# CHAPTER 2

## METHOD OF PROCEDURE

The present investigation aimed at identifying training needs in the selected aspects of Home Science Education of the farm women of Gujarat State. It attempted to explore the training needs of the farm women in each district of Gujarat State. It also examines the association between the training needs of the farm women in each of the selected aspects of Home Science Education and the selected variables of the study.

This very nature of the present investigation necessitated the use of descriptive method of research. Therefore, the study was conducted by using the survey method.

The given frame work of figure is on the steps and method of procedure used in undertaking the present study.

This chapter is divided into six sections, each describes the procedure followed in each respective aspect.

The major sections are :

2.1 Study of training programmes for farm women offered by training institutions in Gujarat State.

2.2 Selection and development of different aspects in Home Science Education for farm women of Gujarat State.

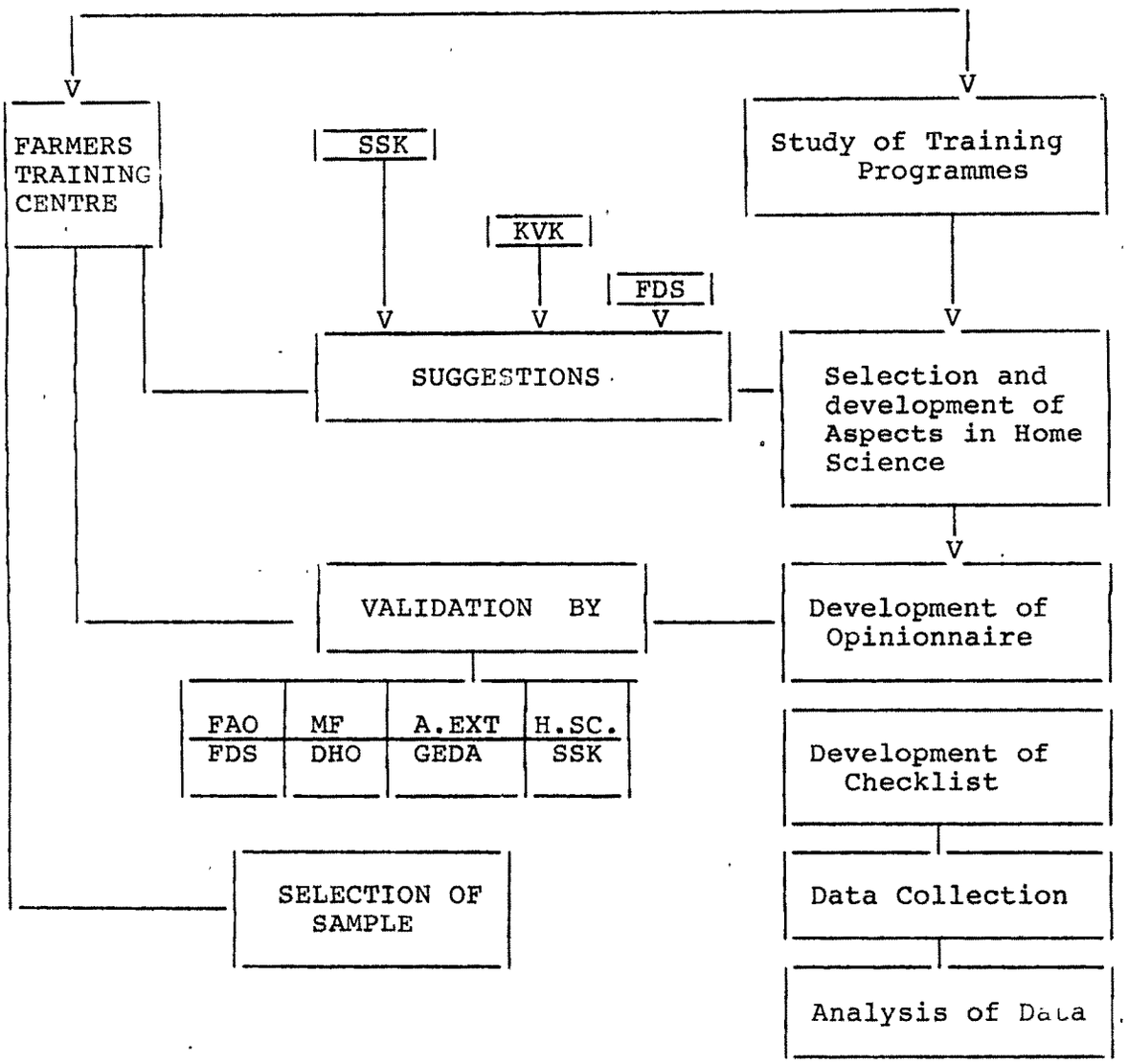
2.3 Development of opinionnaire for experts for selection of aspects and items under aspects.

2.4 Development of tool for data collection.

2.5 Collection of data.

2.6 Plan for statistical analysis of the data.

Diagram Showing Method of Procedure



## 2.1 Study of Training Programmes for Farm Women Offered by Training Institutions in Gujarat State

Since the study aims at identifying training needs in Home Science Education for the selected farm women of Gujarat State, it was necessary to study training programmes offered to farm women by the Farmers' Training Centres, Sardar Smruti Kendra, Krishi Vigyan Kendra and Farmers' Daughters School offering Home Science under Gujarat Agricultural University. These institutions are responsible to organise and conduct training programmes for farmers and farm women in Agriculture, its Allied Areas and Home Science.

