CHAPTER III

RESEARCH METHODOLOGY
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THEORETICAL PERSPECTIVE AND METHODOLOGY

This chapter focuses on the ways in which the present study was carried out. This chapter covers various aspects of this research investigation like research design, attitude / awareness scales used, sampling, tools of data collection, pilot study and the statistical tools used.

THEORETICAL PERSPECTIVE:

The study tries to understand the problem from Sociological perspective of Functionalism. It may be strange to state that the problem which according to many social scientists is a manifestation of social pathology and has functional implications as far as the respondent group is concerned. Rather than viewing the houseless persons as disruptive to the society, look at it constructively as a positive function in the sense that they are the base for NGO’s existence, which work towards the cause of providing better housing to the people. This is a functional role that housing plays in the society. This social fact can be interpreted in both ways –
1. Serving a vital function from the perspective of NGOs and
2. Dysfunctional to Society and social development.

FUNCTIONALISM:

The basic unit of analysis is society and its various parts are understood primarily in terms of their relationship to the whole. Thus social institutions like “family” is part of the social system rather than as an isolated unit. In particular it is understood with reference to the contributions it makes to the system as a whole. The early functionalists
often drew an analogy between society and an organism such as human body. They argue that an understanding of any organ in the body such as the heart or lungs, involves an understanding of its relationship to other organs and in particular of its contribution towards maintenance of the organism.

In the same way, an understanding of any part of society requires an analysis of its relationship to other parts and most importantly of its contribution to the maintenance of the society. Continuing this analogy, they argue that just an organism has certain basic needs, which must be satisfied if it is to survive, so society has basic needs, which must be met if it continues to exist.

Various approaches have been used by Talcott Parson and Robert K. Merton to identify functional prerequisites of society. The present research has fallen into Robert K. Merton's codification of Functional Analysis which questions the three prevailing postulates of Functionalism -

1. 'postulate of the functional unity of society'  
2. postulate of Universal functionalism'  
3. 'postulate of indispensability'.

1. The first 'postulate of the functional unity of society' views society as a well integrated and consistent whole the elements of which contribute to the maintenance of the total system. The underlying assumption is that standard social institutions or commonly shared beliefs and practices are functional for every member of the society. Merton questions the assumption and contends that cultural items do not function uniformly for the society and for all of its members. He further says that in highly differentiated societies, institutions may well have a high degree of functional autonomy and a change in one system will not have any effect
on the other systems. The Non Governmental Organizations, Finance Institutions and Government Organization seem to have high degree of freedom in their functioning.

2. Merton’s assumption regarding the second postulate of ‘Universal functionalism’ is also applicable to this study. This postulate assumes that ‘all standardized social or cultural forms have positive functions contributing to the maintenance of the system. According to Merton’s assertion every aspect of the society may be functional, dysfunctional or non-functional and what is functional for a particular system may not be functional for another system in the society. The lack of regular source of income seems to be dysfunctional for the Finance Institutions but functional for the NGOs existence.

3. The third postulate of ‘indispensability’ has the assumption that certain functions are indispensable for the survival of the social system and certain social or cultural forms are indispensable for fulfilling these functions. Merton rejects the postulate and suggests that the same cultural item may perform multiple functions and alternative items may fulfill the same functions. Alternative means have been variedly adopted in achieving the objective of providing better houses to the rural people. This suggest the existence of ‘functional alternatives’ which is a major premise of the structural functional approach and form the crux of Merton’s third postulate.

From the above discussion, the present research problem may be fit into the Robert K. Merton’s functionalism.
SIGNIFICANCE OF THE STUDY:

The rationale for undertaking any research study especially studies involving a specific social problem is always a measure of the extent of the problem, the impact of the problem, its social implications and its miserable manifestations. Housing is considered as one of the major social problems. It becomes imperative to know the opinion of the Institutional groups (viz. Individual householders, NGOs, Government organization and finance Institutions) involved in housing sector.

