CHAPTER 4

METHOD

OF INVESTIGATION
This Chapter of the dissertation presents a picture of detailed methods and procedures followed by the investigator. At the outset a brief outline has been given about the selection of the problem for the present study, followed by an introductory remark on the research design. The various other essential aspects included in this part have been described along with the relevant details under the following sub-heads:

- Locale of the Study
- Sampling Procedure
- Selection of Innovations
- Development of Instruments for collection of Information
- Interviewing Procedure
- Variables and their Measurements
- Constraint Analysis through Experience Survey
- Statistical methods applied

SELECTION OF THE PROBLEM:

Proper definition and conceptualisation of the problem are often more essential than its solution. So while selecting the research topic, "A study of the differential profile of rural and urban housewives in relation to decision-making and adoption of homescience innovations in the Cuttack District of Orissa State", due importance was given on proper study of different homescience innovations. Home science education is of recent origin in the State of Orissa and thus assumed special importance
In rural development programmes. Hence, the present study has been designed to bring out differences, if any, in the social, psychological and personal profile of the rural and urban women. Provision has also been made in this study to find out the pattern of decision-making among the groups with reference to various innovations given through the mass and other media.

**RESEARCH DESIGN:**

The research design was formulated on the basis of post-facto approach with the matching of two groups design. So accordingly, at the planning stage, specific objective of different home science innovations were putforth in the interview schedule for enquiry. The questions were presented to know the acceptance and use of home-science innovations, by the rural and urban housewives. Parameters like social, psychological, personal and communication variables of the two groups were taken into consideration. Home-Science innovations such as health and nutrition family welfare, food preservation, kitchen gardening, smokeless chulah, preservation and preparation of clothings etc. were included in the study for exploring the differential adoption behaviour of housewives on both the groups. A conceptual frame work of the study was drawn up to explain the relationships of the variables. Thus the scope of the study was delineated, techniques of investigation were developed and the pattern of the statistical analysis followed, were decided for investigation.

**LOCALE OF STUDY:**

The study was conducted in two different community Blocks,
FIG-1, SELECTED LOCATIONS FROM WHICH URBAN AND RURAL SAMPLES WERE DRAWN
Fig. 2. Urban areas (under shading) from which urban samples were drawn.
one in the urban area namely Cuttack and the other in a rural area Jagatsinghpur. Four villages namely, Bidanasi, Tulasipur, Tala Telangabazar, and Zobra, were taken from Cuttack town were as villages such as Mandasahi, Pechipur, Biribati, and Mukundpur were selected from the Jagatsinghpur Block. However, the rationale and the approach adopted in selecting these villages are described in the following, under "Sampling Procedure".

**SAMPLING PROCEDURE** :

a. **SELECTION OF DISTRICT** :

   The district of Cuttack is purposively selected for the study. This district combines urban, semiurban and rural areas which are very fast changing and have been exposed to the media and home science extension programmes. The process of modernisation has just started in the district, therefore, it was thought that the district of Cuttack would provide the best opportunity for a study on rural, urban difference. One would find sharp contrast on values, attitudes, practices and behaviour among the rural and urban housewives in this district with these objectives in view the district of Cuttack was purposively selected for the study.

b. **SELECTION OF BLOCK** :

   The sampling procedure adopted for the study for selection of Blocks, villages and respondents were on the basis of stratified random sampling.
The District of Cuttack comprises of twenty-three Community Development Block, out of which, five blocks are considered to be urban. These Blocks are connected to the main urban center and there is speedy urbanisation and social change occurring in these blocks of Cuttack district. Therefore, urban values have percolated to these areas and thus people have become more cosmopolite and change oriented. The remaining eighteen community development blocks of the district are located away from the main city of Cuttack and are predominantly rural and less progressive. The process of Social change and modernisation have not touched these areas. People still preserve their old values, traditions and customs. Therefore, for a study of rural urban difference, the district was considered to be ideal. Out of the five urban blocks, Cuttack sadar was selected on random sampling basis. The Jagatsinghpur community development block which was selected from out of the rural blocks on random sampling basis is located at 50 K.M. away from Cuttack.

