CHAPTER IV
METHODOLOGY

IV.1 Operational Definition of Main Concepts.
2 Sample.
3 Design and Hypotheses.
4 Tools.
5 Method of Administration.
METHODOLOGY:

In the previous chapter, the related literature surveyed was reviewed. This chapter deals with the plan and procedure of the study. It includes a description of

(a) Operational Definitions of Main Concepts.
(b) Sample.
(c) Design and Hypotheses.
(d) Tools.
(e) Method of Administration.
(f) Statistical Analysis.

(a) Operational Definitions:

The basic concepts whose theoretical background has been given in the first chapter are given the following operational definitions.

Sex Role Orientations:

The Masculinity and Femininity scores on Bem Sex Role Inventory are used to classify the sample into the different sex-role orientations.
Masculine Sex-role Orientation:

Those who score above the median of the total sample on the masculinity scale and below the median of the total sample on the femininity scale are those who have a Masculine sex-role orientation.

Feminine Sex-role Orientation:

Those who score above the median of the total sample on the femininity scale and below the median of the total sample on the masculinity scale are those who have a feminine sex-role orientation.

Androgynous Sex-role Orientation:

Those who score above the median of the total sample on both the masculinity and the femininity scale are those who have an androgynous sex-role orientation.

Undifferentiated Sex-role Orientation:

Those who score below the median of the total sample on both the Masculinity and Femininity scales are those who have an undifferentiated sex-role orientation.

Anxiety

The anxiety score is the algebraic summation of the number of situations which the person has marked as 'Yes'.
Higher score is indicative of anxiety.

(b) Sample:

Data for this study was collected from Ahmedabad city in Gujarat state. The sample was predominantly married, adult females, mainly from urban backgrounds. The investigation intends to study working women. As a comparison group non-working women were also studied. It was decided that the sample would include 100 working women and 100 non-working women. They were to be from the age group ranging from 20 years to 45 years.

Within this frame work the sample was taken through a house to house visit. No special sampling procedure was adopted. On analysis of the personal data gathered from the subjects the sample was classified into certain groups. Also on basis of the score on the Bem sex-role inventory the sample was classified into the different sex-role orientation groups. The groups classified on basis of the personal data are described in the table below.
### TABLE IV.1.
**DESCRIPTION OF THE SAMPLE**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Break Up</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age Groups</td>
<td>20-30 years</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>31-45 years</td>
<td>100</td>
</tr>
<tr>
<td>2. Occupational Status</td>
<td>Working</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Non-working</td>
<td>100</td>
</tr>
<tr>
<td>3. Number of children</td>
<td>None or one</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Two or more</td>
<td>101</td>
</tr>
<tr>
<td>4. Family Types</td>
<td>Nuclear</td>
<td>121</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>79</td>
</tr>
<tr>
<td>5. Income Level</td>
<td>High</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>200</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### Age Groups:

Considering that most Gujarati girls get married around the age of 20 to 25 years, the lower limit of age was decided
at 20 years. The higher limit of age was decided as 45 years to avoid the effect of any physiological changes on the women.

Age can be an important factor affecting the anxiety level of women, particularly in married women. Women enter marriage sometimes full of expectations and at times ill prepared to face, accept and perform her new role. Then gradually with age her experience and maturity to deal with the problems she faces, increases and she can face these problems more competently. Hence age is taken as one of the variables in this study.

Occupational Status:

In today's world, young women are increasingly confronted with a conflict between pursuing a career or opting for the equally demanding role of wife and mother. There are stresses associated with both alternatives. Needless to say, combining both roles presents an even more stressful alternative.

Hoffman (1974) has concluded that the working woman who obtains satisfaction from her work, who has adequate arrangements so that her dual role does not involve undue strain and who does not feel so guilty that she over-
compensates is likely to do quite well and under certain conditions better than the non-working mother.

Employment in itself may or may not affect the anxiety level of the women. It may be the action and interaction of various overt and covert factors interacting simultaneously that may be contributing to the differences in working and non-working women.

The present study intends to study occupational status in relation to many such factors.

Number of Children:

The number of children a woman has, has direct effect on her physical, mental and monetary stress. Every addition into the family increase demands on her time and energy and calls for a lot adjustment on part of not only the woman herself, but the whole family.

Although children have traditionally been viewed as a major source of gratification, in modern society children seem to confine their parents to a narrowly defined domestic role. Evidence presented by Nye (1963) indicates that working mothers are somewhat more positive in their attitude towards
children and described parenthood as less restricting, burdensome and demanding than unemployed. The study intends to investigate these effects and effects of other variables in relation to the number of children a woman has.