The study which attempts to elicit the opinion of the four groups (Individual householders, NGOs, Government and Finance Institutions) regarding the housing issue in rural areas, would yield major inputs to planners and policy makers attempting to find solutions for the issue both at the local level and at the Governmental level. The study's significance lies therein.

SCOPE OF THE STUDY:

Though the study has been carried out in the rural area of Tiruchirappalli District, the findings can be generalized to the entire state of TamilNadu, since the respondents have been selected scientifically. The large size of the sampling and the sampling procedure followed provide ample scope for drawing reliable inferences and for their generalization. Thus the present study has vast scope of utilization in framing the policy and action towards the issue of rural housing.
RESEARCH DESIGN:

The design of the study is basically descriptive in nature with some analytical features. It attempts to describe the present condition of housing in rural areas and analyses the inter-relationship of the institutions involved in housing.

In this basic descriptive research design, the methods adopted by the researcher vary according to the nature of data analysis required for the study. All the groups (householders, NGOs, Finance Institutions) were compared with regard to their scores on the awareness and attitude scales in order to study the "value consensus" which is essential from Functional perspective.

Thus the descriptive design incorporates a multi method approach which most suited to a study of such a nature involving multiple groups and multiple response patterns. The design allows for flexibility and more freedom of choice in the selection of research methods thus proving advantageous to the researcher.

FIELD SETTING:

A. INDIVIDUAL HOUSEHOLDERS:

A multi stage process was adopted in delineating the population of the study. In the first stage, Tiruchirappalli District has been chosen for the study. Tiruchirappalli occupies the middle place (13th rank out of 29 Districts) in terms of size of rural population. It has the same rank (13th) in literacy rate also. The number of households per 1000 occupied rural
houses is 1003, which is neither scattered nor overcrowded. Considering all these points, Trichirappalli District has been selected for the study.

Purposive sampling was used for the block level selection from Trichirappalli District and for the households, random sampling was adopted.

**Block Level:** Trichirappalli District consists of 14 blocks. Among them, Vaiyampatty Block has been purposively selected as the specific study area. The following are the reasons for selection.

- Vaiyampatty is a block consisting of only rural population which could be appropriate to study the rural housing.
- The average size of the household is 5 which is normal (neither too small nor large).
- The number of households per 100 occupied houses is 100.

**Household level:** The list of house owners who constructed the houses in entire Vaiyampatty Block i.e. from 1991-2000 was collected from the concerned Village Administrative Officer. From the given list of 806 households, 268 respondents were selected by random sampling method. However out of 268 respondents who were interviewed, 250 interview schedules complete in all aspects had been taken for analysis. The remaining 18 interview schedules were omitted due to lack of clarity and lack of complete answers as the researcher had filled-in the interview schedules after the entire discussion with the individual householders.
B. HOUSING INSTITUTIONS:

(i) **NGOs:**

Census survey will be used to collect data from the NGOs. Collective Initiative of Voluntary (CIVA) agencies is a network consisting of 40 NGOs functioning actively in Trichirappalli District. The list of 15 NGOs involved in rural housing programme had been identified from the given list. Thus the selected 15 NGOs coming under this list form the respondents and had been given the questionnaire to elicit information on rural housing. Thus the census method had been adopted for NGOs.

(ii) **Finance Institutions:**

Census survey had also been adopted to collect informations from the finance institutions involved in housing. The list of existing organizations involved in housing in Trichirappalli District has been prepared by collecting information from the Trichirappalli Collectorate. Thus 12 institutions who constitute this group were issued the questionnaire on their functioning and the aspects of housing in rural areas.

(iii) **Government:**

Since the only Government institution involved in rural housing in Tiruchirappalli District being the District Rural Development Agency, it has been selected for this study under this group. As far as the housing institutions are concerned, no sampling was involved in the selection of respondents, since census method was adopted.
AREA OF STUDY:

Tiruchirappalli district is a centrally located inland district of Tamilnadu, spread over 448,477 ha, which was reorganised in July 1996. The district is bounded by Madurai and Sivagangai districts in the South, Dindigul in the Southwest, Karur in the West, Namakkal in Northwest, Salem in North, Perambalur in Northeast, Thanjavur in east and Pudukkottai in South east.