c. **SELECTION OF VILLAGES:**

An exhaustive list of all the villages under each category was drawn from blocks, and thus four villages from villages from rural blocks and four from the urban block were selected by using random sampling techniques. Thus Bidanasi, Tulasipur, Zobra and Talatelenga bazar villages were selected from Cuttack Sadar Block, and Mandasahi, Pecheipur, Biribati and Mukundapur were selected from Jagatsingpur Block. This has been outlined in Table 1.
Table 1. List of villages selected and number of households included in the study.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Community Development Block</th>
<th>Name of the villages</th>
<th>Total No. of Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cuttack Sadar</td>
<td>a) Bidanase</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Tulasipur</td>
<td>220</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Tala Telenga Bazar</td>
<td>130</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Zobra</td>
<td>210</td>
</tr>
<tr>
<td>2.</td>
<td>Jagatsinghpur</td>
<td>a) Manda Sahi</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b) Pecheipur</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c) Biribati</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Mukundpur</td>
<td>75</td>
</tr>
</tbody>
</table>

d. SELECTION OF RESPONDENTS:

The respondents were selected carefully from both the settings namely rural and urban on the basis of random sampling technique with the help of the village Agriculture Workers, village Mohila Samity Workers, and the Local housewives. An exhaustive list of housewives of the four selected villages were prepared and among them, twentyfive respondents from each of the villagers were selected randomly. A total of two hundred housewives were selected one hundred each from the urban and rural community development blocks of Cuttack and Jagatsinghpur respectively.

The criterion followed for selection of housewives was that she should have been exposed to the home-science innovations given through the mass media and the Governmental agencies.
SELECTION OF INNOVATIONS:

The basis for selection of innovations were:

(i) The innovation should be geared to the solution of individuals' and national problems (ii) It should have wide applicability to housewives and the communities (iii) It must be need-based (iv) It should be one in which technological research is perfected and is recommended for adoption.

Keeping these major criteria in view, six innovations were selected for this investigation. They are family Welfare, food and nutrition, Child care, Smokeless chulah, Kitchen gardening, preservation and preparation of clothings etc.

TECHNIQUES OF INVESTIGATION:

In order to make the study more objective and specific, a number of standard tools in the field of behavioural sciences, developed by different Indian and foreign research workers, were used. However, such tools have been developed and have been modified to the extent that they could be applicable to the local conditions. Before using these tools and techniques the implications of the application were thoroughly understood through available literature, standard techniques for measurement, already developed by research workers. A part of the technique of measurement in the area of adoption-diffusion were developed by the research worker.

DEVELOPMENT OF THE INSTRUMENTS FOR COLLECTION OF INFORMATION:

The study was conducted with the help of interview schedules
which were prepared after being pre-tested. In course of finali-
sation, many proposals were added and discarded, on the basis of
field judgements and objectives. The pertinent questions were taken
up and many enquiries were dropped because of limitation of time
and resources. The interview schedule consists of two types of
questions such as the open-ended and closed ended ones. Proper mea-
sures were taken to avoid vague and ambiguous answers. The responses
of the housewives were collected through the structured schedule
thus developed for the purpose.

PREPARATION OF INTERVIEW SCHEDULE :

This part comprised of items pertaining to back ground infor-
mation of the respondents. Personal, social, economic and psycholo-
gical aspects of the respondents were collected on several related
items such as age, education, family size, family annual income,
material possesion, social participation and sources of information
etc. These items were categorised to facilitate recording of the
responses.

