CHAPTER VI
METHODOLOGY

VI.1 Research Design
This research was designed in such a way that the negative experiences encountered by women in the menopausal period could be studied by the questionnaire method. A few women were identified for study through an in-depth interview along with administration of two personality tests adapted for Indian conditions. These women were selected on the basis of their higher score on NES.

VI.2 Variables
Independent Variable is the list of 30 items indicating experiences forming a MES.
Dependent Variable is the reactions of women to MES.
Intervening Variables The variability of these conditions was systematized by forming sub-groups of every variable. The variables and their sub-groups were:

1) Marital status — married and unmarried
2) Education — up to S.S.C., graduates and post-graduates
3) Occupation — working, non-working
4) Income — less than Rs.2000 per month, Rs.2001 to Rs.5000 per month, more than Rs.5000 per month
5) Family structure — joint family, nuclear family
6) Age — 40 to 44 years, 45 to 49 years, 50 to 55 years
7) Attitude towards menopause — positive and negative
8) Menopausal period — pre-menopausal phase, menopausal phase and post-menopausal phase
ix) Years of married life — less than 20 years, 21 to 25 years, more than 25 years
x) Number of children — one child, two or three children, four or more children
xi) Sex of children — only daughters, only sons, both male and female issues

**Controlled Variable** The condition which was kept constant in all the respondents was the variable of religion, only Hindu women being studied.

**Selected period** Women in the age group of 40 to 55 years.

In the in-depth study, the independent variable became the partially structured interview and two popular personality tests administered to 12 respondents from the total sample.

The dependent variable was the responses of these 12 who had a high score on MES.

**VI.3. Method adopted for study**

The descriptive statistical method was utilized. The approach was cross-sectional. The statistical methods used were correlational and differential together with t-test, R.I. and $X^2$ tests.

The entire study was conducted in three stages. Firstly, the pilot study was launched in June 1984; secondly, the results and analysis of that pilot study were used to formulate the plan of the main study which was carried out in June 1985. These were followed lastly by in-depth interviews and administration of certain tests.
VI.4 The Pilot Study

For the pilot study two groups of women were included: the older group with an age range of 40 to 55 years as an experimental group, and the younger group with the age range of 20 to 35 years as a control group. These were referred to as the menopausal group and the non-menopausal group respectively. It was reasoned that unless the non-menopausal and menopausal groups were compared the significant differences arising from the menopausal period in the menopausal group would not be very clear. Specific age levels as stated above and an educational level of minimum up to S.S.C. were the criteria used for selecting respondents for the pilot study on a sample of 47 women in all.

The age level 40 to 55 years was decided because the menopausal period is generally believed to begin sometime around 40 years and to come to an end at around 55 years.

The upper age level for the non-menopausal group was pegged at a level of five years less than the lower limit of the menopausal group in order to avoid any kind of overlapping due to early cessation of menstrual cycles. To keep the age span between the two said groups identical at 15 years, the lower age level of the non-menopausal group was determined at 20.

Thus, the pilot study sample of 47 women was divided into two groups according to the age levels. The age group of 40 to 55 years had 27 women; of these, 21 were married and six were unmarried, while 23 were working and four were not working. This was called the menopausal group. To meet
the purpose of comparison, a non-menopausal group of 20 women in the age group of 20 to 35 years was selected. In this group of 20 women, seven were married and 13 were unmarried, while five were working and 15 were not working.

The minimum educational level of the respondents considered necessary was the S.S.C. level because the initial exploration indicated that women who were illiterate were more or less ignorant about the menopausal period. Those who encountered it were either not conscious of the phenomenon on account of constant work in the home and outside, or had inhibitions about such a personal, private, intimate and delicate subject.

VI.4.1 Tools utilised

In all, three tests were administered for the pilot study. These were:

1. Kundu's Neurotic Personality Inventory (KNPI)
2. Bell's Adjustment Inventory (Adult Form)
3. Moos's Menstrual Distress Scale (MMS)

The KNPI was considered relevant as it is developed according to the Indian sociological pattern, and because it gives a reliable measure of neurotic tendencies among adults. The reliability of the test was sought to be ensured by resorting to the split-half method of computation; it was measured at .80 and .88 for adult female respondents. The validity coefficient was found by biserial correlation and was .87 for adult female respondents.
The Bell's Adjustment Inventory (Adult Form), which has been standardized on Indian population, was used with a specific purpose to detect maladjustment in home, health, emotional, social and occupational areas. It was thought appropriate as the menopausal period sometimes brings forth unsatisfactory adjustment pattern among women.