The total Geographical area of the district is 448,477 ha and net sown area is 183,560 ha. The net area under irrigation is 92,856 ha. The total population of the district as per 2001 census is 23,88,831 of which 11,94,133 are males and 11,94,698 are females. The sex ratio is 1000 and the density of population of the district per sq.k.m is 542 persons as against the state average of 478 persons.

The district for administrative purpose has been divided into 8 Taluks (Lalgudi, Manachanallur, Musiri, Thuraiyur, Manapparai, Thottiyam, Tiruchirappalli, Srirengam) which is further sub-divided into 14 blocks viz. Andanallur, Manachanallur, Manikandam, Musiri, Thathiyengarpet, Thuraiyur, Uppiliyapuram, Lalgudi, Manapparai, Marungapuri, Pullambadi, Thottiyam, Thiruverambur, Vaiyampatty) comprising of 479 Villages, 408 Village Panchayats and 18 Town Panchayats.
Rainfall:

The district lies in the Southern plateau & hill zone of Agro-climate regional planning with characteristics of semi arid climate. The soil is predominantly red loamy and black soil. The normal rainfall of the district is 822.3 mm which is less than 946.9 mm, the normal rainfall of the State. The precipitation during northeast monsoon, southwest monsoon and remaining winter & hot weather period account for 52 percent, 34 percent and 14 percent of annual rainfall respectively.

Agricultural situation:

51% of the net sown area is irrigated, the dry areas frequently experience drought conditions due to irregular rainfall. Even though these areas have good potential for horticulture crops, fragmented holding, absentee ownership and poor resource base of the farmers have handicapped the development of these areas. In irrigated areas due to conjunctive use surface water with canal water whose quantum and timing of release has been uncertain during the last few years the farmers have managed to record a continuous increase in production and productivity. But there are vast tracts of lands which have been affected by salinity/ acidity due to years of over irrigation and absence of scientific land management practices.

Industrial scene:

The district is fairly well developed in industrial sector. The presence of a number of medium scale and large industrial units manufacturing rice barn oil, vanaspati, textile yarn, stainless steel tubes, asbestos, alcohol etc.
has helped growth of small of scale sector manufacturing ancillary products. This district is considered as one of the biggest centres in South East Asia for synthetic gem cutting with more than 35,000 traditional artisan families engaged in this activity. This industry has very good export potential but they have not been fully exploited. Handloom is another major activity well developed in the district. Korai mat weaving is another important activity providing employment to a large number of people both in the traditional and mechanised mat weaving units. This district is also famous for vegetative tanning of leather.

**Major crops:**

Cauvery is the major river flowing in the region. The Ground water resource through tubewells and wells contribute nearly 68% of irrigated area command. The major food crop cultivated in the district is paddy covering about 72,000 ha representing about 30% of net sown area. Groundnut is a major oilseed grown in about 30,000 ha forming about 17% of the net sown area. Sugarcane is cultivated in about 5,500 ha in the district. Banana is the major horticultural crop grown in about 13,000 ha in the district. In recent year's sunflower and soyabean cultivation are slowly expanding in area.

**USAGE OF ATTITUDE / AWARENESS SCALES:**

Totally, five scales have been used in this study to measure various factors related to housing in rural areas.
Scale I : Scale measuring the present condition of housing
Scale II : Scale measuring the impact of housing on the lives of rural people
Scale III: Scale measuring the beneficiaries level of participation in the housing process
Scale IV: Scale measuring the awareness on cost effective technologies
Scale V: Scale measuring the awareness on the general condition of housing in rural areas

All the five scales had been administered to the Individual Householders and the last 3 scales were administered to the Institutions involved in housing sector. The scores on each scale had been correlated with the socio-demographic variables as well as housing variables.

