Chapter III
METHODOLOGY
Chapter III
Hypotheses and Methodology

In the previous chapters the theoretical concepts underlying the research findings have been unfolded and the status of the presently available studies in the area have been delineated. It has been observed that although mental health is a domain frequently studied by a number of research workers, some of its aspects are yet to be scrutinized, particularly in relation to gender stereotype. In the present chapter the specific research hypotheses have been detailed in line with the broad objectives of Chapter I. The variables of the study have been described and justified. Their operational definitions have been specified and the tools for assessing them have been described. The selection of the sample and the measures used has also been elaborated here. The procedure of data collection and the statistical tools employed have been narrated.

RESEARCH HYPOTHESES

Research Hypothesis 1: The subjective well being of college students varies across sex.
Research Hypothesis 2: The ego function variables of college students vary across sex.
Research Hypothesis 3: The subjective well being is associated with life stress.
Research Hypothesis 4: The subjective well being is associated with gender stereotype variables.
Research Hypothesis 5: The ego functions are associated with life stress.
Research Hypothesis 6: The ego functions are associated with gender stereotype variables.

However sub-hypotheses from each main hypothesis were framed as and when required for separate testing, particularly for the ego functions.

Besides it was decided that if the association between the dependent and independent variables were found to be significant, then subsequent prediction of the dependent variables from the independent ones would be attempted.
Fig. -3.1
SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

Independent variables

Stressful life events-[the number of potential stressors occurring in the life of the subject during the last one year]

Control Variables:
Demographic Variables
Health Variables
Family Variables
Social and cultural

Gender stereotype Two components

Gender Role Identity (M & F) [Individual's considerations about herself or himself in terms of perceived Masculinity and Femininity (F)]

Gender Role Attitude (GRA) [Belief as to what the members of a given sex should do]

IMPACT

Measured by the Presumptive Stressful Life Events Scale, Singh, Kaur and Kaur (1984)

Measured by Sex Role Attitude Scale, Scanzoni (1975)

Dependent Variables

Mental Health Two components

Subjective well being (SWB) [Individual's reported feeling of overall wellness]

Ego function (EF) [The cognitive, affective and effective functions of the ego that help in perceiving the environment in an organized fashion]

Measured by the Subjective wellbeing Scale by Sell and Nappal (1992)

Measured by Ego Function Assessment Scale (Modified) by Bellak (1989)

Sampling units: Adult female college students (N=165)
Adult male college students (N=165)
RESEARCH DESIGN

The research design has been schematically presented in the Figure 3.1. The dependent and independent variables and their measures as well as the sample have been shown. Its details have been presented in the following sections.

It is important to note here that the present research is essentially a correlational one. The ultimate purpose of the study is to predict the mental health variables from the life stress and gender role variables based on the association among the measured variables. The terms dependent and independent variables are here used not in the context of a purely experimental paradigm, but in the sense of predictor and predicted variables in multiple prediction problems (Guilford and Fruchter, 1981).

SELECTION OF THE VARIABLES

A variable is defined as an event or condition which can have different values; ideally in experiments, an event or condition which can be measured. Variables are essentially categorized as dependent, independent and control variables (Snodgrass et al., 1985). In the context of the present investigation these three kinds of variables were defined and have been reported in the following section.

DEPENDENT VARIABLES

The dependent variable is the attribute or performance being measured to determine the effect of manipulating an independent variable. The dependent variable may be characterized as behavioral, psychological or social, depending on the nature of work. Generally, a researcher tries to select the most sensitive, reliable and unobtrusive dependent variable possible.

The dependent variables of the study were two aspects of mental health, namely,

1. **Subjective well being (SWB)** defined as the individual's evaluation and reported feeling of overall wellness. Such an evaluation is often expressed in affective terms; when asked...
about subjective well-being, participants will often say, "I feel good" (Schwartz & Strack, 1999). Thus it is a measure of quality of life.

2. **Ego functions (EF)** defined as those cognitive, affective and effective functions of the ego that help an individual in perceiving the environment, processing it and reacting in an organized fashion.

In the present study the twelve ego functions enumerated by Bellak et al. (1973) have been taken. These are

**Reality testing or EF1 (RT):** The components are (a) the distinction between inner and outer stimuli; (b) accuracy of perception (including orientation to time and place and interpretation of external events) and (c) accuracy of inner reality testing (psychological mindedness and awareness of inner states).

**Judgement or EF2 (JD):** The components are (a) awareness of, appropriateness of and likely consequences of, intended behaviour (anticipation of probable dangers, legal capabilities and social censure or disapproval) and (b) extent of manifest behaviour as a reflection of the awareness of these likely consequences.

**Sense of reality or EF3 (SR):** The component factors are a) the extent to which external events are experienced as real and as being embedded in a familial context (degree of derealization, déjà vu, trance like states; b) the extent to which the body (or parts of it) and its functioning and one's behaviour are experienced as familiar, unobtrusive, and belonging to (or emanating from) the individual; (c) the degree to which the person has developed individuality, uniqueness, and a sense of self and self esteem; and (d) the degree to which the person's self-representations are separated from his or her object representations.

**Drive control or EF4 (DC):** The components are (a) the directness of impulse expression (ranging from primitive acting out through neurotic acting out to relatively indirect forms of behavioural expression) and (b) the effectiveness of delay and control, the degree of frustration tolerance, and the extent to which drive derivatives are channeled through ideation, affective expression, and manifest behaviour.
Object relation or EF5 (OR): The components are (a) the degree and kind of relatedness to others and investment in them (taking account of withdrawal trends, narcissistic self-concern, narcissistic object choice or maturity); (b) the extent to which present relationships are adaptively or maladaptively influenced by, or patterned on, older ones, and serve present, mature aims rather than past, immature ones; (c) the degree to which the person perceives others as separate entities rather than as extensions of himself or herself; and (d) the extent to which the person can maintain object constancy (i.e., sustain relationships over long periods of time and tolerate both the physical absence of the object and frustration, anxiety, and hostility related to the object).

Thought process or EF6 (TP): The components are (a) the adequacy of processes that adaptively guide and sustain thought (attention, concentration, anticipation, concept formation, memory, and language) and (b) the extent of relative primary–secondary processes influences on thought (degree to which thinking is unrealistic, illogical, and/or loose).

Adaptive regression or EF7 (AR): The components are (a) relaxation of perceptual and conceptual acuity and other ego controls with a concomitant increase in awareness of previously preconscious and unconscious contents (first phase of an oscillating process) and (b) the induction of new configurations that increase adaptive potentials as a result of creative integrations (second phase of the oscillating process).

Defensive functioning or EF8 (DF): The components are (a) the degree to which defensive components adaptively or maladaptively affect ideation and behaviour and (b) the extent to which these defenses have succeeded or failed (degree of emergence of anxiety, depression, and/or other dysphoric affects indicating weakness of defensive operations).