A pilot study conducted revealed the following information.

### 2.1.1 FARMERS' TRAINING CENTRES

There are seventeen Farmers' Training Centres in Gujarat under Tribal-Sub Plan as well as in Non Tribal Areas. The aims of these Training Centres are to provide the farmers and the farm women the advance technical education in agriculture and allied fields for increasing food production. Home Science Education is one of the major areas about which women received training. The information is given through talk, discussion, demonstration and field visit. The Centres organize and conduct five days institutional camps. One day production-demonstration cum

training and a follow up programmes are also conducted by these Centres at village level. The duration of time is seven hours per day. These training programmes are conducted for 3 to 5 days. Hence the total period of time allotted for any training ranges between 21 hours to 35 hours.

### 2.1.2 SARDAR SMRUTI KENDRA (S.S.K.)

In Gujarat State, Sardar Vallabhbhai Patel lead people during struggle for independence and organised very successfully farmers' Satyagraha in Gujarat. Thus, he became 'Sardar' - a leading figure - not only in Gujarat but in India. After independence he took over many kingdoms and integrated them into one country on sound footing of democracy. In order to remember Sardar Patel for his valuable services to the farming community, the Gujarat Agricultural University established 'Sardar Smruti Kendra' at Anand, Navsari and Junagadh during Sardar Vallabhbhai Patel Centenary celebration.

Under the complex of Sardar Smruti Kendra there are three wings (a) Museum (1) Sardar Museum, and (2) Agricultural Museum, (b) Information Centre, and (3) Training Centre.

The main objectives of this Kendra are (1) to provide the information about Sardar Patel and his contribution to farming community. (2) To impart training to farm families in agricultural development. (3) To provide the literature

and information about agricultural development to visitors.

Training wing of Kendra conducts short duration courses based on the needs of the farming community. In the respective zones these courses are more specifically tailored according to the needs of all farm family members, agricultural labourers and village artisans.

The duration of training programmes is generally for 2 to 3 days for the farmers and farm women. The training about crop varieties plant protection, farms tools and machineries, irrigation is given to farmers as well as farm women. To farm women, special instructions in Home Science and Scientific Methods of grain storage and preservation too are imparted.

### 2.1.3 KRISHI VIGYAN KENDRA (K.V.K.)

The Education Commission (1964) in India recommended the vigorous efforts should be made to establish Specialized Institutions to provide vocational education in Agriculture and Allied Areas for rural development. This was considered essential for supporting services and information needed by farmers and farm women. With this aim Krishi Vigyan Kendras were designed to provide skill oriented vocational training to the practicing farmers and farm women and to those who intend to go for self employment after acquiring knowledge and skill. Krishi Vigyan Kendra is a vocational training institution for imparting skill training to the practicing farmers and farm women, school dropouts, young farmers and

field level extension workers. The training comprises of cultivation, farm planning, plant protection, care and feeding of animals, Nutrition, Cooking, and hygiene. Both Agriculture as well as Home Science components are well covered through the programme provided by Krishi Vigyan Kendra. The inservice course for extension workers organised at K.V.K. are of 1-3 months duration. Therefore, farm families are given need based courses and are planned for few days or weeks duration only. There are both, part time or full time educational courses which are offered to them.

### 2.1.4 FARMER'S DAUGHTERS' SCHOOL FOR HOME SCIENCE (F.D.S.)

This school was established under Gujarat Agricultural University for imparting Home Science Education particularly to the farmers' daughters coming from villages. It is a two years diploma course which prepares the girls in all important areas of Home Science, specially in Nutrition, Child Care, Clothing, Textile as well as Home Management. It is a regular and formal Training Institution. The girls also receive training in different crafts which are helpful in their household routine as well as for self employment.

The training programmes offered by the above institutions are tailored for Agricultural and Home Science Education for farm women and were considered as the basis to identify training needs of the farm women in some of the areas for the present study.

## 2.2 Selection and Development of Different Aspects in Home Science Education for Farm Women in Gujarat State

It was necessary to select the aspects of Home Science Education for farm women since the aim of the study was to identify the training needs in Home Science Education. The selection of the aspects of Home Science Education was based on :

2.2.1 Literature related to Home Science Education

2.2.2 Ongoing National Programmes

2.2.3 Syllabi prescribed for farm women by the Farmers' Training Centres, Sardar Smruti Kendra, Krishi Vigyan Kendra and Farmers Daughters School for Home Science under Gujarat Agricultural University.

### 2.2.1 LITERATURE RELATED TO HOME SCIENCE EDUCATION

2.2.1.1 Definition of Home Science. The term Home Science can be defined as the systematic knowledge regarding home living required by home makers and necessary for the well being of all members of their families. According to Paralikar (1983) Home Science is a multipurpose programme of study which takes care of individual's needs and interest and develops needed abilities and capacities for successful home making in dynamic society. Home Science Education is a supplementary training for better home making and not a substitute for traditional training received at home.

Home Science Education unifies the knowledge from all the basic areas of Arts, Sciences and Humanities to solve the problems arising out of day to day living.

Home Science comprises of five major areas of study namely Child Development, Clothing and Textile, Education and Extension, Foods and Nutrition and Home Management. Through each of these areas are specific general broad based instructions are given to student. Specific adaptations in terms of rural-urban artistic, scientific and technical are made in various programmes offered under formal educational schemes. Home Science under agricultural extension, therefore, is farm family based in any society have been the central focus for planning any programme of Home Science.

