providing financial services to the "Unbanked Poor", which has been unbeaten not only in meeting and weaker sections of the society but also strengthen collective self-help capacities of the poor, leading to self employment and their empowerment. SHGs are the most general source of self employment to run even a SHG finance is required therefore to evaluate the depth of functioning and financing guide of SHGs is of utmost important. Rapid growth in SHG formation has now twisted into an empowerment movement among women across the country. Economic empowerment results in women's ability to pressure or make decision, improved self-confidence, enhanced status and role in household etc. Micro finance is compulsory to overcome development, create self-confidence for financial self-reliance of the rural poor, predominantly among rural women who are mostly indistinguishable in the social structure. The present study titled, **"Microfinance and Empowerment of Women: A Case Study of Punjab"** attempts to examine the impact of microfinance with respect to poverty alleviation, employment generation and women empowerment.

3.2   PERSPECTIVE

Hantaris (1996) defined a perspective as the ideas and conceptions, which are most important aspects of the research and collection of information for research. The study concluded that the perspective of the research depends on what the research has been carried out for i.e. scientific reasons. Thus, the perspective portrays how the researcher diagnoses the problem and it is very important that

the researcher should follow a line of investigation and clarifies all for what or which point of view the research has been carried out. The perspective could have clear reflection of the researcher's point of view and the interpretation of the situation at hand.

The main objective of the present study is to focus on two broad prospectives. One is from the loan receivers' point of view (poor women) and another from lender's point of view (microfinance supporting institutions).

Therefore, this thesis will examine the status of women customers who are on and below the poverty line. The study will also assess how poor women are changing their life style by operating small business activities with the help of loans granted by the microfinance supporting institutions. While conducting research, the research philosophy needs to be undertaken carefully, as complete methodology depends on research viewpoint.

According to **Saunders** *et al.* (2007) there are three views about the research process which dominate the literature: Positivism, Interpretivism, and Realism. Positivism ideals deal with objectivity, which points towards social world properties. The positivistic model will replicate the truth towards the objective of research to be carried out in a straight line and aims to explain and discover cause–effect relation between different variables. The study observes the authenticity and compares all facts collected. This makes the study possible to see the regularities in the reality and this can therefore lead to draw conclusions. On the other hand, interpretivism can be defined as: "a theoretical point of view that advocates the study of direct experience taken at face value, and one who sees behavior as determined by the phenomena of experience rather than by external, objective and physically described reality." Another philosophy, called Realism is an epistemological position, which relates to scientific inquiry. The essence of realism is that, what is truth. This research is inclined towards Women Empowerment through Microfinance i.e. How microfinance in the state of Punjab is serving to empower poor women facing family

pressures, domestic violence and trying to overcome poverty with the help of capacity building mechanism of microfinance, which in turn generates employment so that women attain better position in society.

Therefore, keeping in view the importance and role of MFIs, the present study titled **"Microfinance and Women Empowerment: A Case Study of Punjab"** was undertaken with the following specific objectives:

1. To examine the conceptual framework and the existing models of microfinance;

2. To examine the role of microfinance in employment generation and poverty alleviation;

3. To evaluate the role of microfinance in empowerment of women;

4. To study the various problems and challenges faced by beneficiaries in availing the benefits of microfinance;

5. To examine the perceptions of microfinance supporting institutions about policies, procedures and products offered to women beneficiaries; and

6. To identify the gaps and make recommendations for microfinance development.

3.3 SCIENTIFIC APPROACH

There are typically two approaches used in carrying out a scientific based research i.e. is deductive approach and inductive approach. The review of literature involves both induction and deduction.

The research examines and genuinely records what is observed, without any discrimination. Some of the statements of inspections are recognized as true and serve as the basis for theories. In order to check what is true or false, and to draw conclusions, both the ways are applied: induction and deduction. The basis of induction in the study observed facts are recorded and on the basis of deduction judgment is recorded.