Stimulus barrier or EF9 (SB): The component factors are (a) a threshold for, sensitivity to, or awareness of stimuli impinging on various sensory modalities (primarily external, but including pain) and (b) the nature of response to various levels of sensory stimulation in terms of the extent of disorganization, avoidance, withdrawal, or active coping mechanisms employed to deal with them.
Autonomous functioning or EF10 (AF): The components are (a) degree of freedom from impairment of apparatuses of primary autonomy (functional disturbances of sight, hearing, intention, language, memory, learning, or motor function) and (b) degree of, or freedom from, impairment of secondary autonomy (disturbances in habit patterns, learned complex skills, work routines, hobbies and interests).

Synthetic integrative functioning or EF11 (SF): The components are (a) degree of reconciliation or integration of discrepant or potentially contradictory attitudes, values, affects, behaviour, and self-representations and (b) degree of active relating together and integrating of psychic and behavioural events, whether contradictory or not.

Mastery competence or EF12 (MC): The components are (a) extent of competence, that is, the person's performance in relation to his or her existing capacity to interact with and master his or her environment and (b) The extent of sense of competence, that is the person's expectation of success or the subjective side of actual performance (how well the person believes he or she can do).

Rationale: As has been elucidated in the introductory section these two categories of variables represent two aspects of the positive indices of one's mental health status. Since the present study was conducted with the so-called 'normal' subjects, it was considered appropriate to highlight the wellness rather than the distress aspect of mental health.

SWB may be conceived of as an index of the degree of wellness experienced by the subject at a given cross section of time. The ego functions are, on the other hand a complex set of mechanisms representing the overall harmony effected by the subject. They represent a kind of coping ability that ensures the individual's ability to comfortably manage the ups and downs of life.

Taken together these two categories of variables might represent the potential and actual wellness of the individual.
INDEPENDENT VARIABLES

The independent variables of the study were

1. **Stressful life events (SLE)** defined as the number of potential stressors occurring in the life of the subject during the last one year.

   **Rationale:**
   
The rationale for selecting this variable is that earlier literature in Chapter II has indicated that mental health variables are strongly influenced by life experiences. The stress-diathesis model also supports this contention. However, it has also been established that its role is less explored in the context of wellness factors, and whatever findings have been obtained yield contradiction. Hence, the inclusion of this factor within the study design was thought to be essential.

2. **The components of Gender Role Stereotype** formally defined as the "perceived assumption and the generalization about sex-typical behavior" (Shepherd-look, 1982).

   In the present study, two dimensions of gender role stereotype were scrutinized.

   (1) **Gender Role Identity** referring to the degree of perceived masculinity and femininity in oneself. The masculinity (M) and femininity (F) are not the two ends of a single pole, as supposed earlier (Constantinople, 1973), but are two different dimensions of the personality (Bem, 1974). It is supposed that in every person there is a certain amount of masculinity as well as femininity.

   (2) The second dimension of gender stereotype was termed as **Gender Role Attitude** referring to the belief as to what a member of a given sex should do, i.e., the extent to which one abides by the traditional behavioral norms allotted by society for a man or a woman.

   Gender role identity and gender role stereotype, although related, may not be identical (Archer, 1981; Datta et al. 1995).

   Therefore, the selected independent variables were

   1) Masculinity (M)
   2) Femininity (F)
   3) Traditionality-Modernity of gender role attitude (GRA)
**Rationale:** Earlier literature reveals that there is convincing evidence of gender stereotype being associated with different aspects of mental health. The findings however are ambiguous, and studies in the context of India are remarkably few. Therefore it seems that a clear-cut conclusion is still lacking. So further research in this field was considered necessary.

**CONTROL VARIABLES**

In chapter I and II it was pointed out that mental health could be influenced by a number of variables apart from those selected here as independent variables. To avoid contamination in the effect of independent variables as far as possible, it was imperative to identify at least some of the most important relevant variables and control them to maximize the effect of IVs on DVs. Some such variables, which may influence the mental health, have been discussed here. The control variables of the study were as follows:

1. **Demographic Variables:**
   
   **Age of the college students:** In the present study women and men with age ranging from 19 to 22 yrs. were selected.
   
   **Rationale:** Aging related variables have been found to differentially influence subjective wellbeing (Diener and Suh, 1997). In the present study however, the purpose was to assay college students and therefore the usual age for studying at undergraduate level was taken.

   **Sex of the college students:** Both sexes were included in the study, as earlier studies in chapter II revealed that mental health changes according to the sex of the subjects. The number of female and male college students were comparable

   **Locality:** The sample group was selected from the urban society of Kolkata.
   
   **Rationale:** Rural, urban and suburban areas may have different impact on attitude towards self and society as well as on well-being (Sharna and Singh, 1997). In the present study therefore control was exerted by selecting only urban students.
Religion - The subjects in the study were Hindu by religion.

Rationale: Each religious group has a distinctive type of culture, manners, customs, attitudes toward self and other members of their family and society at large. Myers and Diener, 1995, observed the effect of religion on wellbeing. In order to maintain a homogeneity in subjects, a single group that is Hinduism was chosen. Hinduism forms the majority of Indian population and has an advantage of being abundantly and easily available in Kolkata.

Language: Bengali speaking subjects only were incorporated in the study.

Rationale: Like religion, difference in spoken language indicates differences in sociocultural orientation. Since the majority is Bengali speaking subjects in Kolkata so they are selected in the present study.

Marital Status: The subjects in the study were unmarried college students.

Rationale: WHO, 1993 report explicitly support that mental health problem is closely associated with marital status. In Indian society most of the women and almost all men at college level are unmarried. Therefore, for the present study the married students were excluded.

2. Health Variables:

None of the subjects suffered from any diagnosable physical and mental acute or chronic disorder.

Rationale: Physical and mental health are integral parts of wellness. Whenever there is clinically identifiable syndrome the subjective feeling of wellness is automatically disrupted. In the present study the intention was to study the role of gender role variables in mental health in the general population, and not to focus specifically on extreme groups. Therefore it was decided that only those subjects who do not have any chronic or acute disorder at the time of data collection would be taken. Subjects with identifiable physical and mental disorder were excluded by detailed interview and by using suitable screening test.
3. Family Variables:

a) **Structure of the family:**

   *Size of the family:* In the present study, only nuclear and semi-nuclear extended families were included (number of family members not more than six).

   **Rationale:** Earlier studies have revealed the impact of family structure and gender bias on stress and coping styles (Pattanayak, Panda and Mohanty, 1997). Traditional joint families are gradually breaking down to nuclear and semi-nuclear ones in West Bengal, nevertheless quite a few joint families continue to exist. In the present study joint families were eliminated and only nuclear and semi-nuclear families were included.