PRE-TESTING :

After construction of the schedule, pretesting of the Schedule
was under-taken with 5% of the population. This was done with the
objective of testing the validity and reliability of the items called
for, on the Schedule, and to guide the interviewer in the revision
of the wording and content of questions for effective interview. On
the basis of the information collected through pretesting, final
corrections were made in the Schedule and a correct Schedule was deve-
loped and finally administered.
INTERVIEWING PROCEDURE:

Establishing rapport is a pre-requisite for any interviewing and it is of utmost significance, particularly in case of rural people, since they have a tendency to hide information. Personal interview techniques for collecting data were followed. This was done first by introducing the researcher before the group of villagers along with the Secretary of local Mohila Mandal and other leaders of Lady's Club explaining the purpose of visit. The investigator tried to remove the suspicion from the minds of the respondents. The process of building good rapport continued and became increasingly better as the interviews were done.

In the urban areas the house-wives were generally busy at the morning time due to household activities. They were free from work during afternoon which was the best time for them to give response. In the case of working women, it was really difficult but it was completed with patience due to their interest. It took three months for collection of data from the respondents of both the areas.

VARIABLES AND THEIR MEASUREMENTS:

A detailed account relating to conceptual aspects of the variables selected for the study has been mentioned in the chapter of theoretical orientation and the procedure followed for the measurement of each variable has been given in this Section. This study included twentyseven variables which
Fig. 3. Conceptual Model showing Independent, Dependent and Antecedent Variables
alongwith their measurement techniques have been given in Table 2. It would be seen that variables consisting of both dependent and independent ones, would be utilised for correlation and prediction analysis. The independent variables included in the study were selected on the basis of extensive review of literature, discussion with experts and a preliminary informal study conducted in the area of investigation.

Table 2. List of variables and their measurement techniques.

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>MEASUREMENT TECHNIQUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Decision-making</td>
<td>Schedule developed for the Study.</td>
</tr>
<tr>
<td>(b) Adoption</td>
<td>Adoption Quotient (Chottopadhya) 1963 with minor modifications.</td>
</tr>
<tr>
<td>(c) Adoption index</td>
<td>Developed for the Study.</td>
</tr>
<tr>
<td>INDEPENDENT VARIABLES:</td>
<td></td>
</tr>
<tr>
<td>(a) Socio personal variables</td>
<td></td>
</tr>
<tr>
<td>(i) Age</td>
<td>Chronological age of the respondents.</td>
</tr>
<tr>
<td>(ii) Caste</td>
<td>Scores assigned as per Socio economic Status (S.E.S.) Scale (Trivedi 1963).</td>
</tr>
<tr>
<td>(iii) Education</td>
<td>Scores assigned as per SES, Scale (Trivedi 1963).</td>
</tr>
<tr>
<td>(iv) Types of Family</td>
<td>Schedule developed.</td>
</tr>
<tr>
<td>(v) Family income</td>
<td>Schedule developed for the Study.</td>
</tr>
<tr>
<td>(vi) Social participation</td>
<td>Scores as per S.E.S. Scale of pareek and Trivedi 1963 with necessary modifications.</td>
</tr>
<tr>
<td>(vii) Material Possession</td>
<td>Schedule developed for the Study.</td>
</tr>
</tbody>
</table>

Table-2 cont'd....
Table-2 cont'd.

<table>
<thead>
<tr>
<th>(viii) Size of family</th>
<th>Schedule developed for the Study.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ix) Development perception</td>
<td>Schedule developed for the Study.</td>
</tr>
<tr>
<td>(b) Socio-Psychological Variables</td>
<td>Schedule developed for the Study.</td>
</tr>
<tr>
<td>(i) Adoption proneness</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(ii) Leadership Orientation</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(iii) Risk Orientation</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(iv) Knowledge about the innovations</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(c) Stimulus Variable</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(i) Profitability</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(ii) Social prestige</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(iii) Cost of innovation</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(d) Communication Variables</td>
<td>Knowledge test developed by Choubey (1972) with necessary modifications.</td>
</tr>
<tr>
<td>(i) Mass media use</td>
<td>Instruments developed by the investigator.</td>
</tr>
<tr>
<td>(ii) Personal Cosmopolite source use</td>
<td>Instruments developed by the investigator.</td>
</tr>
<tr>
<td>(iii) Personal localite source use</td>
<td>Instruments developed by the investigator.</td>
</tr>
</tbody>
</table>