3.4 RESEARCH METHOD

There are mainly two types of search methods, quantitative method and qualitative method. Both of these methods vary in terms of the numeric (numbers) or non-numeric (words) data. Quantitative method is mainly used as a synonym for any data collection method (such as a questionnaire) or data scrutiny procedure, such as graphs or statistics that generates or use numerical data. On the other hand, qualitative method is mostly used as a synonym for any data gathering technique (such as individual interviews) or data examination method (such as categorizing the data) that generates non-numerical data.

It is not easy to articulate the impact of microfinance on the general people in Punjab with the help of few sentences. On the one hand, some impacts can be shown only in numerical figures like, savings and income, while on the other hand other impacts can be articulated only in descriptive ways, like access to education, business experience etc. When the questionnaire was made, we tried to make it fully structured to get most of the impact of microfinance on women beneficiaries. In the questionnaire, we tried to combine the numerical questions as well as some non-numerical questions. Hence, this study has also focused on the numerical data and the statistical tests are performed. Thus, the result of the research depends on numerical and non-numerical analysis, using both quantitative and qualitative methods.

In order to achieve the specific objectives of the study, following research methodology was adopted:

3.5 SAMPLING DESIGN

The sample of the study was based on multistage random sampling technique. Punjab state is divided into 3 well defined agro-climatic zones on the basis several factors like cropping pattern, rainfall, humidity, temperature, soil texture, soil quality, underground water table and quality, etc. These zones provided the 1st stage of sampling unit, while Self-help groups and respondents became the 2nd and 3rd stage of sampling unit.

3.5.1 Classification of Zones

Punjab state is divided into the three agro-climatic zones as under:

Sub-Mountainous Zone: This zone includes Hoshiarpur, Ropar, Nawan Shehar and Mohali

Central Plain Zone: This zone includes Amritsar, Gurdaspur (except Pathankot), Jalandhar, Kapurthala, Ludhiana, Patiala, Fatehgarh Sahib, Taran Taran, Moga and Sangrur.

South-Western Zone: This zone includes Bathinda, Mansa, Faridkot, Mukatsar, Ferozpur, Abohar and Barnala

3.5.2 Selection of Self-Help Groups

The contact and postal addresses of Self-Help Groups working in different zones were taken from the office of Additional Deputy Commissioner-Development, Child Development Program Office, NGOS, Progressive youth forum etc. Zone wise SHGs were listed and randomly an approximate proportionate number of SHGs were selected from each zone. The selected SHGs came to 19, 42, 17 from Zone-I, Zone-II and Zone-III respectively.

3.6 SELECTION OF RESPONDENTS

A sample of 250 women beneficiaries was taken from the state of Punjab. The women members of SHGs were listed for each zone. Then approximately proportionate number of women respondents from SHGs was selected for the study. This number came to be 61, 135 and 54 in Zone-I, Zone-II and Zone-III respectively. In this way the ultimate sample of the study came to be as under:

Zone	SHGs	Respondents
I	19	61
II	42	135
III	17	54
Total	**78**	**250**

In addition to the above, about 50 microfinance supporting were selected for the study and one representative of each selected. Microfinance supporting institutions were taken for the purpose to examine their perception about the policies, procedures and products offered to the women beneficiaries. The list of selected microfinance supporting institution is given as under:

S.no	Name of the Institutions	Location
1	State Bank of Patiala	Patiala, Hoshiarpur, Ropar
2	SKS	Ludhiana, Patiala, Sangrur and Sanour
3	Child Development Program Officer	Sangrur, Hoshiarpur , Patiala and Bathinda
4	CDPO	Sangrur, Hoshiarpur,Patiala, Bathinda, Jalandhar
5	Don Bosco	Rajpura Patiala.
6	Punjab & Sind Bank	Hoshiarpur , Patiala, Bathinda,Jalandhar
7	State Bank Of India	Ludhiana, Patiala, Fatehgarh Sahib and Sangrur
8	Malwa Gramin Bank	Bhankhar Patiala
9	Cooperative Bank	Hoshiarpur , Patiala, Bathinda and Jalandhar
10	Oriental Bank of Commerce	Hoshiarpur , Patiala, Bathinda and Jalandhar
11	Dena bank	Patiala, Ludhiana and Bathinda
12	Allahabad Bank	Patiala, Bathinda and Ludhiana