   *Internal structure of the family:* For the present study, intact families with no history of parental separation, divorce or remarriage were included.

   **Rationale:** History of any type of conflict in the family has adverse effect on the mind of the subject.

b) **Economic, educational and occupational status of the family**

   *Income of the family:* In the present study who are belonging to the middle income status have been chosen as subjects. According to West Bengal Government’s declaration for the Housing Instructive Cooperation (Feb, 2000), the family income of middle class people per month is Rs. 7,501.00 to Rs. 15,000.00 only.

   *Education of parents of the students:* Parental level of education determines the culture and the environment where the child grows up. In the present study the fathers of the students were at least graduate and the mothers passed at least School final/Madhyamik examination. This level was selected for all the subjects, mainly to attain homogeneity. Illustrative findings are reported from the Wisconsin Longitudinal Study (in 1957), which shows close relationship of well-being with educational attainment (reported in Ryff and Singer, 1998).

   *Occupation of the parents of the students:* Parental work status includes both business and service, both single and dual career. WLS (1957) also revealed that occupational status influence the well-being of the individual.
Work status of the mother: Earlier literature has demonstrated that the work status of the mother influences the gender role development as well as achievement of the children (Wintzel et al., 1991). Therefore work status of the mother along with the kind of job was viewed as a relevant variable in the present study. Housewife mothers as well as working mothers were incorporated in our study. All the working mothers were engaged in traditional job like teaching, working in banks, offices and business.

4. Social and cultural variables:

Culture of the educational institute: Colleges were run either by the Government or by Private administration, but with Governmental aid. All the colleges had a predominant Bengali culture, that is at least 75% of the students were Bengali coming from a vernacular based schooling.

Rationale: Recent researches are increasingly pointing out the importance of the social context, explanations and socialization in the understanding of human behavior. Kolkata being a Metropolitan city is constituted of people from various provinces of India, but the Bengali community retains its own cultural specificity. The schools here are also divided on the basis of teaching medium, some vernacular and some English. Subsequently the colleges also reflect a difference in culture, some having a greater inclination toward Bengali culture, and others more oriented toward cosmopolitan culture. Despite intermingling these two types can be easily discerned, and hence the control was necessary.

SAMPLE OF THE STUDY

The study was conducted with Bengali college students of Kolkata, West Bengal. The sampling criteria were as follow:

GENERAL INCLUSION CRITERIA

1. Age of the student: 19-22 years
2. Sex: Both men and women
3. Locality: Residing in Kolkata at least for the last 10 years
4. Religion: Hindu
5. Language: Mother tongue Bengali
6. Marital status: Unmarried
7. Educational institute: Govt. or private colleges with a predominant Bengali culture, that is at least 75% of the students are Bengali
8. Broad study area: Science, Humanities and Commerce
9. Family structure: Nuclear or extended family
10. Parental education: Father at least graduate, mother passed atleast School final/Madhyamik
11. Parental income: Middle income level
12. Parental work status: Both business and service, both single and dual career

GENERAL EXCLUSION CRITERIA

1. History of any acute physical illness or chronic illness having residual effect
2. Any present mental illness or history of mental illness having residual effect
3. History of any major break in family, for example divorced or dead parents.

SAMPLING TECHNIQUE

Various kinds of sampling techniques are available to the behavior scientists (Guilford & Fruchter, 1981). These are--

1. Random sampling: It is the selection of cases from the population in such a way that every individual in this population has an opportunity to be chosen.

2. Biased sampling: In this type of sampling there is a systematic error. Certain types of cases have advantages over others in being selected.

3. Stratified random sampling: Stratification operates with the sub-groups of more homogenous composition within the larger population. Subjects are considered with respect to any variable that is suspected of correlating appreciably with the variable being studied. Proportional representation from all sub-groups is expected.
4. Purposive sampling: A purposive sampling is arbitrarily selected as there is evidence that it is a representation of the total population.

5. Incidental sampling: The term incidental sampling is applied to these samples which are taken because they are mostly available.

Among the various sampling techniques the Stratified random sampling technique was followed. Stratification was done in terms of sex of the students, locality of the colleges and study area (Science, Humanities and Commerce). The list of colleges spread over Kolkata was prepared and a zone wise mapping was done. A random selection of 15 colleges from North, South, East, West and Central Kolkata was done. The college authorities and the Student Unions were approached and through them the students were contacted. They were asked to volunteer for the study and those who agreed were given the detailed information schedule and The GHQ-28. Those who met the criteria were included as prospective subjects. This group was again randomly shortlisted to include approximately equal number of subjects from both sexes and three study areas spread over the 5 zones. A total of 450 subjects were thus chosen.

**The Ideal sample:** The ideal sample may be described through Table 3.1.

<table>
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<th>East</th>
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<th>North</th>
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</table>
THE FINAL SAMPLE

Ultimately however 438 data could be collected from which 330 were finally retained. Among them 165 were women and 165 men. The two sexes were more or less evenly distributed across zones and were comparable in terms of relevant variables.

The final sample is represented in Table 3.2.

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<td>28</td>
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The female and male subjects were comparable in terms of relevant variables, such as age, education, number of family members, total family income etc.

The demographic profiles of the two sexes have been represented in the following figures (Figures 3.2 to 3.9). It was observed that the two sexes were more or less comparable in terms of the variables.
Fig. 3.2
Mean age in years of the female and male subjects and their parents.
Mean years of academic qualification

Fig. 3.3

Mean years of academic qualification of parents of the female and male subjects

Father

Mother

□ Women

■ Men

13

13.5

14

14.5

15

15.5
Fig. 3.4
Percentage of service and business in case of parents of female and male subjects

- Women
- Men

Father's business
Father's service
Mother's business
Mother's service

Percentage of business and service of parents

-4

Percentage of business and service of parents
Mean no. of siblings

Fig. 3.5
Mean no. of siblings in case of female and male subjects

Brother
Sister

0 0.5 1 1.5 2

Men
Women
Figure 3.6
Percentage of first born and second born male and female subjects in birth order.

First born
Second born

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Men
Women

Percentage in birth order
Fig. 3.7
Percentage of female and male subjects falling in nuclear or extended family structure.

Percentage in case of family structure

Nuclear
Extended

0 20 40 60 80 100

Men
Women
Fig. 3.8
Mean no. of family members of female and male subjects

Mena no. of family members

<table>
<thead>
<tr>
<th>Women</th>
<th>Men</th>
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<tbody>
<tr>
<td>3.9</td>
<td>4.2</td>
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<td>4.15</td>
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<td>4.05</td>
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Fig. 3.9
Mean monthly family income (Rs.)

Women

Men

Mean monthly family income of female and male subjects
MEASURES USED IN THE STUDY

In the following section the selection and description of the measures of the variables have been presented.