Type of Family:

In Indian society an institution playing a crucial role in the personality development of an individual is the family. There are two types of families: The Nuclear family and the Joint family.

The nuclear family is a family where the husband, wife and their children live together under one roof. A joint family is one in which, along with the husband, wife and their children, the husband's parents, unmarried sisters, brothers and their wives and children all live and share the same roof.

Joint and Nuclear families have both some advantages and disadvantages. In a Nuclear family the woman has to adjust to her husband and look after her children only. She has the freedom to keep her house as she wishes and bring up her children as she and her husband feel best, with no interference of any kind from any other person. They have the freedom to plan their activities according
to their own tastes. While at the same time, there are some disadvantages. For a working woman, she has to deal with all the problems she faces, herself and also do quite a lot of work all by herself. Her children most of the time have to be left at day-care centres, since there is one at home to be with them.

In joint families, since there are so many members, it might so happen that the work is divided and a wife need not be overburdened with all the responsibilities of keeping the house, and also she might get support in facing some kinds of crisis. She gets company of the other members when her husband is out at work if she is not working away from home herself.

But one point should be noted, that in a joint family a housewife has to deal with people of different age and status at different footings. At times, she has to lose her own identity which she might probably not be willing to do, especially if she is educated and working. But this might also happen if she is staying only with her own husband and children. Hence it might be so that the type of family alone or in relation to factors affect the anxiety in women. Hence the type of family is studied as a variable in the study.
Income Level:

For this study the income of the husband has been considered as another variable. The immediate outward occasion of anxiety in our country could be economic problems. Fulfilment of most basic needs is looked after by money. People who have more money can fulfill their needs and also enjoy more luxuries of life. Lack of money can cause a lot more adjustment problems which might lead to tensions and anxiety in the women who have to manage a house, feed, dress and educate her children with a very limited amount of money.

For the purpose of this study the subjects are divided into income groups. Above Rs. 2,000/- per month herein called as 'High' income group and below Rs. 2,000/- per month called as 'Low' income group.

(c) Design:

Anxiety is the dependent variable. The main independent variable is:

(a) Sex role orientation. The other independent variables are:

(b) Age.

(c) Occupational Status.
(d) Number of children.
(e) Family types.
(f) Income level.

(a) Sex role orientation is treated on four levels: masculine, feminine, androgynous and undifferentiated women classified on basis of BSRI scores.

(b) Age is treated on two levels: Age group 20-30 years and 31-45 years.

(c) Occupational status is treated on two levels: Working women and non-working women.

(d) Number of children is treated on two levels: None or one child and two or more children.

(e) Family types is treated as two levels: Nuclear family and joint family.

(f) Income level is treated on two levels. High income group and low income group.

The level of anxiety is studied in relation to:
Hypotheses:

1. More working women would be androgynous and more non-working woman would be feminine.

2. Androgynous women would have fewer children. Feminine women would have more number of children.
3. More androgynous and masculine women would be living in nuclear families and more undifferentiated and feminine women in joint families.

4. The anxiety level of androgynous women would be the lowest and the anxiety level of undifferentiated women would be the highest.

4. The anxiety level of the women of the age group 31-45 years would be lower than the anxiety level of the women of the age group 20-30 years.

5. The anxiety level of the non-working women would be lower than the anxiety level of the working women.

7. The anxiety level of women who have none or one child would be lower than the anxiety level of those who have two or more children.

8. The anxiety level of women who live in nuclear families would be lower than the anxiety level of women who live in joint families.

9. The anxiety level of women from the high income group would be lower than the anxiety level of women from low income group.
10. The anxiety level of non-working women in the age group 31-45 years would be the lowest and the anxiety level of working women in the age group 20-30 years would be the highest.

11. The anxiety level of women in the age group 31-45 years, having one or no children would be the lowest and the anxiety level of women in the age group 20-30 years, who have two or more children would be the highest.

12. The anxiety level of women in the age group 31-45 years, living in nuclear families would be the lowest and the anxiety level of women in the age group 20-30 years living in joint families would be the highest.

13. The anxiety level of women in the age group 31-45 years, who are in the high income group would be the lowest and anxiety level of women in the 20-30 years age group who are in the low income group would be the highest.

14. The anxiety level of non-working women who have none or one child would be the lowest and the
anxiety level of working women who have two or more children would be the highest.

15. The anxiety level of non-working women living in nuclear families would be the lowest, and the anxiety level of working women living in joint families would be the highest.

16. The level of anxiety of non-working women from the high income group would be the lowest and the level of anxiety of working women from the low income group would be the highest.