3.7 PRE-TESTING THE QUESTIONNAIRE

After the formation of a questionnaire, a kind of pilot survey is necessary to gain specific knowledge of the subjects, possible difficulties in procedure of interview and kind of responses that are likely to be available. In order to validate and find out the reliability of

the questionnaire, a pilot study was conducted before processing with the actual survey. Appropriate modifications in contents and format of the questionnaire were then incorporated in the light of experience gained during the pilot study to finalize the questionnaire.

3.8 DATA COLLECTION

Both primary, as well as secondary data were collected for the study.

3.8.1 Primary Data

Primary data were collected from the women respondents on a specially structured pre-tested questionnaire through personal interview method. The data were related to the year of formation of SHGs, group size, age of the respondents, educational level, religion, marital status, type of family, family size, family income, land ownership pattern, quality of life, food buying behavior, access to health care services, knowledge and awareness as a group member, impact of SHGs on orientation and exposure of respondents, development and growth aspects, problems faced by SHGs, voice concern, mobility, freedom, network, political empowerment, people's perceptions towards working women, attitude related problems, psychological problems, family problems, etc.

Another questionnaire was developed to collect the data from MFIs officials. The data were related to meeting of the group, membership of the group, financial management, utilization of earnings, group auditing, awareness about group activities, basic services, purposes of saving, decision making power, etc. The data from MFIs officials were also collected through personal interview method.

3.8.2 SECONDARY DATA

Although the result of the research is highly dependent on the primary sources that have been gathered from the structured interview, but it also required some secondary sources to understand the concepts, definitions, theories and empirical results. We have used several books, research literatures, articles, journals and thesis, as

secondary sources for our study. Internet sources were also used as a secondary source for the thesis. Since the internet sources are less reliable, therefore, the researcher had limited use of those sources to the web pages of prominent organizations like Grameen Bank. Most of the sources are reliable and are acceptable almost everywhere. Further, we have also used the handbooks and annual reports of NABARD.

The present study concentrate on microfinance to the self help groups functioning in the Punjab. Hence it is relevant to have an overview of different aspects of loans advanced to SHGs, loan outstanding against them and NPAs against loan outstanding.

3.9 STATISTICAL FRAMEWORK

Both simple as well as advance statistical techniques were used to analyze the data. Simple tools like averages, frequencies, percentages, etc. were used while advance techniques like chi-square test, ANOVA, t-test, regression analysis and Z-test were applied to analyze the data.

3.10 DEVELOPMENT OF VARIABLES

Before going for statistical analysis, the variables were developed by assigning scores to different attributes as under:

Attribute	Score
1: Education Index	
Illiterate	0
Primary	5
Middle School	8
High School	10
Intermediate	12
Graduate	15
Postgraduate	17
Professional/Technical/Vocational	18
2:Food Buying Behaviour	
Daily	3

Weekly	2
Occasionally	1
Never	0

3: Access to basic services, Development & Growth, Organizational problems, Mobility, freedom, development of network, People perceptions, psychological constraints and family problems

Strongly agree	5
Agree	4
Rarely	3
Disagree	2
Strongly disagree	1

4: Knowledge & Awareness and Economic decision making

Completely	5
To large extent	4
To small extent	3
Rarely	2
Never	1

5: Rating of Training, Orientation & Exposure, Cooperation and Voicing concern

Not at all	1
To a very small extent	2
To small extent	3
To a large extent	4
To a very large extent	5