Measures of the control variables:

(a) A detailed information schedule for familial and personal information.
(b) General health questionnaire (GHQ-28) by Goldberg and Hiller (1979) for identifying any physical and psychological disorder in the subjects.

The tools have been described in detail below.

The Detailed Information Schedule—

The information blank consisted of information on age, sex, education, personal income, family income type of dwelling, occupation, number of family members, religion, etc. Copies of the Schedules are given in appendix A.

General Health Questionnaire (GHQ-28) by Goldberg and Hiller (1979) adapted by Basu and Dasgupta (1996)

Description: GHQ was designed to be a self administered screening test aimed at detecting short-term changes in mental health among respondents. It was designed by Goldberg and Hiller (1979) as a state measure. The questionnaire is objective in the sense that it does not require the person administering it to make subjective assessment about respondents. There are different versions of GHQ available depending upon the nature of items. GHQ-28 containing 28 items was derived from factor analysis of GHQ 60. It consists of 4 sub-scales for somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. It is as good as any other version of GHQ as a case detector, at the same time it gives scaled sub-scores if necessary. Each item has 4 response alternatives. Its sensitivity was found to be 0.8, and specificity 0.88.

The GHQ-28 has been adapted in Bengali culture by Basu and Dasgupta (1996). There was no difficulty in its applicability in this culture. In this adaptation item analysis was done. And
split half reliability was found to be 0.97. Its sensitivity and specificity were 1.00 and 0.88 respectively.

**Administration**: The GHQ-28 is a self administering screening test. There is no time limit to complete it. The instruction precedes the inventory.

**Scoring and interpretation**: Scoring was done by GHQ method (0-0-1-1) as suggested by Goldberg and Williams (1988). Threshold for case identification was taken as 4/5 i.e. score 4 signifies a non-psychiatric case and 5 signifies a psychiatric case. Total score ranges from 0 to 28.

A copy of the questionnaire is presented in Appendix B.

**Selection of the tool**: In the present study, the General Health Questionnaire was used among the prospective subjects to screen out those with a psychiatric disorder. This particular test was selected because

(a) as a screening test applicable in India it is one of the most comprehensive and compact ones. The GHQ-28 is also a popular one with only 28 items yet including 4 domains,

(b) it is quite easy to administer and the scoring procedure is also very simple,

(c) a number of earlier studies in Calcutta have used this version (Dasgupta and Basu, 1997; Basu et al., 1999) and have found it satisfactory.

**Measures of the dependent variables**

(a) *The Subjective Well Being Scale by Sell and Nagpal (1992)*

(b) *The Ego Function Assessment Scale (Modified) by* (1989) and adapted by Basu et al. (1996).

This scale was used to assess the 12 ego functions. High score indicates better ego function. The tools have been described in detail below.

**The Subjective Well-being Scale by Sell and Nagpal (1992)**

*Description:* The Subjective Well Being Scale has been designed to measure the feeling of well being or ill being as experienced by an individual or a group of individuals in various day to
day life concerns. It consists of 40 items and each of them provides three alternative responses. The inventory measures 11 factorial dimensions namely

a) General Well being - positive affect
b) Expectation achievement congruence
c) Confidence in coping
d) Transcendence
e) Family group support
f) Social support
g) Primary group concern
h) Inadequate mental mastery
i) Perceived ill health
j) Deficiencies in social contact
k) General well being - negative affect

A global score of wellness is also available from the scale. The reliability coefficient of the scale is 0.87.

**Administration:** It is a self administering questionnaire with no time limit. Instructions are given in the beginning of the questionnaire. However subjects are allowed to respond to the items after discussing with the interviewer. The subjects responds on either of the three alternatives, namely - 'very much', 'to some extent' and 'not so much'.

**Scoring and interpretation:** The inventory can be scored by assigning 3, 2 and 1 to response categories of the positive items and 1, 2, and 3 to the negative items. The minimum and maximum scores thus obtained are 40 and 120 respectively. The total score can be interpreted summarily in the light of the broad score ranges; 40-60; 61-80 and 81 -120 to have an overall picture of the well being status. The mean score of normal adult Indian sample is 90.8 with a SD of 9.2. High score indicates greater wellness.

A copy of the scale is given in Appendix C.

**Selection of the tool:** The scale was selected for the present study because
a) It is indigenous and applicable for the present sample.
b) It is comprehensive and represents a composite measure of independent feelings about a number of significant life concerns.
c) There have been some indication that the wellness as assessed by this scale is a stable personality trait (Sell and Nagpal, 1992)
d) It is easy to administer and score.


Description of the tool-This scale contains 12 subscales, each subscale assess separate EF. Each sub scale contains 10 questions and hence the total scale contains 120 questions or items. Each of the questions provides 3 alternative responses, i.e., rarely, sometimes and often. Validity of this scale relies on original scale (EFA) and Gruber's Scale.

EFA has been used as a diagnostic tool in psychiatry evaluation, in predicting analyzability, in the evaluation of ongoing treatment process, and as an adjunct of research with normal as well as with the mentally ills. It is therefore an important addition to the existing methods of assessing mental functioning. In the present study the Indian adaptation of the scale (Basu and Banerjee, 1998) was used. The Bengali adaptation of this scale demonstrated adequate reliability coefficients (split-half reliability coefficients ranged from .52 to .86 and Chronbach’s alpha ranged from .50 to .78 for different subscales). Item total correlation coefficients between each item and its corresponding subscale score of the EFA-M were found to be significant at .01 level for all items. The criteria-related validities were found to be satisfactory.

Administration –It is a self administering questionnaire with no time limit. Instructions are given in the beginning of the questionnaire, however, subjects responds for each item after discussing with the interviewer and hence EFA-M works like a structured interview schedule rather than a questionnaire.

Scoring and Interpretation-Some of the items are scored for 0, 1, 2 for rarely, sometimes and often respectively and for some other items scoring is done in a reversed way. Scores of each function are summed up separately. Higher score indicates better adaptive function in that specific EF. Total score for each function or subscale ranges from 0 to 20.
A copy of the scale is given in Appendix D.

Selection of the tool - This scale has been used in present study to assess ego functions (EFs) objectively in 3 clinical groups as well as in normal. Various researchers attempted to assess EFs at different times. An early attempt was made by Green (1954). Scores on EFs reflected a child’s or adult’s abilities to perform a given function in conformity with his/her age and social setting. Karush et al. (1964) reported a method for profiling ego strength. Bellak and Rosenberg (1966) published a drug study which employed a global Ego Strength Scale with psychological and behavioural characteristics for each of 7 EFs as proposed by Beres (1956). However, systematic EF assessment in the area of psychopathology had its origin in the attempt to deal rationally with problems presented in the diagnosis of schizophrenia (Beliak, 1958). In the context of a study of schizophrenics, neurotics and normals, Beliak et al. (1973) describes a method for studying 12 EFs. This method is designated as Ego Function Assessment (EFA) and is in essence a rating scale based on interview conducted to tap each ego function (EF). The EFA manual provides a guide for the detailed interview. Various questions concerned with all the components of each of the 12 EFs are formed. Then the interview materials are submitted to at least 2 raters well acquainted with the concepts. The raters major task is to make a rating of each function on a 7 point scale or 13 point scale following the rating guidelines provided by . Finally a global rating for the total scale can be arrived at.