2.2.1.2 Home Science Extension Programmes. On 2nd October, 1952, a Nationwide programme of Community Development was launched. The aim of this programme was to bring about planned change in agrarian society to raise the general standard of living through increase in production of food as well as other resources.

In 1954, after two years of establishing this programme a need was felt to include women and home in the realm of development. As a result of which the Home Science Extension Programme was launched. The realisation brought about through this programme was that, if the community has to be changed, there is a need to bring about planned change

in individuals as well as in the homes and families in which they are born and brought up.

In rural society agricultural production is a main occupation of the family. There are many activities related to agricultural production, storage as well as preservation which are predominantly the areas of work for women. These women are also concerned with allied occupation like poultry, bee keeping, animal husbandry and dairy. Thus, to make Community Development Programme successful through the implementation of national extension services. Home Science Extension was considered as inevitable and integral part of this programme.

When Home Science Extension was introduced in the National Extension Programme, it was broad based programme. It covered number of aspects concerning rural life namely the Child and Family Welfare, the Nutrition and Health as well as Environmental Sanitation. It also aimed at promoting craft oriented education and for providing gainful employment during leisure time. Today there are specific programmes of Community Development and Welfare which have a stronger component of Home Science.

### 2.2.2 ONGOING NATIONAL PROGRAMMES

Home Science has contributed to national development through various Developmental and Welfare Schemes floated by Government through the five year plans from time to time. The various programmes began with Community Development

Programmes which was launched in 1952. Under this programme only two female village level workers in block of 100 villages were allotted. They were trained in 47 Home Science Wings all over India. They were employed in various blocks for organising development and welfare activities for women and children.

With "Specific Area Development Approach" various specific programmes related to various areas of Home Science were launched. Today more than 75 per cent of programmes under Rural Development for Women and Children have their roots in Home Science Extension Programmes launched in 1954. Some of the important progrmmes of development having potentials for Home Science aiming for betterment of women and children are, Nutrition, Health and Childcare.

Applied Nutrition Programme (ANP) was launched in 1959 to improve diets of vulnerable groups through education and self help. It was supported by international agencies like the UNICEF the FAO and the WHO. Home Science colleges provided venue for training of personnel already in service at the time when this programme was launched. They also trained their graduates to occupy special positions to enrich the promotion of this programme.

The other national programmes such as Expanded Aid to Nutrition Programme (ENP) which was launched by UNICEF and FAO, vitamin A Prophylaxis programme, Anemia Prophylaxis programme and Supplementary Nutrition Programme (SNP)

involved the areas of Nutrition, Child Development and Rural Home Economics as components to be instructed by their workers.

In another programme like Food For Work (FFW) which is now called National Rural Employment Programme (NREP) the women labourers are also covered under this programmes. In planning and promotion of Social Input Programme (SIP) for Area Development in Gujarat the Home Scientists were involved at the planning as well as evaluation. This programme too had a component of Child and Women Welfare, Nutrition and Health as well as Employment and Income Generation.

Integrated Child Development Scheme (ICDS) which aimed at preventing, reducing and eradicating morbidity and malnutrich among the vulnerable mothers and child population has an inbuilt nutrition and health education component in it. Thus, three departments of Home Science, namely, Child Development, Foods and Nutrition as well as Home Science Education and Extension are involved in these programmes.

Recently a new objective of studying and improving the anthropometric and nutritional status of school children was added in Mid-Day Meal Programme (M.D.M.) where Home Scientists participated in evolving easy method for recording this status and also training teachers in doing so.

Integrated Rural Development Programme (IRDP) in the sixth five year plan was introduced with the aim at eradicating the poverty and raising the economic level of families living below poverty line. Under this programme Development of Women and Children in Rural Areas (DWACRA) was started to improve the status of underprivileged women by promoting training in income generating activities and concurrent market for their products easy way accessibility to women by supporting system through creches and day care centres.

In this programme there is a lot of potentials for all areas of specialization in Home Science to contribute as the main clientele under this programme are Women and Children.

Under the same programme of IRDP the national TRYSEM programme was launched in 1979 with the aim to equip rural youths with necessary skills and techniques to enable them to take vocations or self employment. It provides training for self employment in both traditional and non-traditional vocational skills starting from household food processing and preservation on large scale food technology and food processing including canning, bottling and the like. It also expands in the field of Clothing Textile, Cottage and Village Industries. Thus, this programme has a lot of involvement of Home Scientists in both training in various skills as well as project formation, execution, monitory, supervision and evaluation.

Recently under National Technology Mission, the programme related to Housing, Drinking Water, Literacy, Energy and Oil Seed Management were launched.

During sixth five year plan, under Minimum Need Programme (MNP) Rural Housing Project was launched.

Under the project of Indira Awas Yojana the house of Rs.6,350/- per family unit of rural homeless was provided by the Government. The Central Building Research Institute (CBRI), Roorkee, Vishvakarma Engineering College, Vallabh Vidyanagar which has Rural Housing Wing, also help in promoting low cost housing and alternative building material. The Home Scientists as expert homemakers have a significant role to play in promotion of this Mission on the basis that women are the basic consumers of the house.