PILOT STUDY:

A. Individual Householders:

Before finalizing the interview schedule, the researcher conducted the pilot study with 25 respondents in order to determine the efficiency of the tool. Necessary modifications were made in the interview schedule after completing the pilot study.

B. Housing Institutions:

A pilot study was undertaken in few NGOs and finance institutions identified as the population of the study. Discussions were held with the Chief Functionaries and Branch managers regarding the feasibility of data collection. Affirming the cooperation of the institutions and confirming their participation in the study, the researcher then decided to proceed with the study.
METHODS OF DATA COLLECTION:

Since the awareness and attitude scales used in the study were framed by the researcher, reliability estimates had to be established for the tools. Keeping this in mind, the data collection procedure was repeated twice i.e. both interview schedules for individual respondents and questionnaires for NGOs and Finance Institutions were administered with an interval of 5 months between the first and second instances. In the first instance, the full schedules along with the basic socio-demographic and housing variables were administered, while in the II instance, only the scales for which the reliability analysis to be done were administered to the respondents. This was done in order to establish the reliability co-efficient (test-retest scores reliability) of the responses to the scales.

TOOLS OF DATA COLLECTION:

1. Individual Householders: The structure of the interview schedule as follows.
   a. General socio-demographic and housing variables.
   b. Scale to measure the present condition of housing in the study area.
   c. Scale to measure the impact of housing in the study area.
   d. Level of beneficiaries participation in the housing process.
   e. Awareness scale regarding the understanding of cost effective technologies
   f. Attitude scale to measure their attitude towards the housing problem in rural areas.
All the above mentioned tools were developed by the researcher. A detailed description of how the tools were developed and the validity, reliability measures along with norms and scoring patterns is described here.

**SCALE I : The present condition of housing in the study area**

**Tool Description** : It is a Likert type scale consisting of 15 positively keyed items with a 3 response mode of fully adequate, adequate, not adequate.

**Tool Development** : A set of 32 statements relating to the condition of housing in rural areas were generated and checked by the panel of experts (as explained earlier). The expert committee downsized the scale to a set of 15 items with a uniform response pattern.

**Scoring** : The scale has 15 items scored in the positive direction and these items are given a score of 2 for fully adequate, 1 for adequate and 0 for not adequate. The minimum score that one could obtain on the scale is 0 and the maximum possible score is 30. Higher the scores, better the housing standard with more basic amenities.

**Validity** : Content validity was established by the panel of experts who scrutinised the statements, edited the scale and gave shape to its final form.

**Reliability** : Test-retest reliability $r = 0.821$ and for split-half method $r = 0.716$

**SCALE II : The impact of housing in the study area.**

**Tool Description** : It is a Likert type scale consisting of 20 positively keyed items with a 5 response mode of Strongly agree, agree, not sure, disagree, strongly disagree.
Tool Development: Similar to the previous scales, a list of statements were generated. 20 statements were approved by the panel of experts.

Scoring: The statements were graded on a five point scale of agreement, thus forming Likert type with all 20 items positively keyed. The minimum score that one could obtain on the scale is 0 and the maximum possible score is 80. Higher the scores, higher the impact of housing on the lives of the respondents in the study area.

Validity: As with the previous scales the panel approved the items in the scale giving the scale good content validity.

Reliability: Test-retest reliability $r = 0.761$ and for split-half method $r = 0.625$

A detailed description has been given below, regarding d - Level of beneficiaries participation in the housing process, e - Awareness scale regarding the understanding of cost effective technologies f - Attitude scale to measure their attitude towards the housing problem in rural areas, since the scales are common for all the groups – individual householders and the housing institutions.

2. Housing Institutions: A questionnaire (for NGOs and Finance Institutions) was framed which consisted of following parts.

a. General institutional variables.

b. Level of beneficiaries participation in the housing process.

c. Awareness scale regarding the understanding of cost effective technologies
d. Attitude scale to measure their attitude towards the housing problem in rural areas.

For Governmental Organization, Interview Guide was adopted along with the above three scales, as there is only one organization involved in rural housing.