The Moos's test used is not Indian; however, it depicts most of the features universally observed during the menopausal period. Its contents were found highly relevant to the present problem.

The above three tests together with a few questions about background information or personal bio-data and attitude were administered to each respondent.

The five sets of Record Sheets used for the pilot study are at Appendix A.

Difficulties, if any, were resolved and noted for the main study.

VI.4.2 Formation of the scale

The responses thus collected from the sample of 47 were divided according to the specified age levels into two groups, namely, menopausal group and non-menopausal group. Responses on each of the three tests were measured on the basis of frequency of only the highly rated (negative) responses. Those items on the tests which were rated high and which had more than 15 per cent frequency or identical reportage in the menopausal group were selected. Out of the total of 273
items in the three tests (66 from KNPI, 160 from Bell's Adjustment and 47 from M.M. Scale), 150 items showed 15 per cent or more frequency.

These 150 items were then juxtaposed with the corresponding items of the non-menopausal group. Only such of these items which showed a frequency difference of 50 per cent or more between the two groups were considered. Further, only those items for which the menopausal group had a higher frequency were included in the pool for the formation of the new scale. It transpired in such a comparison that only 28 out of the total of 150 selected items showed such a higher difference.

The rationale for selecting only 15 per cent frequency of items was based on the KNPI response pattern. The test has five alternative answers. The probability of each item to be answered was 20 per cent. Three fourths of this, i.e. 15 per cent probability, for high rated items was considered satisfactory for selection of items. In order to maintain consistency, the item population of 15 per cent frequency was followed for the other two tests as well i.e. Bell's Adjustment Inventory (Adult Form) and Moos's Menstrual Distress Scale.

To the pool of 28 items selected as explained above, one additional item "hot flushes" (also referred to as "hot flashes") was included for the final scale because it was considered to be very common, even though it was not found significant in the pilot study. This was done because most
medical as well as other texts discussing the menopausal period indicate existence of this experience. For instance, a medical authority states that "Vasomotor disturbances (hot flushes) are one of the most important symptoms which are ascribed to be due to oestrogen lack leading to disturbed autonomous nervous system." Similarly, a gynaecologist states, "The hot flushes may be triggered by excitement or emotions, and are the most common menopausal symptoms."^1  

Thus, the total number of items came to be 29. The 30th item, "Any other," was included in order to give scope to the respondent to record a particular miscellaneous physical experience not already listed.

Therefore, these 30 items, the initial 28 and two additional ones i.e. "hot flushes" and "any other", were pooled together to form a scale for the measurement of menopausal experiences. Of these, 15 were psychological and 15 were physiological in nature.

The following were the items which were considered physiological — Anaemia, Fatigue, Blood Pressure, Illness Proneness, Constipation/Diarrhoea, Dizzy Spells, Headaches, Weight Gain, Palpitation, Bodyache, Hot Flushes, Irritability, Insomnia, Restlessness and Any Other.

Those 15 which were considered psychological were: Feeling of Stagnation, Crying Spells, Loneliness, Mood Swings, Tension, Inability To Take Decisions, Anxiety, Urge To Run Away, Useless Thoughts, Aversion To Self-Criticism, Disagreements, Aversion To Social Activities, Depression, Worry About Future and Nervousness.
The decisive factor for the grouping was the judgements of medical personnel and experts from the field of psychology. Besides, many women who have long passed this period were also asked to give their opinions. Although they were not unanimous, they revealed 90 per cent agreement.

The critical criterion applicable for list of 30 items in the MES was the same as used for the pilot study. The only difference was that this scale was given only to women in the menopausal group of 40 to 55 years. This was considered appropriate on the basis of available medical information indicating the possible menopausal age range.

VI.5. The Main Study

The MES with questions related to background information was given to 250 respondents to be filled in. The nature of this sample of 250 is given in detail in Chapter VII.

Response was solicited with a Letter of Appeal in which the importance of their contribution to the research project was stated. This Appeal is at Appendix B while the final MES is at Appendix C.

The MES was constructed on the style of Likert's Attitude Scale, but on a 3 point scale instead of the usual 5 point scale because it was thought easy for the respondents to comply with. Three alternatives were given for each of the 30 items, viz. "No reaction", "Mild" and "Strong". These were given in numerical format i.e. 1, 2 and 3 respectively. The minimum score on the MES was 30 and the
maximum was 90. Thus, the scores available were 30 to 90.