Home Scientists through Technical Back Up Unit sponsored by the Department of Non-Conventional Energy Sources of Ministry of Energy, Government of India are also involved in training of individual master craftsmen as well as youth for self employment in this area through the Home Scientists from the Departments of Home Management and Home Science Education and Extension in the programmes on Energy Development. The Home Scientists contribute significantly to the programmes of promotion of non-conventional and alternative energy sources as well as designing and standardizing improved cook stoves through basic and applied research, promotion of these equipments and developing

methods for their promotion.

Home Scientists can participate in developing Science and Technology inputs related to Water Management at Household and Family level. Similarly in working for reduction of drudgery in fetching water in purifying, use in sanitation, disposal of water, water borne diseases and also in training women and girls for various posts for better water management programme.

In National Adult Education Programme women are the integral part and are given prominence under its various scheme. Literacy and the other components of Functional Literacy such as Population Education, better \Nutrition and health are also provided under NAEP.

Analysis of the above programmes indicated that there is an in built component of Home Science Education in almost all developmental schemes since independence. Most of the time they are in the areas like Foods and Nutrition, Child Care, Household and Grain Storage, Health and Sanitation as well as Family Planning, Energy Management area is a recent addition which is significant not only as a means for energy conservation but also in terms of broader environmental problems.

### 2.2.3 SYLLABUS PRESCRIBED FOR TRAINING PROGRAMMES FOR FARM WOMEN BY FTCs, SSKs, KVKs AND HOME SCIENCE SCHOOL UNDER GUJARAT AGRICULTURAL UNIVERSITY

In order to understand the training programmes and Home Science components in these training programmes a systematic study of the suggested syllabus for farm women in different institutions such as FTC, SSK, KVK and for farmers' daughters' Home Science School was undertaken.

The finding indicated as per the followings.

2.2.3.1 Syllabus prescribed by Farmer Training Centre. The suggested syllabus from Farmers' Training Centre for farm women for five days institutional programmes was studied. The analysis of the syllabus having theory and Discussion as component included :

1. Importance of Foods and Nutrition.
2. Importance of balance diet.
3. How to store grains and seeds.
4. Preservation of fruits and vegetables.
5. Use of high yielding varieties in diet.
6. Importance of kitchen gardening.
7. Child care and Mother welfare.
8. General health and hygiene.
9. Family Planning.
10. Solar cooker and biogas.
11. Information about high yielding varieties.
12. Need for seed treatment.

13. Compost making from waste.
14. Weeds and weed control.
15. Farm based manures.
16. Management of farm animals.
17. Fodder production, utilization and conservation.
18. Use of enhanced fertilizers and seeds.
19. Information of soil and soil testing from laboratory.
20. Farm forestry and poultry practicals.

The Practical comprised of :

1. Demonstration of different nutritive recipes from high yielding varieties.
2. Making pickles, jam, chutneys, beverages and other preservative recipes.
3. Storage of seed grains as well as grains for consumption.
4. Kitchen gardening.
5. Seed treatment.
6. Method of taking soil samples.
7. Compost making.

2.2.3.2 Syllabus prescribed by Sardar Smruti Kendra (SSK). The following subjects were taught in the training programmes organised for farm women by Sardar Smruti Kendra under Gujarat Agricultural University.

1. Home Science and Scientific method of Grain Storage.
2. Recipes from different grains and fruit preservation.
3. Child Care and Child Health.
4. Clothing and Textile.

5. Home Management.
6. Different cooking methods.
7. Importance of nutritive foods.
8. Animal nutrition.
9. Kitchen gardening.
10. Importance of Mahila Mandal for development of rural society.

2.2.3.3 Syllabus prescribed by Krishi Vigyan Kendra.

The syllabus for the training programmes for farm women under Krishi Vigyan Kendra included.

1. Food Production and Agricultural Science.
2. Food Production and Technical Information.
3. Seed Storage, Grain Storage.
   - Chemical fertilizers.
   - Farming mechanism.
   - Use and importance of compost manures, bio fertili--zers, compost making.
   - Rat control.

Animal husbandry and milk production.

- Technical information about animal husbandry.
- Animal Nutrition.
- Fodder storage.
- Increasing milk production.
- Nutritions in milk and milk preparation in diet.
- Poultry.

Foods and Nutrition.

- Diet and Nutrition, balanced diet.

- Food groups and nutrients and necessities.
- Meal planning.

Mother Welfare and Child Care.

- Care of pregnant women.
- Diet of pregnant and lactating mothers.
- Child care, Immunizatiion and Diet.
- Weaning, growing children's needs.
- General habits in children.

Home Management.

- Adolescent education.
- Modern devices and their use.
- Kitchen arrangement, cleanliness.
- Smokeless chulla, home made refrigerators, house cleanliness.
- Home decoration, best out of waste.

Health.

- Importance of health.
- Personal health and cleanliness.
- Public health and cleanliness.
- Communicable diseases, care and prevention.

Diet and Care of Sick Persons.

- Nutritious diet, importance of green vegetables.
- Fruits and fruits preservation.
- Kitchen gardening.
- Cooking methods, hints while cooking.