**SCALE III. Level of beneficiaries participation in the housing process.**

**Tool Description**: It is a Likert type scale consisting of 10 positively keyed items with a 3 response mode (fully participated, participated and do not participate).

**Tool Development**: A set of 22 statements relating to the Beneficiaries participation (based on the review and the discussions with the institutions) were generated and given to a 10 member panel of experts consisting of 5 NGO Chief functionaries, 3 Branch Managers from finance institutions and 2 Government officials who are expertise in this field. The expert panel on analysis eliminated 12 statements, modified some and decided to have 10 items in the scale.

**Scoring**: The scale has 10 items scored in the positive direction and these items are given a score of 2 for fully participated, 1 for participated and 0 for do not participate. The minimum score that one could obtain on the scale is 0 and the maximum possible score is 20. Higher scores indicate the higher level of participation in the housing process.

**Validity**: Content validity was established by the panel of experts who scrutinised the statements, edited the scale and gave shape to its final form also validated against the rating of the experts $r = 0.66$. 
The same scale was administered to the 3 groups apart from the householders group. Test retest reliability and split half reliability estimates were established for each group and are given as follows.

<table>
<thead>
<tr>
<th>Reliability estimates</th>
<th>Householders (n = 250)</th>
<th>NGOs (n = 15)</th>
<th>Finance institutions (n = 12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Split half</td>
<td>0.702</td>
<td>0.678</td>
<td>0.645</td>
</tr>
<tr>
<td>Test-retest</td>
<td>0.812</td>
<td>0.709</td>
<td>0.741</td>
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</table>

SCALE IV: Awareness on cost effective technologies

**Tool Description**: It is a Likert type scale consisting of 10 positively keyed items with a 3 response mode (Strongly aware, aware and do not aware).

**Tool Development**: A set of 25 statements relating to the understanding of cost effective technologies were generated and checked by the panel of experts (as explained earlier). The expert committee downsized the scale to a set of 10 items with a uniform response pattern of strongly aware, aware and do not aware.

**Scoring**: The scale has 10 items scored in the positive direction and these items are given a score of 2 for strongly aware, 1 for aware and 0 for do not aware. The higher the total score, greater the level of awareness with regard to the understanding of cost effective construction technologies. The minimum score is 0 and the maximum possible score is 20.

**Validity**: Content validity was established prior to data collection by the panel of experts who scrutinized the statements, and gave shape to its final form also validated against the scores of the experts  \( r = 0.54 \).
The same scale was administered to the 3 groups apart from the householder group. Test retest reliability and split half reliability estimates were established for each group and are given as follows.

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<tr>
<td>Split half</td>
<td>0.645</td>
<td>0.654</td>
<td>0.601</td>
</tr>
<tr>
<td>Test-retest</td>
<td>0.741</td>
<td>0.785</td>
<td>0.703</td>
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**SCALE V. Attitude towards the housing problem in rural areas**

**Tool Description**: It is a Likert type scale consisting of 10 positively keyed items with a 3 response mode (strongly agree, agree, do not agree)

**Tool Development**: A set of 19 statements relating to the housing problem in rural areas were generated and checked by the panel of experts (as explained earlier). The expert committee downsized the scale to a set of 10 items with a uniform response pattern of strongly agree, agree and do not agree.

**Scoring**: The scale has 10 items scored in the positive direction and these items are given a score of 2 for strongly agree, 1 for agree and 0 for do not agree. The minimum score that one could obtain on the scale is 0 and the maximum possible score is 20. Higher scores indicate the greater understanding of housing as a problem in rural areas.

**Validity**: Content validity was established by the panel of experts who scrutinised the statements, edited the scale and gave shape to its final form.
The same scale was administered to the 3 groups apart from the householders group. Test retest reliability and split half reliability estimates were established for each group and are given as follows.

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**DEFINITION OF CONCEPTS:**

*Respondents*: Refer to those who constructed the house in the revenue villages of Vaiyampatty Block between 1991-2000.