The full EFA, however, does have some limitations. First, it is lengthy, second, it requires psychoanalytically oriented clinicians who have been trained in the procedure. On the basis of EFA, Gruber et al. (1984) structured questions and used in screening civil service applicants. Bellak (1984) developed a shorter questionnaire form for the interview that requires less psychoanalytical skill on the part of the interviewer. This version was used in research to separate schizophrenics from patients with psychosis plus attention deficit disorder. To enhance its applicability in clinical as well as in general population, a 120 item questionnaire version of the same has been prepared (1989) and named as Ego Function Assessment (Modified) Scale or EFA-M.

The Indian adaptation of the scale has been used by Basu and Bhattacharyya (1995), Basu et al. (1998). Basu et al., 2000. Hence its applicability was ensured.
EFA-M has been selected in the present study as it is easy to administer, at the same time it assesses 12 EFs quantitatively so that these measures can be used for further analysis.

**Measures of the independent variables**

(a) *The Stressful Life Events Scale by Singh et al. (1983)*

This was used to assess the life events during the last one year. High score on this scale indicates greater stress.

(b) *A cultural adaptation of the Bem Sex Role Inventory by Bem (1974)*

This was used to assess gender role identity of the subjects. It yields a M and a F sub scale, higher score indicating greater masculinity and greater femininity respectively.

(c) *The Sex Role Attitude Scale by Scanzoni (1975)*

This was used for determining modernity and traditionality. Higher score indicates greater modernity.

The details of the scales are presented below.

**Presumptive stressful Life Events Scale or PSLES (Singh et al., 1984)**

Description of the tool- PSLES consists of 51 life events. This scale is based on Social Readjustment Rating Questionnaire by Holms and Rahe (1967) consisting of 43 items or life events. This scale is especially prepared for adult Indian population. This scale assesses number of life events experienced in past one year, frequency of occurrence of each event and quantitative estimate of presumptive stress of each of the life events. No significance difference was observed between males and females, young and older age groups, married population and single, in terms of number of events experienced in life time and in past one year. However it was observed that subjects with high neuroticism score experience significantly greater presumptive stress than those with low neuroticism score.

In the present study, the English version of this scale (Indian Institute of Biobehavioural Sciences, 1990) has been used.

Administration- In the present study, the subject is presented the list of 51 events and is asked to indicate the life events which he/she experienced in last one year or in one year preceding the onset of illness, as the case may be.
Scoring and Interpretation- In the present study, total number of life events is counted and is used for further analysis.

Selection of the tool-Presumptive Stressful Life Events Scale or PSLES has been used in the present study to estimate the number of life events occurred in the subjects in past one year (in case of normal) or in one year preceding the onset of illness (in case of subjects of clinical groups). This scale has satisfactory psychometric properties. It has been prepared in Indian context and a self rating scale. Hence it is used in the present study. English version of PSLES is given in Appendix E.

Bem Sex Role Inventory :—

The scale was originally constructed by Bem (1981). Here the culturally adapted version prepared for the study has been used.

Description of the Original Bem Sex Role Inventory (BSRI) : The inventory consists of 60 adjectives or phrases printed in a test booklet in a cyclic order along with instruction and space for personal information about the subject. Among those 60 items 20 are masculine, 20 feminine and 20 neutral. Each item is accompanied by a 7 point scale on which the subject indicates how well each of the 60 characteristics describes herself or himself. High score indicates existence of that trait in a high degree.

In order to estimate the internal consistency of the BSRI coefficient alpha was computed separately for females and males in both samples for the femininity score and the masculinity score. Coefficient alpha for the femininity scale was 0.78 for males as well as for females. The coefficient alphas for the masculinity scale was 0.87 for males and 0.86 for females. The test-retest reliability for femininity scale was 0.89 for males and 0.82 for females. For the masculinity scale it was 0.76 for males and 0.94 for females.

The femininity and masculinity scales were independent, i.e. correlated insignificantly with each other. A 1978 survey demand started this correlation among females was .00 (n=340) and among males was 0.05 (m=476).
Administration: The BSR1 is essentially self-administering and may be given to large groups as well as to individuals. There is no time limit.

Scoring and Interpretation: Hand-scoring of BSR1 is a relatively simple task that may be facilitated by the use of calculator. Each subject's femininity and masculinity scores are the average of the subject's ratings of the feminine and masculine adjectives on the BSR1. This score may be used in different ways. The M and F scores may be used as continuous variables. Secondly, the average of the rating for the femininity and masculinity scales can be transformed to a standard score. An androgyny score may be obtained from the difference of the masculinity and femininity standard scores. Thirdly, subjects may be classified in various categories by using either a hybrid or median split method. In the hybrid method the subjects are classified in two steps. Initially they are classified as feminine masculine or potentially androgynous on the basis of femininity mines masculinity score. This third group is then classified into androgynous or undifferentiated on the basis of a median split. The median split technique is easier and more widely used. Here a sample of subjects is divided at the median on forth the femininity and the masculinity scales and a fourfold classification is derived with subjects designated as masculine, feminine, androgynous and undifferentiated.

Initially Bern suggested that the neutral scale also be scored. But due to doubts about its neutrality the 1981 manual prefers to keep these items as fillers only.

Selection of the tool: The BSR1 was selected for this study because—

(i) it considered masculinity and femininity as two independent dimensions rather than as two poles of a single continuum,

(ii) it defines masculinity and femininity as cultural prototypes and subsequently assesses the presence of these prototypes in one's description of oneself. Thus it captures the representation of culture within one's self image. Thus an impact cast by the constructs used here may be interpreted as the effect of cultural imperatives operating through an individual within that culture. This is in line with the basic intention of the present study.

(iii) It is less time consuming than other personality tests. The adjectives given in the scale in terms of items are easy to understand,
(iv) it is an widely accepted measure despite a few criticisms. Numerous studies abroad have been conducted with it and a few studies in India (Ghadially, 1996; Basu, 1991; Datta et al. 1995; Dasgupta & Basu, 1997) also have been reported.