### 2.2.4 SELECTED ASPECTS IN HOME SCIENCE EDUCATION FOR FARM WOMEN FOR THIS STUDY

Thus, on the basis of analysis of the programmes undertaken at Farmers' Training Centres, Sardar Smruti Kendras, Krishi Vigyan Kendra, and Farmers' Daughters School following common broad aspects in Home Science Education were thought most important and were selected for this study. The care was taken to develop relevant and suitable content in these aspects. Therefore, constant consultation was sought from Farmers' Training Centres, Sardar Smruti Kendra of Anand and Navsari and from Home Science School under Gujarat Agricultural University at Anand.

The following aspects were finally selected :

1. Foods and Nutrition.
2. Household storage.
3. Grain storage.
4. Child care.
5. Health and Sanitation.
6. Family Planning.
7. Energy Management.

### 3.2.5 FORMATION OF STATEMENT IN EACH ASPECT OF HOME SCIENCE EDUCATION

The aspect in Home Science covered by the training centres for farm women and girls namely Farmers' Training Centre, Sardar Smruti Kendra, Krishi Vigyan Kendra and Farmers' Daughters' school under Gujarat Agricultural

University were studied and selected as mentioned earlier. Each aspect was studied separately. The information was collected on each selected aspect in details. The intention was to develop concepts in the content of the subject matter in the selected aspects of Home Science. Under each concept the comprehensive statement regarding specific facts and practices were presented. These items of statements were considered important for helping the farm women in developing related concepts in the subject matter areas of Home Science. Thus, it was envisaged that the training programmes for them could be planned focussing around the content in the selected aspects of Home Science Education.

In all there were 78 concepts with 426 items of statements distributed under each of the seven aspects as shown in the table.

Table . Distribution of Concepts and Items of Statements Under Each of the Seven Selected Aspects of Home Science Education

| No. | Aspects | No.of Concepts | No.of Items |
|---|---|---|---|
| 1. | Foods and Nutrition. | 21 | 96 |
| 2. | Household storage. | 4 | 16 |
| 3. | Grain storage. | 9 | 77 |
| 4. | Child care. | 16 | 79 |
| 5. | Health and Sanitation. | 11 | 76 |
| 6. | Family Planning. | 7 | 33 |
| 7. | Energy Management. | 10 | 49 |
| | | 78 | 426 |

As evident from above table under the aspect of Foods and Nutrition there were highest number of concepts followed by those under Child Care as well as Health and Sanitation. Though there were only 9 concepts under grain storage, there were 77 items of facts and practices as against 10 concepts in Energy management with only 49 items. In Family Planning there were 7 concepts with 33 items of statements and under Household Storage there were 4 concepts having 16 items of Statements.

## 2.3 Development of Opinionnaire

An opinionnaire consisted of the statements regarding specific facts and practices in seven selected aspects of Home Science Education for the selected farm women under this study.

### 2.3.1 PREPARATION OF OPINIONNAIRE

According to Remmers Gage and Rummel (1963) the pooled opinions of specialists on given information would indicate a valid content. For identifying training needs of the farm women in Gujarat State, the opinionnaire on selected aspects of Home Science Education was prepared for finding out the pooled judgments of the experts, and trainers from Farmers Training Centre as well as the subject matter experts from Faculty of Home Science.

The objective of this opinionnaire was to check the validity of the content with reference to accuracy of the

content and importance of the content to the farm women in Gujarat State.

With regard to accuracy of the statement in each aspect an attempt was made to determine whether the statement is "correct" or "not correct". They were asked to correct the statement if they found it incorrect. They were also asked to add the items in the aspects given, if they think them as most important to know.

With regard to the importance of the statement the attempt was made to determine whether the statement in each aspect of Home Science Education was "Most Important", "Important" or "Not Important" for farm women.

### 2.3.2 ADMINISTRATION OF OPINIONNAIRE

The opinionnaire was mailed to the authorities of all District Farmers Training Centres in Gujarat State, Sardar Smruti Kendra and authority of Farmers' Daughters' School for Home Science under Gujarat Agricultural University. The opinionnaire was given personally to the experts in the subject matter areas of each aspect of Home Science from the Faculty of Home Science, District Health Office, Model Farm under GAU, Baroda and Gujarat Energy Development Agency. There were 24 experts who checked each aspect of Home Science judging the "Correctness" and "Importance" of the given items under each aspect selected for farm women of Gujarat State.

### 2.3.3 MEASUREMENT OF OPINIONNAIRE

The items given under each of the aspect selected for Home Science Education for farm women were found correct except one item under the aspect of Grain Storage. Eighty per cent of judges had pointed out that the item that "Boric powder for storing grain is not advisable" hence the same item was deleted.

The rating scale of Importance consisted of three categories "Most Important", "Important", "Not Important" representing three positions on the dimension of Importance. The three categories were assigned the values of 3, 2 and 1 respectively. The mean of each of the statement based on the responses of 24 experts were calculated for arriving at a value per statement.

It was found that out of 78 concepts 77 concepts were found most important except one concept under Foods and Nutrition aspect which was the technical information. The number of 214 of items of statements were found "Most Important" as per table 3 given. Only the items falling under the category of "Most Important" were included in the study with the consultation of the authority of the Farmers Training Centres. The training programme for the farm women is organised only for 3-5 days. During this short period the essential information is given to farm women and therefore, only the "Most Important" items were included in the study.

