CHAPTER 4

METHODOLOGY AND CONCEPTS
CHAPTER – IV

METHODOLOGY AND CONCEPTS

In this chapter, the methodology and the operational concepts adopted in the study are presented.

The present study is focussed on two aspects. The first aspect relates to the performance of WDP in the Cuddalore district of TamilNadu. The second aspect of the study is related to the analysis on the effectiveness of WDP in terms of SHGs from the point of view of SHG members.

4.1.1. LOCALE OF THE STUDY

The Cuddalore district of TamilNadu is the study area for the present study as the SC population is more (57%) in this district and majority of the SHGs are formed by SC women. Though this is one of the backward districts, it has shown a high performance of WDP as per the report of TamilNadu Corporation for Development of Women Ltd. Hence, this district has been purposively selected for the research work.

4.1.2. RESEARCH DESIGN

As the study attempts to evaluate the performance of WDP with the help of secondary data, it is evaluatory in nature. Further, dependent women empowerment is analysed on the basis of independent variables and hence it is analytical in nature. The dependent units of analysis in the study are blocks, community, group duration and educational level.

4.1.3. SAMPLING DESIGN

The Cuddalore district has 13 community development blocks. Out of them, 6 are selected purposively, having large number of SHGs. As there is not much variation among the number of villages in each selected block, 5 villages have been selected randomly. Thus, the total number of villages is 30. A list of SHG members in each village is prepared. Since there is less difference in the number of SHG...
members, 20 SHG members have been selected randomly from each selected village. Thus, there are 600 sample respondents.

4.1.4. METHOD OF DATA COLLECTION

To collect the primary data, a well structured Interview Schedule was prepared. To find out the reliability of the interview schedule, a pilot survey was conducted with 25 respondents. The interview schedule was reformulated on the basis of the pilot survey. The researcher has collected the data by establishing a good rapport with the respondents personally. The data collection was carried out during April 2003 to June 2003.

The secondary data used in the study have been collected from various government reports such as reports of District Rural Development Agency (Mahalir Thittam), Director of Statistics and Statistical Reports of WDP Implementing NGOs.

4.1.5. STATISTICAL TOOLS

4.1.5.1 Data interpretation, in general, was done with the help of Percentage and Average analysis. Diagrammatic and Graphical representation of data was also done to strengthen the field data.

4.1.5.2 Co-efficient of Variation has been applied to study the variation in the growth of SHGs on different aspects. The formula used is,

\[
C.V = \frac{\sigma}{\bar{X}} \times 100
\]

Where,
- \(C.V\) = Coefficient of Variation
- \(\sigma\) = Standard Deviation of variable
- \(\bar{X}\) = Mean of variable

4.1.5.3 Coefficient of Correlation has been applied to study the interrelationship among performance indicators of SHGs. It was given as,
\[ r = \frac{\sum xy}{\sqrt{\sum x^2 \sum y^2}} \]

- **r** = Correlation coefficient between x and y
- **\( \Sigma xy \)** = Sum of product of variables x and y
- **\( \Sigma x^2 \)** = Sum of squares of variable x
- **\( \Sigma y^2 \)** = Sum of squares of variable y

4.1.5.4 In order to study the inter-block variation in the performance of WDP, Performance Index has been constructed by using the following formula.

\[
I = \frac{1}{n} \sum_{i=1}^{n} \left[ \frac{\text{BlockIndicatorValue}}{\text{District Average}} \right] \times 100.
\]

- **I** = Index of Performance
- **n** = Number of indicators of performance
- **Ui** = Index for the \( i^{th} \) indicator in the block

The performance index has been constructed with the help of the following indicators.

(i) Number of SHGs per 1000 rural female population
(ii) Number of SHGs per village
(iii) Number of members per SHG
(iv) Per group saving
(v) Per member saving
(vi) Percentage of SC SHGs
(vii) Percentage of eligible SHGs as per ratings
(viii) Per group loan
(ix) Per group beneficiaries
(x) Percentage of loan repayment

Based on the above indices, four levels of performance on the implementation of WDP in Cuddalore district have been identified by taking the index value of 100 as district average.
i. Very high level of performance indicates the index value above 120
ii. High level of performance denotes the index values in the range 100-120
iii. Low level of performance shows the index value in the range 80-100
iv. Very low level of performance indicates the index value below 80

4.1.5.6 ONE-WAY ANOVA model has been applied to show the variation among various independent variables. The model used was,