On an average, the respondent took 10 to 12 minutes to answer the questionnaire fully. The time factor was considered important to elicit the required co-operation.

VI.6. Location, Universe and Sample

The venue for the main study was Greater Bombay as it was for the pilot study.

As for the universe, the published figures of the 1981 Census give the total population of Greater Bombay as 82.43 lacs. The number of females in this total population is not available separately for Bombay City. Hence, applying the Maharashtra ratio of 48.4 per cent females in 1981, the number of females in Greater Bombay can be assumed as 39.90 lacs. Further, the percentage of Hindu population in the city is also not yet available in any printed source; however, going by the all-India proportion of 82.6 being Hindus out of a total of 100, the number of Hindu women in Bombay city can be taken as 37.95 lacs.

About literacy, once again there are no separate published figures for Bombay city; the number of literates up to S.S.C. and above is therefore to be estimated on the basis of the all-India average of the 1981 Census. The numbers who were in the urban areas and who possessed some form of formal education constituted 28.73 per cent of the total urban population of the country. Applying this proportion to Hindu females, it can be estimated that the number of females in Bombay city qualifying for inclusion in this study on the basis of education was 9.47 lacs.
Out of this last figure, those who fell in the qualifying age-group of 40-55 years for this study had to be estimated, once again, on the basis of the all-India average in the 1981 Census which, however, does not provide for a break-off point for the age of 40 years but includes it in the category of 35-54 years. The average for 40-55 years is 18.8 per cent; hence the estimated number of Hindu females who were educated up to S.S.C. and above and who were in the age group of 40 to 55 years can be put at 1.78 lacs.

This number of 1.78 lacs was thus the universe of the present study; it would be marginally less if women listed by the 1981 Census in the age-group of 35-44 years were reduced by those who had not yet reached 40 years, the time when menopausal changes generally begin.3

The sample of 250 for this study thus represented 0.14 per cent of the universe. This proportion is statistically valid for an exploratory endeavour like the present study.

VI.6.1 Data collection

The MES was accompanied by a list of questions eliciting the respondent's background information like name, address, birth-date, age, education, profession, religion, occupation, marital status, year of marriage, number of children, sex of children, family structure, number of members in the family, monthly income, major physical
illnesses, menstrual period and attitude towards menopause. These questions were incorporated in Form-I annexed in Appendix C.

The selective random sampling technique was used as the age level, education and physical normality were predetermined.

Some respondents complied with the questionnaire on the spot, while others filled it out at home or elsewhere and later returned them to the researcher in person.

VI.7. In-depth Study

In order to reach the core of the problem and to understand the related personality and background factors in detail, 12 respondents were selected from the highest 25 per cent of the scores on WES.

The selection of respondents was initially based on higher scores on physiological experiences, psychological experiences and total experiences. From each of the above three categories, four respondents were selected.

Earlier to this selection of 12 respondents, five respondents from the average category were interviewed and administered two personality tests to see whether they also showed any marked negative traits and background conditions which influenced their sufferings.

Ultimately, the five respondents from the average category were excluded from the in-depth study because their negative traits were found to be less pronounced and,
besides, they indicated some positive tendency to overcome these traits by talking to friends, family physicians, reading relevant material and utilizing logical thinking.

The 12 respondents who were selected for the in-depth study were first interviewed, the interview being partially structured to give as much scope as possible to the respondent to talk at length about herself. It covered the life pattern of the respondent, her daily routine, her preferences, her disappointments and frustrations. Many of her weaknesses and strong points were tapped while she was asked to relate her life as of today and as she would have liked it to be. The scheme of the in-depth interview is at Appendix D.

Followed by the interview were two tests selected for the purpose of investigating each respondent's projections of herself to people very close to her. One of these was the Thematic Apperception Test (T.A.T.) — Indian adaptation by Uma Chaudhary. The four cards chosen were Card Nos. T3FG (mother and daughter sequence), T4FG (husband and wife sequence), T5 (mother and son sequence), and T8 (a lone woman).

The T.A.T. Card selection was based on the experiences of MES and the basis of general observations and findings on the women during the menopausal period.

Secondly, the Multiphasic Questionnaire (M.P.Q.) was chosen because of its capacity to carry out differential diagnosis reflecting the inclinations of one's personality.
It is a short form of Minnesota Multiphasic Personality Inventory (M.M.P.I.) which has been adapted to Indian conditions. It has 100 items to be answered either as 'yes' or 'no'. The M.P.Q. form is in Appendix E.
REFERENCES