Table 3. Distribution of Items Under Three Categories of Importance Rated by the Experts in Selected Seven Aspects of Home Science Education

| No. | Aspects | Total Items | Most Important | | Important | | Not Important | |
|---|---|---|---|---|---|---|---|---|
| | | | N | % | N | % | N | % |
| 1. | Foods and Nutrition | 96 | 54 | 56.25 | 41 | 42.83 | 1 | 1.04 |
| 2. | Household Storage | 16 | 9 | 56.25 | 7 | 43.75 | - | - |
| 3. | Grain Storage | 76 | 30 | 39.47 | 40 | 52.64 | 6 | 7.89 |
| 4. | Child Care | 79 | 38 | 48.10 | 41 | 51.90 | - | - |
| 5. | Health and Sanitation | 76 | 40 | 52.63 | 35 | 47.37 | - | - |
| 6. | Family Planning | 33 | 19 | 57.57 | 14 | 42.43 | - | - |
| 7. | Energy Management | 49 | 24 | 48.97 | 25 | 51.03 | - | - |
| | | 425 | 214 | | 204 | | | |

As evident from table there were highest number of Most Important items fall under the aspect of Foods and Nutrition (54), followed by the aspect of Health and Sanitation (40). There were 38 Most Important items under the aspect of Child Care followed by 30 items under the aspect of Grain Storage, 24 items under Energy Management, 19 items under Family Planning. The lowest number of items (9) were under the aspect of Household Storage.

In the four aspects namely Foods and Nutrition, Household Storage, Health and Sanitation and Family Planning the items fall under category of Most Important were above fifty per cent (56.25, 56.25, 52.63, 57.57) whereas in two aspects Child Care and Energy Management the items fall under the category "Most Important" were 48.97 % and 48.10 %

just below 50 %. The lowest percentage of 39.47 % fall under the category of Most Important were from the aspect of Household Storage.

In the aspects of Foods and Nutrition and Grain Storage 1.04 % (one item) and 7.89 % (six items) respectively were considered Not Important.

## 2.4 Development of Tool for Data Collection

A structured checklist for the interview of the selected farm women for the data collection was prepared.

It consisted of two parts as follows :

2.4.1 Collecting Background Information of the respondents.

2.4.2 Checking the knowledge of the farm women in seven selected aspects of Home Science Education.

### 2.4.1 BACKGROUND INFORMATION OF THE RESPONDENTS

First section of research tool dealt with background information about the respondents. A standardized socio-economic status scale by Udai Parikh and G. Trivedi was used who modified the scale to facilitate its use n most parts of the country, although the scale was primarily standardized in village near Delhi. The scale consisted of only such items on which quantitative information could be collected objectively.

The scale called for information on important aspects of socio-economic status of a family of farm women mainly occupation, education, social participation of the heads of

the family, the caste of the family, their land, houses, farm powers and material possessions. Each major item had several sub items.

Besides this information about their ages, exposure to the other training programmes other than FTCs prior training under FTC programmes and the proximities to the centre was also collected. This helped in collecting information about selected variables included in the study.

### 2.4.2 CHECKLIST FOR COLLECTING INFORMATION REGARDING THE KNOWLEDGE OF THE FARM WOMEN IN SEVEN SELECTED ASPECTS OF HOME SCIENCE

This section consisted of the items of facts and practices in seven aspects of Home Science Education namely Foods and Nutrition, Household Storage, Grain Storage, Health and Sanitation, Family Planning and Energy Management.

2.4.2.1 Selection of Checklist. The respondents under this study were the farm women from rural areas. It was thought that interviewing respondents would be the appropriate method to collect data from the farm women on the assumption that majority may not be familiar with the practice of reading and writing due to their level of literacy. The structured checklist was prepared to interview the selected farm women. It was also assumed while developing interview checklist that farm women would be able to deal only with simple statements of facts and

practices under each aspect rather than generalisation since dealing with generalisation is a higher intellectual process to which they may be accustomed.

According to Homer Komfper ( 1964) there were four common forms of checklist arrangements. In the present study the form in which the question with a "Yes" or "No" response was asked was followed to collect data from the farm women in each selected aspect of Home Science Education.

### 2.4.3 VALIDITY OF THE CHECKLIST

A checklist must have quality of completeness and comprehensiveness so that one can increase the validity of data. The checklist was based on the Intensity Index of Importance of the ratings given by the experts. Thus, this checklist had completeness and comprehensiveness to increase the validity of the data.

Moreover, the checklist was translated into Gujarati language for interviewing the respondents who were Gujarati and residing in the rural areas. The help for the same was sought from the teacher who was Gujarati, teaching in English medium school from Baroda as well as one professor from Gujarat Agricultural University at Anand.

### 2.4.4 RELIABILITY

The efficiency of measuring instrument was in its reliability. In this study Split Half Method for testing

reliability was used as the statements could be arranged in an ordinal form. Spearman Brown Prophency Formula for testing reliability based on Split Half data was used.

$$r_{11} = \frac{2 r_{1/2\ 1/11}}{1 + r_{1/2\ 1/11}}$$

The reliability coefficient of .78 was obtained by Split Half method and it was considered high reliability.

### 2.4.5 PRETESTING

Pretesting was carried out on 20 farm women in Kaira district. These women were not included in the final data collection. The purpose of pretesting was to find out comprehension of farm women for the checklist and to check the time required for conducting interview.

After pretesting few words in the statements were still made simpler as to help farm women to comprehend easily to answer correctly.

## 2.5 Collection of Data

The data were collected from 580 farm women in 17 districts of Gujarat State.