**Cultural Adaptation of the Bem Sex Role Inventory**

A number of earlier studies have indicated that the original items of the BSR1 are highly culture specific (Rowland, 1977; Carlsson and Magnusson, 1980) and therefore cannot be used directly for the present study. The very construction of the items of the BSR1 was based on a judgement of the traits considered to be desirable for men or women in the American Society. Obviously the same items may not be desirable for men or women in an Eastern culture. Studies conducted in India and other South Asian countries have demonstrated that many of Bem's masculine and feminine items are considered neutral in the Eastern culture (Sethi and Allen, 1984, Ward and Sethi, 1986; Fakir and Sahoo, 1990; Basu, et al. 1995). The studies have also revealed gross regional variations, for example the items found to be significant in the North Indian sample (Sethi and Allen, 1984) differed from those in South India (Ward and Sethi, 1986). Therefore a cultural adaptation and modification of the items was considered essential.

A second important point was that the sample of the present study was somewhat older in age than Bem's sample which consisted of college students. In this study the sample group ranged from 30 to 50 years of age. Therefore, an adaptation suited for this particular age group was also required.

An earlier adaptation of the same scale has already been attempted by Chakroborty (1998) on late adolescents. The present effort may be considered an extension of this earlier work to a higher age group.

**Selection of Items:** Bem (1981) used 200 items for construction of her scale. However many of them have been rejected as insignificant in the American sample itself. In the present study, a survey of all the works conducted in India was done and all the items found to be significant by various authors were pooled. The items of the original BSR1 were also included. Furthermore, the items obtained from an open ended survey by Basu (1991) were also added to this total constellation. Thus 150 items were initially pooled. These items were given to two experts of language and two psychologists for identifying duplicates. Those with "identical or
very similar” connotations were excluded. Thus 26 items were rejected resulting in 124 final items. A copy of these items is presented in Appendix F.

Judgement of the items for inclusion in the scale

Following Bern's (1981) definition a personality characteristic was considered as masculine or feminine if it was judged to be significantly more desirable for one sex than for the other in contemporary Indian society.

60 male and 60 female Bengali Hindu subjects of age ranging between 30 to 50 years served as judges. They were required to assess each item on a 7 point scale ranging from 1 (not at all desirable) to 7 (highly desirable) either for a male or for a female. No judge rated both. The instruction for judgement was as used by Bern. It ran as follows:

“We are interested in Indian stereotypes of masculinity and femininity. On the following pages you will be shown a large number of personality characteristics. We would like you to indicate how desirable it is in Indian Society for a man to possess each of these characteristics. Note: We are not interested in your personal opinion of how desirable each of these characteristics is. Rather, we want your judgement of how our society evaluates each of these characteristics in a man.

Example: healthy
Mark a 7 if it is considered extremely desirable in India for a man to be healthy.
Mark a 6 if it is considered very desirable in India for a man to be healthy.
Mark a 5 if it is considered quite desirable in India for a man to be healthy.
Mark a 4 if it is considered moderately desirable in India for a man to be healthy.
Mark a 3 if it is considered somewhat desirable in India for a man to be healthy.
Mark a 2 if it is considered slightly desirable in India for a man to be healthy.
Mark a 1 if it is considered not at all desirable in India for a man to be healthy.

Note: if you come to an adjective which seems so ambiguous that you cannot bring yourself to rate it, no matter how hard you try, mark that characteristic with an “X”. Please do not leave any characteristic unmarked.
Thus, if you feel that in our society generally, it is extremely desirable for a man to be healthy, not at all desirable for a man to be fat, quite desirable for a man to be carefree, and somewhat desirable for a man to be comical, then you would respond as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Healthy</th>
<th>Carefree</th>
<th>Fat</th>
<th>Comical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

The mean rating for each item was done. The significance of differences between desirability for man and woman was tested by ‘z’ test separately for the female and the male subjects. Since these items were intended to reflect the cultural stereotype, only those items which were desirable (p<0.05) for one sex over other by both sexes were considered as ‘feminine’ or ‘masculine’. Those items reflecting no significant difference (P>.20) in terms of desirability for man or woman by both sexes were labeled as neutral items.

Bem (1974) originally retained items which satisfied the criterion of significant differences only. Thus the scale included items which by themselves may not be very desirable, as their mean rating fell below 4, the midpoint of the scale. This approach has been criticized by others (Silvern and Ryan, 1979). Recognizing this criticism only those items which had a mean desirability rating above 4 for at least one sex were included.

Out of 58 items which fulfilled the criteria (22 masculine, 16 feminine and 20 neutral), 16 masculine, 16 feminine and 16 neutral items were retained. These items have been presented in Table 3.3.

**Table-3.3**

<table>
<thead>
<tr>
<th>Masculine</th>
<th>Feminine</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Active</td>
<td>Affectionate</td>
<td>Adaptive</td>
</tr>
<tr>
<td>2. Acts as leader</td>
<td>Charismatic</td>
<td>Disciplinarian</td>
</tr>
<tr>
<td>3. Adventurous</td>
<td>Compassionate</td>
<td>Flexible</td>
</tr>
<tr>
<td>4. Ambitious</td>
<td>Domestic</td>
<td>Friendly</td>
</tr>
<tr>
<td>5. Assertive</td>
<td>Easily expresses tender emotion</td>
<td>Generous</td>
</tr>
<tr>
<td>6. Athletic</td>
<td>Feminine</td>
<td>Happy</td>
</tr>
<tr>
<td>7. Competitive</td>
<td>Forgiving</td>
<td>Helpful</td>
</tr>
<tr>
<td>8. Courageous</td>
<td>Graceful</td>
<td>Humane</td>
</tr>
<tr>
<td>9. Enterprising</td>
<td>Loyal</td>
<td>Kind</td>
</tr>
<tr>
<td>10. Hard working</td>
<td>Loves children</td>
<td>Modest</td>
</tr>
<tr>
<td>11. Independent</td>
<td>Nice</td>
<td>Pleasant</td>
</tr>
</tbody>
</table>
The mean desirability ratings, for the masculinity and femininity scales by female and male judges and the ‘z’ ratios indicating the significance of their differences are presented below in Table 3.4 and Table 3.5.

**Table -3.4**

Mean desirability ratings and SD for the masculinity and femininity scales by female judges (N = 60) and ‘z’ ratios indicating the significance of mean differences

<table>
<thead>
<tr>
<th></th>
<th>For Women</th>
<th></th>
<th>For Men</th>
<th></th>
<th>‘z’ ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>4.38</td>
<td>0.80</td>
<td>5.79</td>
<td>0.80</td>
<td>-6.83**</td>
</tr>
<tr>
<td>Femininity</td>
<td>5.47</td>
<td>0.82</td>
<td>4.14</td>
<td>0.77</td>
<td>6.48**</td>
</tr>
</tbody>
</table>

**p<0.01

**Table -3.5**

Mean desirability ratings and SD for the masculinity and femininity scales by male judges (N = 60) and ‘z’ ratios indicating the significance of mean differences

<table>
<thead>
<tr>
<th></th>
<th>For Women</th>
<th></th>
<th>For Men</th>
<th></th>
<th>‘z’ ratios</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Masculinity</td>
<td>4.55</td>
<td>0.76</td>
<td>5.49</td>
<td>0.67</td>
<td>-5.08**</td>
</tr>
<tr>
<td>Femininity</td>
<td>5.62</td>
<td>0.82</td>
<td>3.94</td>
<td>0.73</td>
<td>8.38**</td>
</tr>
</tbody>
</table>

**p<0.01

The tables indicate that the mean desirability of the masculinity scale was greater for men than for women. The mean desirability of the femininity scale was greater for women than for men. This is true when judged by boys as well as by girls.
The overall mean desirability rating for the masculinity and the femininity scales summed over the judges and targets are presented below in Table 3.6.