17. The level of anxiety of women who have none or one child, living in nuclear families would be the lowest and level of anxiety of women who have two or more children living in joint families would be the highest.

18. The level of anxiety of women who have none or one child from the high income group would be the lowest, and the level of anxiety of women who have two or more children from the low income group would be the highest.
19. The level of anxiety of women from the high income group, living in nuclear families would be the lowest, and the level of anxiety of women from the low income group, living in joint families would be the highest.

20. The anxiety level of androgynous women of the age group 31-45 years would be the lowest, and the level of anxiety of undifferentiated women of the age group 20-30 years would be the highest.

21. The anxiety level of androgynous non-working women would be the lowest and the level of anxiety of undifferentiated working women would be the highest.

22. The anxiety level of androgynous women who have none or one child would be the lowest and the level of anxiety of undifferentiated women with two or more children would be the highest.

23. The anxiety level of androgynous women living in nuclear families would be the lowest and the anxiety level of undifferentiated women living in joint family would be the highest.
24. The anxiety level of androgynous women in the high income group would be the lowest and the anxiety level of undifferentiated women in low income group would be the highest.

(d) Description of the Tools Used:

The following tools were used for classification of the sample in terms of sex-role orientation, the main independent variable and for the measurement of the dependent variable, anxiety.

1. The Bem Sex-Role Inventory (BSRI) 1974:

The Bem Sex-Role Inventory was used to classify the subjects into different sex-role orientations, namely, Masculine, Feminine, Androgynous and undifferentiated. Bem was one of the chief advocates of the altered conception of Masculinity and Femininity. She asserted that an individual could be "both masculine and feminine, both assertive and yielding, both instrumental and expressive, depending upon the situational appropriateness of these various behaviours" (Bem, 1974). She used the term "androgyny" to describe such individuals and further stated that because of their rich repertoire of behavioural responses, such individuals could adapt better to situational
demands than sex-typed individuals. Thus she hypothesized that androgyny was conducive to mental health. Based on this theoretical assumption of independent dimensions, Bem constructed the BSRI.

The BSRI is a standardized paper pencil, self report measure of psychological androgyny. The measure consists of sixty personality characteristics. Twenty of the characteristics are stereotypically feminine and twenty are stereotypically masculine. The BSRI also contains twenty neutral characteristics, those which do not differentiate significantly between the two sex-roles. Bem (1971) asserts that these items serve merely as filler items and do not enter into the assessment of an individual sex-role.

The sixty characteristics are randomized and are presented to individuals who are asked to indicate on a 7 point scale the extent to which each characteristic describes him or her.

Based on the suggestions offered by Spence, Helmreich and Stapp (1975) and Bem's (1977) own research, Bem opined that the scoring of the BSRI should be based on a median split on masculinity and femininity dimensions.
Thus each respondent receives both a masculinity score and a femininity score. Those who score above the median on the sex-congruent scale and below the median on the sex-incongruent scale are defined as sex-typed. Those who show the opposite pattern are defined as cross-sex typed. Those who score above the median on both scales are defined as androgynous. Those who score below the median on both scales are defined as undifferentiated individuals.

TABLE IV.2
SCHEME FOR SCORING BSRI BY MEDIAN-SPLIT METHOD

<table>
<thead>
<tr>
<th>Masculinity Score</th>
<th>Below Median</th>
<th>Above Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undifferentiated</td>
<td>Masculine</td>
<td></td>
</tr>
<tr>
<td>(Low-Low)</td>
<td>(Low Fem.)</td>
<td>(High Fem.)</td>
</tr>
<tr>
<td>Femininity Score.</td>
<td></td>
<td>(High-High)</td>
</tr>
<tr>
<td>Above Median</td>
<td>Feminine</td>
<td>Androgynous</td>
</tr>
<tr>
<td>(High Fem.)</td>
<td>(High-High)</td>
<td>(Low Mas.)</td>
</tr>
<tr>
<td>Low Mas.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reliability:

Test-retest reliability of the inventory was found to range from .76 to .94 for the different scales over an interval of four weeks. Moreover, subjects, scores on the inventory were internally consistent and do not correlate with the tendency to characterize one-self as socially desirable.

Validity:

The validity of the BSRI has been established through a series of studies (Bem, 1975; Bem and Lenney, 1976; Bem, Martyna and Watson, 1976). Co-efficient alpha is very high, with the lowest alpha .75 occurring for undergraduate students at Stanford University.