### 2.5.1 POPULATION

The population of rural women in Gujarat State is 11,497,474. This population resides in 18,574 villages in Gujarat State according to 1981 census. The population under the study of trained farm women from the Farmers

Training Centre consisted of 1739 farm women trained in the year 1988.

### 2.5.2 SAMPLE FOR THE STUDY

A sample as the name implies is a smaller representation of a large population barring the unusual instances in which a complete population is taken. Considering the limitation of time and the investigator's capacity to reach the target it was decided to study only the selected trained and untrained farm women of the 17 districts of Gujarat State.

As seen from the table there were 17 Farmers Training Centres in Gujarat State out of which only 12 Farmers Training Centres had conducted the training programmes for farm women.

Table 4. Distribution of Farmers Training Centre for Organising and Not Organising Training Programmes for the Farm Women in Gujarat State

| Divisions | Farmers Training Centres | |
|---|---|---|
| | Organised Training Programmes for Farm Women | Not Organised Training Programmes Farm Women |
| 1. Ahmedabad | Ahmedabad<br>Thasra<br>Pilwai<br>Khedbrahma | Deesa |
| 2. Navsari | Navsari<br>Vyara<br>Chhotaudepur<br>Rajpipla<br>Dahod | |
| 3. Rajkot | Rajkot<br>Surendranagar<br>Junagadh | Jamnagar<br>Amreli<br>Bhuj |

The table above also showed that five Farmers Training Centres, the majority from Rajkot division, did not organise training programmes for farm women due to vacancies of the post of Female demonstrators and instructors in Home Science in those centres as reported by them.

Based on the above information the sample of the study was selected. It consisted of only 240 trained farm women representing 14 per cent of the total trained population of 1739, and 340 untrained farm women totaling to 580 trained and untrained farm women.

### 2.5.3 SELECTION OF VILLAGES AND SAMPLE

The authorities of Farmers Training Centres provided the guidance in the selection of the villages to be contacted and the sample of the farm women.

The villages were selected on the basis of the distance between training centres and the villages and those villages which were covered in the year 1988. The distance lesser than 15 Kilometers and more than 15 Kilometers between the centres and villages was the criteria used for the selection of villages since it was one of the variables used in the study.

The sample of the farm women was also selected on the basis of the training received by the farm women from Farmers Training Centres and socio-economic status of the farm women. The authorities of Farmers Training Centres helped in selecting 20 farm women who had received training

from Farmers Training Centres and 20 untrained farm women as shown in table. Moreover, women were selected from the higher as well as from the lower socio-economic status group.

Table 5. Frequency of the Farm Women From the Area Near to Farmers Training Centres in Seventeen Districts of Gujarat State

| No. | Farmers' Training Centre at | District | Number of Farm Women N = 580 | | |
|---|---|---|---|---|---|
| | | | Trained | Untrained | Total |
| 1. | Ahmedabad | Ahmedabad | 20 | 20 | 40 |
| 2. | Thasra | Kaira | 20 | 20 | 40 |
| 3. | Pilwai | Mehsana | 20 | 20 | 40 |
| 4. | Khedbrahma | Sabarkantha | 20 | 20 | 40 |
| 5. | Deesa | Banaskantha | - | 20 | 20 |
| 6. | Navsari | Valsad | 20 | 20 | 40 |
| 7. | Vyara | Surat | 20 | 20 | 40 |
| 8. | Chhotaudepur | Vadodara | 20 | 20 | 40 |
| 9. | Rajpipla | Bharuch | 20 | 20 | 40 |
| 10. | Dahod | Panchmahal | 20 | 20 | 40 |
| 11. | Rajkot | Rajkot | 20 | 20 | 40 |
| 12. | Surendranagar | Surendranagar | 20 | 20 | 40 |
| 13. | Junagadh | Junagadh | 20 | 20 | 40 |
| 14. | Jamnagar | Jamnagar | - | 20 | 20 |
| 15. | Amreli | Amreli | - | 20 | 20 |
| 16. | Bhavnagar | Bhavnagar | - | 20 | 20 |
| 17. | Bhuj | Kachha | - | 20 | 20 |
| | | | 240 | 340 | 580 |

The table showed that out of 17 Farmers' Training Centres five FTCs were in Ahmedabad, division out of which one FTC was in Ahmedabad district in Ahmedabad headquarter. The rest four FTCs were not in district headquarters.

In Navsari division all the five FTCs were not at district headquarters whereas in Rajkot division all the seven FTCs were in district headquarters.

The table also showed that for the selection of 240 trained Farmers Training Centres who had conducted their training programmes for farm women helped in identifying the sample of the study. In the remaining Farmers' Training Centres at Deesa in Ahmedabad division and Jamnagar, Amreli, Bhavnagar and Bhuj in Rajkot division, who did not organise training programme, the trained women were not available. However, the selection of 340 untrained farm women was made with the help of all the authorities from each of the seventeen District Farmers Training Centres in Gujarat State. Thus, it was a purposive accidental clustered sample of 580 trained and untrained farm women.

### 2.5.9 DATA COLLECTION

The data were collected from 580 farm women from villages in 17 districts of Gujarat State under the guidance of authorities from District Farmers Training Centres by interview technique.

### 2.5.5 SCORING OF THE DATA

The checklist prepared for data collection consisted of two parts.