MEASUREMENT OF DECISION-MAKING

Decision-making was operationalized as the extent to which housewives justified their selection of most efficient means, from among the available alternatives on the basis of Scientific criteria for achieving maximum economic ends in immediate or long term basis. But decision-making and adoption are considered to be two sides of the same coin. If we know one, we can know the other.
SELECTION OF DECISIONS AREAS

Adoption of home science practices such as family planning, childcare, food and nutrition, smokeless chalaks, kitchen gardening and preservation and preparation of clothings etc. in a broader sense involves many different types of decisions on the part of housewives. Attempts were made to incorporate decisions from all the areas as far as possible in relation to the innovations.

During pretesting such of the decisions which were found not applicable to the situation of all the respondents were detected.

EXPLORING THE POSSIBLE JUSTIFICATION

Information about these eight decision areas (for each innovation) was obtained from the housewives. These were structured in a question form and justification offered by them for each decision were listed out.

MEASUREMENT OF ADOPTION BEHAVIOUR

Adoption was operationalised as a stage at which the urban and rural housewives would decide to continue the full use (100 percent utilisation) of the innovation. The main function of the adoption stage is the consideration of the trial result and the decision to conform sustained use of the home science practices. This was measured with the help of adoption quotient developed by Chattopadhyay (1963).
ADOPTION QUOTIENT FOR HOME SCIENCE PRACTICES

For the purpose of this study, the adoption quotient (A.Q) (Chattopadhyay 1963) which was used for assessing the adoption of package of home science innovations was chosen. This ratio scale was eminently suited to quantify multipractice adoption behaviour of housewives. While developing it, all the possible components of adoption behaviour had been considered such as extent, potentiality, time, consistency and weightage for the practices for their complexity.

Adoption of home science practices was taken as the sum total adoption of the various practices recommended as a package by the extension agency which were adopted by the housewives. For obtaining adoption quotient scores three major items which made a substantial impact over the local improved ones were selected in consultation with the specialists at the block level during the pilot study. These items were, the use of recommended scientific family welfare measures, kitchen gardening, smokeless choolah, childcare etc. While incorporations the adoption scores, all the components in the scale (extent, potentiality, time consistency and weightage in respect of each of these practices) as suggested by Chattopadhyay (1963) were taken into consideration. Due to practical difficulties experienced during the pilot study in eliciting accurate details about the implementation or otherwise of all the component items by the housewives at that time, adoption with respect to last five years only was considered for compilation of adoption score.
INDEPENDENT VARIABLES METHOD OF SCORING

All the respondents who had personal experience of working with the Gram Panchayats, Mahila Samity, Youth clubs, Commercial banks and home-science extension personnel etc. were requested to record their experience with respect to each of the above aspects separately for each infrastructure. For easy comparision of the responses on different aspects measured using different point scales, the scores of each aspect was first converted into an index by multiplying the proportion of actual score to minimum score with 100. This enabled the data to be in the same level, so that they can be added together to arrive at a single score for each infrastructure. This also give the pooled score for a single housewives. The independent variables included, socioper­sonal, socio-psychological, Stimulus and Communication variables which are described below :

SOCIO-PERSONAL VARIABLES

This include age, education, family size, caste, social participation and urban contact.

(1) AGE :

Age was operationalised as the number of full years completed by the respondent at the time of enquiry. Thus, chronological age of the respondent was taken into consideration and categorized into three levels with the scores as follows :

- Young (below 25 years)
- Middle (25 - 50 years)
- Old (above 50 years)
(2) **EDUCATION**:

Educational status of the respondent was operationalised as the number of years of formal education attended by the respondent. The scoring system followed by Trivedi (1963) in his Socio-Economic Status Scale was used to quantify the educational status of the respondent.