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of squares</th>
<th>Degrees of Freedom</th>
<th>Mean sum of squares</th>
<th>'F'-ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between columns</td>
<td>SSC</td>
<td>c-1 ($\gamma_1$)</td>
<td>MSC = SSC/(c-1)</td>
<td>MSC/MSW</td>
</tr>
<tr>
<td>Within columns</td>
<td>SSW</td>
<td>n-c ($\gamma_2$)</td>
<td>MSW = SSW/(n-c)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>SST</td>
<td>n-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[\text{SSC} = \text{Sum of Squares between columns}\]
\[\text{SSW} = \text{Sum of Squares within columns}\]
\[\text{SST} = \text{Total Sum of Squares}\]

\[\text{SST} = \text{SSC} + \text{SSW}\]

\[n = \text{Number of items}\]
\[c = \text{Number of columns (samples)}\]
\[\text{MSC} = \text{Mean Sum of Squares between columns}\]
\[\text{MSW} = \text{Mean Sum of Squares within columns}\]
\[\gamma_1, \gamma_2 = \text{Degrees of Freedom}\]

\[
F(\gamma_1, \gamma_2) = \frac{\text{Variance between Samples}}{\text{Variance within Samples}}
\]

4.1.5.7 In order to study the association between socio-economic status of SHG women and their empowerment level, Chi-square test has been applied. It is written as,

\[\chi^2 = \sum \frac{(O - E)^2}{E}\]
Where,

\[ \chi^2 = \text{Calculated values of Chi-Square} \]
\[ O = \text{Observed Frequency} \]
\[ E = \text{Expected Frequency} \]

### 4.2. OPERATIONAL CONCEPTS

This section of the chapter aims at defining the operational concepts used in the study.

#### 4.2.1. Economic Empowerment

It is held in terms of greater access to financial resources outside household, significant increase in the women's own income, equal access and control over resources at household level.

#### 4.2.2. Family Size

It refers to the number of persons in a family. A family with four members is a small, six members a medium and more than six a large family.

#### 4.2.3. General Good

It includes the household infrastructure development like purchase of consumer durables, dressing materials, household utensils, designing and repairing the house, celebrating festival etc.

#### 4.2.4. Group Savings

It refers to the periodical contribution of members of the SHGs. The amount of savings and its periodicity are decided by the group.

#### 4.2.5. Group Duration

It refers to the age of the group.

**Short Duration groups:** The groups up to 1 ½ years of age are called short duration groups.
Medium Duration groups: The groups up to 4 years of age are named as medium duration groups.

Long Duration groups: The groups whose age is more than 4 are termed as long duration groups.

4.2.6. Internal Lending

It refers to the amount given to the members of the group at a low interest rate from the savings fund of the group for income generation activities, education, marriage and other social ceremonies.

4.2.7. Landless Women

A lady having no land and the major portion of her income is from wages.

4.2.8. Marginal Farmers

Marginal farmers are those cultivators whose land holding size is less than 2.5 acres.

4.2.9. Marital Status

It means a person’s state of being single, married, separated, divorced or widowed.

4.2.10. NGO

It refers to an organisation, not belonged to any government, which promotes informal groups of the poor based on self help and mutual help for women in rural areas.

4.2.11. Peer Group

Peer group means a group of women of approximately the same age, status and interests.

4.2.12. Rating of SHGs

It refers to the rating made by the banks on the evaluation indicators to select the groups for credit facilities. The evaluation indicators are the group members size,
age, number of monthly meetings and attendance, quantum, frequency and regularity of savings, total savings, internal lending, loan recovery, maintenance of records and registers, and documentation, awareness about government sponsored programmes and banking procedures.

4.2.13. Rural Artisans

They are persons who derive their income mainly from activities other than farm and wage earning works.

4.2.14. Self-Help Group

It is a woman group in rural area formed with atleast 20 members and involved in savings, internal lending, micro-entrepreneurial activities, assimilation and dissemination of knowledge about health, childcare, education, participation of woman in decision making in households etc.

4.2.15. Skill

It refers to the ability of the SHG members in acquiring knowledge from training programmes with respect to a particular trade or service.

**High skill** : Having knowledge on a particular trade or a service and executing it.

**Moderate skill** : Having knowledge on a trade or a service and executing it with assistance.

**Low skill** : Executing a trade or a service in the line of instructions.

4.2.16. Small Farmers

Small farmers are those whose land holding size is between 2.5 and 5 acres.
4.2.17. Women Empowerment

It refers to SHG women's influence over the economic resources of the households, participation in decision-making in money matters, influence over other decisions pertaining to general welfare of the households.

4.2.18. Worker

It means a person whose income is mainly from wage earning works.