In addition, psychometric analysis yielded low correlations between the two scales which proved that as predicted, masculinity and femininity scores are 'logically independent and that the structure of the test does not constrain them in any way' (Bem 1974)


Sinha's W-A self analysis scale was used to measure the level of anxiety in the subjects.
The preliminary form of the test, called the Self-Analysis Form, had a total of 140 items of the "Yes-No" type. It was assumed that anxiety would be revealed by the reported behaviours not in any one situation but by his average behaviour in a great number of situations. A more anxious person would tend to be anxious in a great number of different situations than would a less anxious person.

Manifestation of anxiety being multi-dimensional, a test was developed which could tap the various areas or dimensions as well as forms of manifestations of anxiety.

Questions were designed to elicit self-rating on items descriptive of anxiety reactions to the following areas:

2. Area of ambition (success or failure in work, money and occupation).
3. Family anxieties.
4. Anxieties regarding friendship and love.
5. Social relations and social approval.
6. Worries regarding the future.
7. Worries about civilization, war, virtue.
8. Guilt and shame.
In the construction of the items, help was taken from the IPAT Anxiety scale as well as from Taylor's Manifest Anxiety scale. Most of the statements were constructed afresh, though in the original version, 10 items from Taylor's scale were incorporated.

After item analysis, some items were eliminated and the final scale consisted of 100 items. The score is the algebraic summation of the number of situations which the person has marked as 'Yes'. The maximum score possible is 100 and the minimum score is zero. Higher score is indicative of anxiety.

Norms for the test are available on 785 university students consisting of 310 boys and 475 girls. Separate norms for men and women are also available. Percentile norms for boys and girls have also been provided.

Reliability:

The test has a high reliability both by the split-half and test-retest method. It is .86 and .73 respectively.
Validity:

Concurrent validity, when scores on this test were compared with scores on Taylor's Manifest Anxiety Scale was .72 and against Cattell's IPAT Anxiety Scale Questionnaire it was .70. The mean anxiety score of normal subjects was 30.89; Psychatric patients was 41.12. The mean anxiety score of Hyper-Anxiety subjects was 55.18 and for other patients was 38.18, this shows that the test differentiates the anxiety levels successfully.

(e) Method of Administration:

The tests were administered in two sessions. In the first session personal information was gathered from the subject. Later the Bem Sex-role Inventory was administered. The following instructions were given to the subjects: "This is a scale for the identification of some aspects of your personality. Please read each item carefully and indicate how well each item describes yourself on the following scale:

(1) Never or almost never true.
(2) Unusually not true.
(3) Sometimes but infrequently true.
(4) Occasionally true.
(5) Often true.
(6) Usually true.
(7) Always or almost always true.

Please read and understand the appropriate category of your answer and mention the number of the category (mentioned in the bracket) in your answer sheet. If you need to change or alter your answer please mention it very clearly. We expect that your answers will be as frank as possible. Please be accurate in placing yourself in the given categories for correct results.

Instructions and the test required on an average forty minutes.

In the second session, the anxiety scale was administered. The following instructions were given: "The following statements deal with certain samples of behaviour and situations that most people experience at one time or another. Please read each statement carefully and see if it applies to your usual mode of behaving. Encircle 'Yes' if you feel that the statement applies to you or encircle 'No' in case it does not. You have to indicate your own opinion about yourself. In this way you have to respond to all the statements."
Instructions and the test required in all a maximum of thirty minutes. For both the sessions subjects were tested on door to door basis at their willingness and convenience.

(f) Statistical Analysis:

For the classification of the sample and to verify the hypotheses made the following statistical analysis was made.

1. Median : To classify the sample into different Sex-role orientations, the median-split method was used, for which the median of masculinity and of the femininity scores of the total sample was calculated.

2. $X^2$ : To examine the nature of the sample distribution into different sex-role orientation groups.
   
   (1) Overall sample.
   (2) Occupational status groups.
   (3) Number of children groups.
   (4) Family types.

3. Means ($X$) and standard deviations : Measures of central tendency and variability, Means ($\bar{X}$) and standard deviations (S.D.) were calculated.
4. 'F' one-way analysis of variance: It was decided that the main aim of the study is to analyse the effect of sex-roles on anxiety. For this analysis, 'F' one-way analysis of variance for unequal number of observations in cells was used.

5. 2 x 2 Factorial designs for the analysis of variance: To screen other independent variables that might affect anxiety, 2 x 2 factorial analysis of variance for unequal number of observations in cells was used.

6. 4 x 2 Factorial design for the analysis of variance: An analysis was planned to study the effect of sex-roles and the other independent variables on anxiety, for which 4 x 2 factorial analysis of variance for unequal number of observations in cells was used.

7. 't' Test: To analyse the significance of mean differences the 't' test was used.