1. Collecting background information of farm women.
2. Collecting information from farm women regrding seven selected aspects in Home Science Education.

2.5.5.1 Scoring of Background Information. There are nine major items on socio-economic status. Each major item had several sub items and each sub item carried specific scores as an prescribed in the mannual of socio-economic status scale.

Table No.6 shows the score given to each sub item on the socio-economic status scale.

The informatiion related to nine categories about respondents' families had been collected and scored according to the weightage given in the table. The total score was obtained by adding the scores obtained oneach sub item indicatieng individual family's overall Socio-Economic status.

The overall score was interpreted according to the broad categorizatiion given in the manual as shown in table 7.

Table 6. Prescribed Weightage for Each Sub Item on Socio-Economic Status Scale

| | Score | | Score |
|---|---|---|---|
| **Caste** | | **Land** | |
| Scheduled Caste | 1 | No land | 0 |
| Lower Caste | 2 | Less than one acre | 1 |
| Artisan Caste | 3 | 1 - 5 acre | 2 |
| Agriculture Caste | 4 | 6 - 10 acre | 3 |
| Prestige Caste | 5 | 11 - 15 acre | 4 |
| Dominant Caste | 6 | 16 - 20 acre | 5 |
| | | More than 20 acres | 6 |
| **Occupation** | | **House** | |
| Labour | 1 | No house | 0 |
| Caste Occupation | 2 | Hut | 1 |
| Business | 3 | Kutcha | 2 |
| Independent profession | 4 | Mixed | 3 |
| Cultivatiion | 5 | Pucca | 4 |
| Service | 6 | Mansion | 6 |
| **Education** | | **Farm Power** | |
| Illiterate | 0 | No drought animal | 0 |
| Can read only | 1 | 1-2 drought animal | 2 |
| Can read and write | 2 | 3-4 drought animals or one more prestige animal | 4 |
| Primary | 3 | | |
| Middle | 4 | | |
| High School | 5 | 5-6 drought animals or tractor | 6 |
| Graduate | 6 | | |
| **Material Possession** | | **Family Size** | |
| Bullock cart | 1 | Upto 5 | 1 |
| Cycle | 1 | Above 5 | 2 |
| Radio | 1 | Distinctive features | 2 |
| Chairs | 1 | | |
| Improved agricultural implements | 2 | | |
| **Family Type** | | | |
| Single | 1 | | |
| Joint | 2 | | |

Table 7. Categorization of Socio-Economic Status According to the Score Obtained on the Scale

| | Category | Scores on the Scale |
|---|---|---|
| A. | Upper Class | Above 43 |
| B. | Upper Middle Class | 33 - 42 |
| C. | Middle Class | 24 - 32 |
| D. | Lower Middle Class | 13 - 23 |
| E. | Lower Class | Below 13 |

2.5.5.2 Scoring the Responses of the Farm Women in selected aspects of Home Science Education. In order to identify the training needs of the farm women in each selected aspect of Home Science Education the knowledge of the farm women was tested in terms of "Yes" or "No" responses.

When the response was affirmative as "Yes", a value assigned to a statement was given as a score for arriving at planned statistical computation. No value was calculated when a response was negative

Thus, the maximum obtainable score on each aspect of Grain Storage was as given below.

Table 8. Maximum Total Score Assigned by the Expert in Each Selected Aspect of Home Science Education

| | Aspects in Home Science Education | Maximum Score in the Aspect |
|---|---|---|
| 1. | Foods and Nutrition | 147 |
| 2. | Household Storage | 23 |
| 3. | Grain Storage | 84 |
| 4. | Child Care | 104 |
| 5. | Health and Sanitation | 112 |
| 6. | Family Planning | 53 |
| 7. | Energy Management | 65 |
| | Total Score of all the seven aspects... | 588 |

It was then categorised that, when the score was below fifty per cent of the total score it showed lesser knowledge and thus indicated higher extent of training needs in that aspect. On the other hand, the score above the fifty per cent of the total score showed higher knowledge and thus indicated lower extent of training needs in that aspect. The same scoring system was followed in all the aspects studied here.

## 2.6 Plan of Statistical Analysis

The statistical analysis was planned for each aspect of the study undertaken by keeping the objective of the study in mind.

- All the relevant background information of the respondents were studied in terms of frequency and percentages. - Mean and mean percentages of the score

achieved by the farm women of Gujarat State from three divisions of Gujarat State, from the areas near to training centres in each of the division and from tribal and non tribal areas of Gujarat State, were calculated.

- The differences in training needs of the farm women in selected aspects of Home Science Education from three divisions, within the division and between tribal and non-tribal areas were studied by applying 't' test.

  The formula used was -

$$SD = \sqrt{\frac{(X_1 - M_1)^2}{(N_1 - 1)} + \frac{(X_2 - M_2)^2}{(N_2 - 1)}}$$

$$SE_D = SD \sqrt{\frac{N_1 + N_2}{N_1 N_2}}$$

$$t = \frac{(M_1 - M_2) - 0}{SE_D}$$

The association between the training needs of the farm women and the selected variables wre found out by using ($X^2$) Chi-Square test and (C test) coefficient of contingency.

The formula for Chi-Square test was -

$$X^2 = \frac{N (AD - BC)^2}{(A + B)(C + D)(A + C)(B + D)}$$

The formula for coefficient of contingency was -

$$C = \frac{X^2}{N + X^2}$$