*Housing Process*: A series of actions or operations planned by the respondents in order to achieve the housing.

*Institutional Mechanisms*: The techniques that followed by the organizations in the society for fulfilling the housing needs of the people.

*Pucca House*: It refers to a house constructed its roof and superstructures with durable materials.

*Semi-pucca house*: It refers to a house constructed its roof with thatched leaves and superstructures with mud.
**Thatched house:** It refers to a house constructed both its superstructures and roof with thatched leaves.

**Cost effective Technology:** Refers to the technology that will be adopted for house construction in order to reduce the cost of building.

**NGOs:** Organisations registered under the Indian Societies Registration Act XXI of 1860, these are profit oriented, non-party political and people processing, in the sense that their general mandate is 'to maintain or improve the general well being or function of people' (Chowdhry, 1983, p.92).

**HYPOTHESES:**
The following hypotheses were drawn.
1. There is a significant association between the income and type of house.
2. There is a significant association between income and the period taken for house construction.
3. There is a significant relationship between type of house and the amount spent towards construction.
4. There is a significant relationship between additional source of income and repayment status of the amount borrowed for house construction.
5. There is a significant association between religion and legal ownership of the house.
6. There is a significant association between education and consultation of women during house construction.
7. There is a significant relationship between type of house and water shortage.
8. There is a significant association between Gender and satisfaction towards the house.
9. There is a significant relationship between income and the ability to solve the housing problems.
10. Pucca Dwellers are more likely to have better housing (with the basic amenities) than the Kutcha inhabitants.
11. Pucca Dwellers are more likely to feel better impact of housing on their lives than the Kutcha inhabitants.
12. Low caste members are more likely to participate in the housing process than the high caste members.
13. Literate People are more likely to have awareness on Cost Effective Technologies than the Illiterate People.
14. Higher the income, higher the score on the condition of housing (including basic amenities).
15. Lower the investment in housing, higher the awareness on cost effective technologies.
16. There is a significant variance between the various institutional groups (Kutcha inhabitants, Pucca dwellers, NGOs and Finance Institutions) in terms of beneficiaries level of participation in the housing process.
17. There is a significant variance between the various institutional groups (Kutcha inhabitants, Pucca dwellers, NGOs and Finance Institutions) regarding their awareness on cost effective technologies.
18. There is a significant variance between the various institutional groups (Kutcha inhabitants, Pucca dwellers, NGOs and Finance Institutions) with regard to their awareness on the general condition of housing in rural areas.

LIMITATIONS OF THE STUDY:

The findings of this study based on the information furnished by the respondents which may have its own limitations. The objective of the researcher is naturally circumscribed by the extent of the respondent’s readiness to give truthful information. Possibility of hiding certain facts on the part of the respondents cannot be ruled out, although every possible steps were made to elicit reliable information.

The technique for the collection of data was the interview schedule for which respondents furnished the necessary information in response to various items included in the schedule and the researcher used observation to verify the validity of information obtained by cross checking the same.

DATA ANALYSIS:

The data collected were analysed using the following statistical tools:

a. **Mean**: This was used to find out the average of a series of data for the condensation of data that is essential for statistical analysis and interpretation.
b. **Chi-square test**: This was used to study the degree of association between attributes of qualitatively defined variables as well as to indicate significant differences between two or more qualitative groups.

c. **T-Test**: This test was used to assess the statistical difference between two groups when the attributes of reference had been quantified. It is based on the comparison of mean scores and standard deviation. The difference was estimated at 9.5% level of confidence (5% error) indicating a significant difference between the groups.

d. **Analysis of Variance**: One way analysis of variance was used when there was one nominal and one qualitative variable and significant differences between several groups had to be observed. The F ratio which is thus calculated indicates whether there is significant difference between several groups.

e. **Product Moment Correlation**: Formulated by Karl Pearson, this index of correlation is used to find out the linear association between two quantitative variables. A coefficient of 0.70 to 1.00 (plus or minus) indicates a high degree of association (positive or negative).