6:Political empowerment

Very often	5
Often	4
Occasionally	3
Rare	2
Never	1

7:Attitude	
Very frequently	5
Frequently	4
Often	3
Sometimes	2
Never	1
8:Knowledge & Awareness, Availability of Basic services, purpose of saving by members: Officials	
Majority	2
Some	1
None	0
9: perceptions of community towards women organized into self help group	
Strongly agree	5
Agree	4
Rarely	3
Disagree	2
Strongly disagree	1

3.11 CHI-SQUARE TEST:

In order to see the association between two way classification of respondents, Chi-square test was applied by using the following formula:

$$\chi^2 = \Sigma \ \frac{(O - E)^2}{O}$$

Where

χ^2 = Chi-Square Value

O = Observed Frequency

E = Expected Frequency

Σ = Summation

3.11.1 Paired t-test : To compare two mean values (before and after joining the SHGs), paired t-test was applied as under:

$$t = \frac{\bar{D}}{S.E. of \bar{\bar{D}}}$$

$$S.E.ofD = \sqrt{\left[\sum(\bar{D}-D)_2\right]/\left[N(N-1)\right]} and$$

$$\bar{D} = \sum D / N$$

where,

D = Mean of differences before and after joining the SHGs

SE = standard error of difference from before to after joining the SHGs

N = number of respondents

3.11.2 Analysis of Variance

To compare more than two means at a time (between three zones), analysis of variance (ANOVA) was carried out. This was done to compare a parameter between three zones.

The process of the analysis is given hereunder:

Source of variation	d.f.	T.S.S.	M.S.S.	F-ratio
Zones	n-1=a	S_1	S1/a=x	x|y
Error	b-a=c	S_2	S2/b=y	
Total	N-1=b			

where   n= No. of zones to be compared i.e. 3

N= Total number of observations i.e. 250

T.S.S.= Total Sum of Squares

M.S.S. = Mean Sum of Squares (TSS/d.f.)

d.f. = Degree of Freedom.

3.11.3 Z-test :

In order to compare two proportions of respondents, Z-test i.e test of proportions was applied as under:

$$Z = \frac{P_1 - P_2}{SE \text{ of } (P_1 - P_2)}$$

$$S.E. \text{ of } P_1 - P_2 = \sqrt{pq\,(1/N_1 + 1/N_2\,)}$$

$$P = \frac{P_1 n_1 + P_2 n_2 +}{n_1 + n_2}$$

$$Q = 1-p$$

Where

P_1 = Proportion of one group of respondents

P_2 = Proportion of second group of respondents

n_1 = Total number of respondents in one group

n_2 = Total number of respondents in second group

3.11.4 Regression Analysis

To evaluate the impact of several independent variables on one dependent variable, multiple regression analysis was employed in both log as well as log-linear forms. The algebraic form of the regression equations are as under:

Linear Form:

$$Y = a + b_1x_1 + \text{--} b_nx_n + \mu$$

Log Linear Form:

$$\text{Log } Y = \log a + b_1\log x_1 + \text{--------------------------} b_n\log x_n + \mu$$

Where

Y = Dependent variable

a = a constant term

x_1 to x_n = Independent variables

b_1 to b_n = Regression coefficients of x_1 to x_n

μ = a random error term

The linear functional form was chosen for the study keeping in view:

(i) Higher value of R^2;

(ii) Economic significance of the factors; and

(iii) Logical significance of the factors.

Symbols used for significance

*: Significant at 1%

**: Significant at 5%

3.12 LIMITATIONS OF THE STUDY

Every research has certain limitations and this study is no exception. The present study is based on the primary data there may be biasness in the responses of the respondents while collecting the data in spite of utmost care and expert supervision. The present study is restricted to Punjab so results cannot be generalized for SHGs working in other states, similarly, financing pattern to SHGs through MFIs also cannot be generalized for other states.