**Table 3.6**

Mean desirability ratings and SD for the masculinity and femininity scales by all judges (N = 120) and ‘z’ ratios indicating the significance of mean differences

<table>
<thead>
<tr>
<th></th>
<th>Masculinity Scale</th>
<th>Femininity Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.05</td>
<td>4.79</td>
</tr>
<tr>
<td>SD</td>
<td>0.78</td>
<td>0.79</td>
</tr>
<tr>
<td>Z ratio</td>
<td>2.56*</td>
<td></td>
</tr>
</tbody>
</table>

*p < 0.05

The above tables indicate that the mean femininity rating was somewhat lower than the mean masculinity rating. Some authors, have suggested that the mean rating of the desirability values of the two scales should be made equal (Silvern and Ryan, 1979). Others however opined that if such differences in desirability reflect cultural stereotype, they should not be tampered with (Taylor and Hall, 1982). The present investigator agreed with the second line of thinking particularly since the same pattern was observed by male and female judges alike.

**Preparing the workable form of the test**

The 48 items were cyclically arranged in the form of a scale with 7 response categories for each item. This was used to assess the extent to which the culture's definitions of masculinity and femininity are incorporated within the individual's self-definition. Here, instruction was changed to suit the above purpose. Essentially Bem's instructions were used.

**Determining the item validity**

The test was subsequently administered to 100 male and 100 female subjects with characteristics as before. The data were scored following Bem's suggestion that is, the mean of the ratings for the 16 masculinity items was the raw masculinity score. Similarly femininity
scores were computed. The neutral items served as buffers only and were not scored (Bern, 1981).

Then item-total correlations were computed between the score for each item and the total masculinity and total femininity scores. The results have been presented in Table 3.7.

Table 3.7 showed that none of the masculinity items correlated significantly with the total femininity scores and vice versa. Thus item validity for the masculinity and femininity scales were established.

Table 3.7

Item-total correlation coefficients (Pearson's product moment r) for the masculinity and the femininity scales for the total sample (N = 200)

<table>
<thead>
<tr>
<th>Item No. (following Table 3.3)</th>
<th>Masculinity Scale items</th>
<th>Femininity Scale items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r with total femininity score</td>
<td>r with total masculinity score</td>
</tr>
<tr>
<td>1.</td>
<td>0.43**</td>
<td>0.09</td>
</tr>
<tr>
<td>2.</td>
<td>0.45**</td>
<td>0.06</td>
</tr>
<tr>
<td>3.</td>
<td>0.47**</td>
<td>0.11</td>
</tr>
<tr>
<td>4.</td>
<td>0.54**</td>
<td>0.06</td>
</tr>
<tr>
<td>5.</td>
<td>0.43**</td>
<td>0.05</td>
</tr>
<tr>
<td>6.</td>
<td>0.55**</td>
<td>0.11</td>
</tr>
<tr>
<td>7.</td>
<td>0.48**</td>
<td>0.10</td>
</tr>
<tr>
<td>8.</td>
<td>0.47**</td>
<td>0.04</td>
</tr>
<tr>
<td>9.</td>
<td>0.39**</td>
<td>0.06</td>
</tr>
<tr>
<td>10.</td>
<td>0.46**</td>
<td>0.09</td>
</tr>
<tr>
<td>11.</td>
<td>0.50**</td>
<td>0.07</td>
</tr>
<tr>
<td>12.</td>
<td>0.33**</td>
<td>0.07</td>
</tr>
<tr>
<td>13.</td>
<td>0.78**</td>
<td>0.07</td>
</tr>
<tr>
<td>14.</td>
<td>0.44**</td>
<td>0.10</td>
</tr>
<tr>
<td>15.</td>
<td>0.67**</td>
<td>0.11</td>
</tr>
<tr>
<td>16.</td>
<td>0.58**</td>
<td>0.03</td>
</tr>
</tbody>
</table>

**p<0.01
Determining the reliability
Reliability was determined by the following methods:
a) Internal consistency reliability by computing
i) Split half reliability using Spearman-Brown Formula.
ii) Chronbach's alpha
b) Test retest reliability, the retest being conducted after 1 month.
The sample was the same as used for determining item validity.
The reliability values have been presented below in Table 3.8.

<table>
<thead>
<tr>
<th></th>
<th>Split Half</th>
<th>Internal Consistency</th>
<th>Test retest (After 1 month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculinity</td>
<td>0.88**</td>
<td>0.83**</td>
<td>0.78**</td>
</tr>
<tr>
<td>Femininity</td>
<td>0.77**</td>
<td>0.75**</td>
<td>0.79**</td>
</tr>
</tbody>
</table>

**p<0.01

Table 3.8 showed that both the masculinity and femininity scales were highly reliable.

Determining the construct validity.
Bem's conceptualization required that the masculinity and femininity scales be independent. The inter-correlation between the masculinity and femininity scales have been presented here in Table 3.9.

<table>
<thead>
<tr>
<th></th>
<th>Masculinity</th>
<th>Femininity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculinity</td>
<td>1.00</td>
<td>0.08</td>
</tr>
<tr>
<td>Femininity</td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>
Thus the independence of the two measures was established.

The Working Norm

The test was again administered to 100 boys and 100 girls of the same characteristics. The mean and standard deviations for the boys, girls and the total pool of subjects are presented below in Table 3.10.

Table 3.10 also reveals the significance of the mean differences of the masculinity and femininity scores between the two sexes.

**Table 3.10**

Showing means and SD of masculinity and femininity scales for the women, the men and the total sample and the z values showing significance of sex differences

<table>
<thead>
<tr>
<th>Sample</th>
<th>Women (N = 100)</th>
<th>Men (N = 100)</th>
<th>Statistics</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Z value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Masculinity | 4.85           | 0.73          | 5.66       | 0.66 | 13.66**
| Femininity | 5.27           | 0.77          | 4.45       | 0.70 | 7.89**

**p<.01

The above Table reveals that the women had greater femininity than the men, and the men had greater masculinity than the women. This is of course in line with the expected results.

Limitations Of The Cultural Adaptation.