The scoring was as follows:

<table>
<thead>
<tr>
<th>Status</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>0</td>
</tr>
<tr>
<td>Can read only</td>
<td>1</td>
</tr>
<tr>
<td>Can read and write</td>
<td>2</td>
</tr>
<tr>
<td>Upto Primary level</td>
<td>3</td>
</tr>
<tr>
<td>Upto Middle school</td>
<td>4</td>
</tr>
<tr>
<td>Upto High School</td>
<td>5</td>
</tr>
<tr>
<td>College</td>
<td>6</td>
</tr>
</tbody>
</table>

(3) **FAMILY TYPE**:

Family type may be either joint or nuclear family is composed of off-springs of only one spouse including minors and dependants. Joint family refers to one which is constituted of two or more brother's families. Family type was operationalised, on the basis of whether the members were jointly staying in a common kitchen, or they have nucleated type of family with separate kitchens. The score assigned to these types of families as per S.E.S. Scale of Trivedi is as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>1</td>
</tr>
<tr>
<td>Joint</td>
<td>2</td>
</tr>
</tbody>
</table>
(4) FAMILY SIZE:

The family size was operationalised as the total number of members in the family at the time of investigation. The family size was quantified as follows:

- Small family (upto 5 members) - 1
- Medium family (upto 5-10 members) - 2
- Large family (above 10) - 3

(5) SOCIAL PARTICIPATION:

Social participation in this study refers to the degree of involvement of the respondents in organisations either as its member or its office-bearer. This variable was qualified on the basis of scoring system followed in socio-economic status scale of Pareek and Trivedi (1963).

Never a member - 0
A member in the past but not at present. - 1 (For Each organisation)
A member at present but not in the past. - 2 (For Each organisation)
Was a member in the past and also at present. - 3 (For Each organisation)
Position held (if any). - 4 (For Each organisation)

Attendance in meetings of the organisation:
- Always - 2 (For Each Organisation)
- Some time - 1 (For Each Organisation)
(6) **OCCUPATION** :

It is a holding, tenure, possession, an employment business, vocation and pursuit against which a person earns his livelihood. The corresponding scores of socio-economic status scale developed by Trivedi (1963) were assigned:

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour</td>
<td>1</td>
</tr>
<tr>
<td>Caste occupation</td>
<td>2</td>
</tr>
<tr>
<td>Business</td>
<td>3</td>
</tr>
<tr>
<td>Independent profession</td>
<td>4</td>
</tr>
<tr>
<td>Cultivation</td>
<td>5</td>
</tr>
<tr>
<td>Service</td>
<td>6</td>
</tr>
</tbody>
</table>

(7) **MATERIAL POSSESSION** :

According to Anderson and Parker (1964). Material possession consists of goods and services that society gives to an individual or group of individuals the exclusive right to possess for use and disposing off. In this sense material possession is one's own, something possessed by him.

(8) **IMPROVED HOUSEHOLD EQUIPMENTS** :

The devices used at home for efficient working, which are considerably time and labour saving and also add to the prestige of the family were referred to. In order to arrive at standardized score for improved household equipment some steps were followed.

(9) **URBAN CONTACT** :

The urban contact was operationalized as having frequent visit to urban areas on regular basis were categorized into always,
seldom and never with the assigned scores of 2, 1 and 0 respectively.

**MEDIA EXPOSURE AND UTILISATION**

This was subjected to the various media available and their extent of utilisation by the respondents. This was measured in relation to the type of source viz. localite cosmopolite and mass media with the assigned scores of 1, 2 and 3 respectively with their extent of utilisation as most of them sometimes and never categories with 2, 1 and 0 weightages. The multiple of the type of sources of extent of utilisation so obtained was the final score of the respondent for this variable.

**KNOWLEDGE (about the selected home-science innovations)**

Knowledge has been operationalised in the study as "those behaviours and test situations which emphasized the remembering either by recognition or recall of ideas, material or phenomenon (Bloom et al, 1956). In this study the knowledge has been defined as the amount of information an individual possessed with regard to various aspects of improved home science innovations. A comprehensive close ended statements were prepared and the responses were obtained in 'Yes - No', 'Essential - Not essential', 'Required - Not required' dichotomous categories. The schedule was prepared for six improved home practices, viz. food preservation, clothings, Nutrition, Kitchen garden, Women's participation and family planning practices. Knowledge test developed by Singh (1975) was used.
ATTITUDE TOWARDS HOME SCIENCE INNOVATION

Attitude has been defined as, "the degree of positive or negative affect associated with some psychological object" (Thrustone, 1946). The psychological objects provided were the improved home science, innovations against which rural housewives' agreement or disagreement were recorded. Likert's (1932) technique of Summated Rating was modified and adopted for construction of attitude scale as adopted by Singh, T.R. (1976).

METHOD OF SCORING

The respondents were to answer the item in dichotomised categories like 'Correct' - 'Incorrect' - 'Agree - Disagree', and 'Yes - No'. Some questions were of multiple-choice type, they were asked to select one appropriate answer from many possible ones, read out to them. For correct reply, one score was given for each of the items selected and the total score obtained on all the items of the test was the knowledge score of that respondent.

All the statements were then arranged in rank order according to their 't' values and those with larger 't' values were selected for the final scale.

The final scale was administered to the sample respondents in the form of Likert-technique. The procedures of scoring in the scale ranged from 6 to 30.
STIMULUS VARIABLES
PERCEIVED CHARACTERISTICS OF INNOVATION

Characteristics, such as simplicity-complexity, physical compatibility, cultural compatibility, profitability, and cost of innovation included to test the adoptability of home-science innovations. Thus, the allocation of scores to the respondent was made on the basis of the single choice of the most important characteristics as perceived by them. The scale value of the particular single choice characteristic was multiplied by the rank score given by the judges so as to allocate the final score to the concerned respondents. Through this process, the position of each respondent with respect to her perception about the characteristics of the innovations was obtained.

COMMUNICATION VARIABLES

The present study has taken personal cosmopolite, personal localite and mass media sources of informations. The exposure of the housewives to these sources have been worked out through a structured question.

CONTACT WITH THE EXTENSION AGENCY

This was measured with the help of a Schedule. The following items are kept in the Schedule.

(i) Awareness of the respondent regarding the name and position of extension worker. For each awareness a score of 1 was given. Thus a housewife who was aware of the names and positions
of two extension personnel was given a score of 2.

(ii) Contact with the Extension agency was also measured in terms of degree of contact. Each housewife was asked as to how often she comes in contact with the extension worker. The possible response and their scoring were as follows:

<table>
<thead>
<tr>
<th>RESPONSES</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most frequently (weekly)</td>
<td>6</td>
</tr>
<tr>
<td>Frequently (fortnightly)</td>
<td>5</td>
</tr>
<tr>
<td>Most often (Monthly)</td>
<td>4</td>
</tr>
<tr>
<td>Often (Once in two month's)</td>
<td>3</td>
</tr>
<tr>
<td>Sometimes (Once in three month)</td>
<td>2</td>
</tr>
<tr>
<td>Hardly (Once in six month)</td>
<td>1</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
</tr>
</tbody>
</table>

The total score of a housewife was obtained by adding the score obtained by her in the above method.

CONSTRAINT ANALYSIS:

An experience survey was conducted among three agencies namely the Home scientists, the Home Science extension agency and the programme beneficiaries to get an insight into the various types of constraints limiting the acceptance of home-science innovations. The technique of conducting experience-survey has been reported by Sellitis, Jahoda, Deputsch and Cook (1962.P.55). They have stated, "many people in the course of their every-day
experience are in a position to observe the effects of alternate decisions and actions with respect to problems of human and physical relations. It is the purpose of an experience survey to gather and synthesize such experiences."