Bem proposed conversion of the raw scores to T scales, particularly to obtain an 'androgyny" score by computing the difference between masculinity and femininity scores. The present
study did no use the 'androgyny' score and therefore this standard score conversion was not done.

- The norm was computed only on 200 subjects. A greater sample size would have been much more representative.
- Many authors have highlighted the importance of determining the factorial validity of the Bem Sex Role Inventory (Ismail and Choo, 1986). This has not been done in the present work, and remains for future extension of the adaptation work.

**Utility of the adapted form of the Bern Sex Role Inventory.**

The culturally adapted form of the Bern Sex Role Inventory may presently yield two raw scores for each individual, these being masculinity and femininity. The scores can be used in a study in either of the two ways:

1. The raw scores themselves can serve as measure of the two independent and continuous gender role orientations, namely masculinity and femininity.
2. The median of the masculinity and femininity scores for the sample may be calculated and the median split method as suggested by Bem may be used to divide the sample in the four gender role identity categories, namely, masculine, feminine, androgynous and undifferentiated.

A copy of the adapted version of BSR1 is attached in Appendix G.

**Sex Role Attitude Scale**

**Description of the tool:**

This scale has been developed by Scanzoni (1975), which measures attitude towards "Traditional wife role, Traditional Mother Role and Traditional Father role". The total scale consists of 20 items, with a 5 point rating scale. The first 13 items assess the attitude toward wife role the next 5 items assess the attitude toward mother role and the last 2 items assess the attitude toward father role. In order to determine the reliability of the three sub-scales Cronbach's alpha was computed. Coefficients of internal consistency were 0.74 for wife role, 0.68 for mother role and 0.62 for father role/husband role. The scale has been slightly revised by Rao and Rao (1983) for the Indian culture.

Datta et al. (1995) used the scale in Bengali culture. The split half reliability of the total scale was 0.79 and test-rest reliability was 0.75.
Administration: The scale is a self-administering one. There is no time limit to complete it. Respondents are asked to indicate their choice for each of the item in the 3 sub-scales to one of the five response categories, namely 'strongly disagree'; 'sometimes' 'agree'; 'agree'; and 'strongly agree'.

Scoring and Interpretation: The responses are summed for each of the 3 dependent variables. Then the three scores are again summed up to find out the total score. The highest possible score for wife role is 65, for mother role 25 and for husband role 10. Thus the highest possible total score is 100. The lowest possible score for wife, mother and father roles are 13, 5 and 2 respectively, thus the total lowest possible score is 20. Mean values for the positions the total scale, a lower score indicates a traditional emphasis while a high score indicates a role is considered traditional if the interests of husband and children are emphasized and placed ahead of those of the wife. It is considered modern if the wife role emphasizes reduced commitment to the notion of subordination of the wife's interest. The mother role is treated as traditional if the interests are placed ahead of the mother's or if mother-centered consideration superordinate the individual-centered. The husband's role is considered traditional if the emphasis is given to the husband as head and as unique provider of the family. Modernism is indicated by weaker concern with the traditional patriarchal ideology. A copy of the scale is presented in Appendix H.

Selection of the tool: This particular scale was selected to assess gender role attitude of the couples because
i) it produces a total traditionality score toward wife, mother and father in the same scale, thus being comprehensive,
ii) it has been successfully used in Indian cultural set up (Datta et al. 1995; Rao and Rao, 1983),
iii) it is easy to administer and score,
iv) it has high reliability and validity.

A note on the language of the questionnaires
All the questions of all the inventories were in English. Since study of English is compulsory as second language from class IV in all schools of West Bengal the educated people
here is more or less at home with this language. Since the subjects of the study had had minimum higher secondary level education, they did not have any difficulty with the items. However if occasionally they faced some problems they were helped out by providing a standard translation of the words/items.

**PREPARATION FOR FINAL COLLECTION OF DATA**

After selecting the measures a few preparations were made for data collection. The inventories and booklets were prepared and organized. Contacts at different colleges distributed over all the zones of Kolkata were made. The list of prospective respondents was prepared following the Stratification procedure detailed before. Prior appointments were made with the target individuals. A pilot study was conducted to ensure that the subjects would not have any problem with any inventory used in the study.

**THE PILOT STUDY**

The pilot study was conducted on 80 subjects. Among these 40 were female and 40 male. The sample for the pilot study however was taken only from the Southern and Northern zones of Kolkata.

All the inventories used in the final collection of data were used. The subjects were individually asked whether they had encountered any difficulty in understanding the instruction or the meaning of the test contents. Since no considerable difficulty was encountered the data were scored and the obtained results are presented in Table 3.11. It was observed that the means and standard deviations did not differ greatly from the norms. So final collection of data was attempted.
Table 3.11
Results of the pilot study

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>Standard. Deviation</th>
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<tr>
<td>SWB</td>
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<td>40</td>
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<td>2.45</td>
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<tr>
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<td>3.69</td>
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<td></td>
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<td>3.56</td>
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<td>11.95</td>
<td>3.90</td>
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<tr>
<td></td>
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<td>40</td>
<td>11.76</td>
<td>3.56</td>
</tr>
<tr>
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<td></td>
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<tr>
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<tr>
<td></td>
<td>Men</td>
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<td>8.01</td>
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</tbody>
</table>
**FINAL COLLECTION OF DATA**

Data were collected in small group situations at the college premises. The subjects were given the required instruction and filled in the set of questionnaires. The approximate time required for collection of each set of data were as follows:

| Day 1: Information Schedule | 30 minutes |
| General Health Questionnaire | 30 minutes |
| Day 2: Subjective Well being Scale | 30 minutes |
| Ego Function Assessment Scale | 30 minutes |
| Day 3: Stressful Life events Scale | 10 minute |
| Bem Sex Role Inventory | 30 minutes |
| Scanzoni Traditionality Scale | 20 minutes |
| **TOTAL** | **180 minutes** |

**SCORING AND STATISTICAL TREATMENT OF DATA**

Each data was scored according to the manuals. The incomplete and dubious data as well as those with extreme scores were eliminated. Descriptive statistics were done and skewness were calculated to establish the normality of the sample.
To organize the ego functions in a meaningful unit Principal Components Factor Analysis with Varimax rotation was done. The relation between SWB and the Ego functions was determined.

The hypotheses were tested in the next section. Independent samples t tests were done to determine whether there was any sex difference in the dependent variables. The correlation coefficients between the independent and dependent variables were calculated to understand their association.

To determine whether the dependent variables could be predicted from the independent variables the Backward Stepwise Regression Analyses were done for each DV that was significantly associated with the IVs. In this statistic all the IVs are initially forcibly entered and then gradually eliminated at subsequent steps to retain only those which contribute significantly to the total variance. It was selected because it would yield the specific contribution of each variable and by eliminating the insignificant ones would predict the amount of variance explained only by the significant predictors.