**SELECTION OF RESPONDENTS**

They have further stated, "The respondents in an experience survey should be carefully selected. The aim of the experience survey is to obtain insight into the relationship between variables, rather than to get an accurate picture of current practices or a simple consensus as to the best practice. In other words a selected sample of people working in the area is called for a random sample of practitioners may not be of such value in an experience survey. It is important to select respondents so as to ensure representations of different types of experiences. There is no simple rule for determining the number of informants who should be interviewed. At a certain point, the investigator would find that additional interviews do not provide new insight, that the answers fall into a pattern with which he is already familiar. At this point, further interviewing becomes less and less rewarding."

**THE QUESTIONING OF RESPONDENTS**

Before any systematic attempt is made to collect the insights, of experienced practitioners, it is necessary to have some preliminary idea of the important issues in the area. One can get this through structured interviews with people who have extensive
PROCEDURE ADOPTED IN THIS STUDY

The Home Scientists, the Home Science extension agency and the programme beneficiaries from the Home Science lectures of general Colleges; Orissa University of Agriculture and Technology, Bhubaneswar and the officials of the Directorate of Nutrition and Community Development Government of Orissa, Bhubaneswar were involved in the study. The total number of respondents selected were 50. Their individual break-up was as follows:

(i) HOME SCIENTISTS - (15)
   (a) Home Science lecturers (6)
       (Three from each of the areas of Nutrition, Child Development and extension)
   
   (b) O.U.A.T. (9) (Orissa University of Agriculture and Technology) All the Senior research assistants (Home Science Department)

(ii) HOME SCIENCE EXTENSION AGENCY - (15)
   (a) Home-Science officers of the Directorate of Nutrition, Directorate of Agriculture, and Community Development, Government of Orissa, Bhubaneswar-(5)

   (b) Lady Health Visitors - (5)
       3 Health Visitors from Medical Department and 2 from Directorate of Health.

   (c) Lady V.L.W. - (5)
       All the Workers from the Public Health Department.
(iii) PROGRAMME BENEFICIARIES -(20)
(a) Mahila Samity Presidents - (10)
(b) Balwadi and Angan Wadi heads - (5)
(c) Lady Panchayat and Ward members - (5)

STATISTICAL MEASURES:

After compilation of the field work the data collected were classified and tabulated in the light of objectives. An orderly tabulated and processed data were analysed with use of some statistical methods. However, the statistical techniques which have been used in this study during the course of analysis for proper and adequate interpretations are (a) percentage distribution (b) Chi-square (c) rank order analysis (d) correlation (e) Pearson's zero order correlation (f) test of significance for correlation coefficient, and mean score etc.

a) PERCENTAGE:

Simple comparisons were made on the basis of the percentage. For drawing percentages, the frequency of a particular cell was multiplied by 100 and divided by the total number of respondents in that particular category. This has been used at many places in the thesis and proved helpful in organizing the data with clarity and preconditions.

b) CHI-SQUARE TEST:

Chi-square test was applied to test whether a particular distribution is in agreement with the normal distribution or whether the two sets of classification are independent of each other and so on.
The equation for Chi-Square ($\chi^2$) is stated as follows:

$$\chi^2 = \frac{(Fo - Fe)^2}{Fe}$$

where,

$Fo =$ Frequency of occurrence of observed or experimentally determined facts.

$Fe =$ Expected frequency of occurrence on some hypothesis.

The evaluation of Chi-Square was done by referring tables given by Garrette (1969) with the computed value of Chi-Squares and the appropriate number of degrees of freedom.

c) MEAN SCORE AND RANK ORDER:

Each respondent was given a three point scale like fully agree, partly agree and not at all, or Know well, Know some and Do not know, to give their opinion for various statements. Scores like 3, 2, and 1 were given to "fully agree", "partly agree" and "not at all", or "know well", "know some" and "do not know", respectively. For negative statements scores were given in a reverse order like 1, 2 and 3. Then total scores and mean scores were calculated, and on the basis of mean scores rank order was made.

d) RANK ORDER CORRELATION:

Rank order correlation was suggested by Spearman by which the correlation between two characters can be estimated on the basis of rank of individuals in the whole lot for each of the characters without ranking or exact measurement for any of the individuals.
The rank order correlation "R" was calculated using the following formula:

\[ R = 1 - \frac{6 \sum d^2}{n (n^2 - 1)} \]

where,

- \( d \) = difference between the two ranks of variables.
- \( n \) = number of pairs.

Correction Factor = \( \frac{1}{12} (p^3 - p) \)

where,

- \( p \) = number of items whose ranks are common.

The corrected formula is:

\[ 1 - \frac{6 \sum d^2}{n (n^2 - 1)} - \frac{1}{12} (p^3 - p) \]

e) PEARSON'S CO-EFFICIENT OF CORRELATION:

This test was used to find out the zero order correlations to measure the degree of association between the general awareness about urban and rural housewives for socio-economic profile and also the extent of association with general awareness towards development agency.

The formula for calculating "r" is given below:

\[ r = \frac{N \sum xy - (\sum x)(\sum y)}{\sqrt{N \sum x^2 - (\sum x)^2}(N \sum y^2 - (\sum y)^2)} \]

Co-efficient of 0.70 to 1.00 (+ or - ) signifies that there is a high degree of association between the series. If the co-efficient is greater than 0.20 but less than 0.40, it
implies that there is low correlation. When the coefficient is less than 0.20, there is a negligible relationship.

If the coefficient is greater than 0.40 but less than 0.70, there is a substantial relationship.

In the formula given in the previous page for computing Pearson's coefficient of correlation,

\[ r = \text{co-efficient of correlation} \]
\[ N = \text{number of pairs being correlated} \]
\[ x, y = \text{the variables being correlated} \]
\[ = \text{summation} \]

f) **TEST OF SIGNIFICANCE OF CORRELATION CO-EFFICIENT:**

To test the significance of the deviations of the estimate of correlation coefficient from the hypothetical value 0 (zero) and to test whether the observed coefficient indicates a real correlation between the variables and has arisen merely due to fluctuations of sampling, test of significance or F was calculated by using the following formula:

\[
F = \frac{r \times \sqrt{n - 2}}{\sqrt{1 - r^2}}
\]

where,

\[ r = \text{correlation co-efficient} \]
\[ n = \text{number of items of pair} \]
LIMITATION OF THE STUDY:

(a) The present investigation suffers from the limitations of time physical facilities and financial resources. The interviewer had to face troubles while interviewing the respondents because of the time of availability for meeting. The investigators had to stay in the villages during night time to meet the respondents for collection of data. However, sufficient care was taken in making the study as objective and precise as possible.

(b) Recallability of facts and data are a major constraint. The housewives in general, did not remember things of past correctly. Therefore some amount of error was most likely to have crept into the data.

OBJECTIVES, VARIABLES AND STATISTICAL TREATMENTS OF THE STUDY:

<table>
<thead>
<tr>
<th>OBJECTIVES</th>
<th>VARIABLES AND ASPECTS OF STUDY</th>
<th>STATISTICAL TREATMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To study the differential profile of rural and urban housewives with respect to social, psychological and communication behaviour.</td>
<td>Personal, social, economical, psychological, communicational.</td>
<td>Frequency, percentage, mean score, rank, Student's 't' and 'F' test and correlation.</td>
</tr>
<tr>
<td>2. To study the differential decision making patterns and acceptance of certain selected home-science innovations among rural and urban housewives.</td>
<td>Patterns of rationality in decision making, change in adoption behaviour through decision.</td>
<td>Frequency, percentage and Rank.</td>
</tr>
</tbody>
</table>
3. To study the development perception of rural and urban housewives.

4. To study the constraints in adoption of home science innovations in relation to urban and rural housewives. Organisational constraints and functional constraints. Frequency, percentage, rank, rank correlation.

5. To formulate a suitable home-science extension strategy based on the findings of the investigations. Suitable home-science extension.