reworded so as to make them understandable to even the subjects of low intelligence / education. It is a 57-item dichotomous questionnaire rating the three psychological states: Neuroticism (24 items), Extroversion (24 items) and Lie scores (9 items). The scoring is accomplished by aligning the scoring keys furnished with the manual counting one for each underlined answer uncovered by the holes in the keys. The lie scale is used to eliminate subjects showing “desirability response set” i. e. to make the scale valid, reliable and useful in detecting individuals “faking good”. The ‘L’ score of 5 is set as the cutting point where inventory answers cease to be accepted. The retest reliability of the EPI runs between 0.84 and 0.94. N (neuroticism) factor is closely related to the inherited degree of lability of the autonomic nervous system, while the E (extroversion) factor is closely related to the degree of excitation and inhibition prevalent in the central nervous system. There is a significant trend for the N and E to decline with advancing age (Eysenck & Sybil, 1971). Appendix-VIII shows EPI.

5. DATA EXTRACTION AND ANALYSIS

5.1 Climacteric symptom scales

5.2 Cognitive variables

5.3 Psychological variables

5.1 Climacteric symptom scales

5.1.1 Menopause Rating Scale

The data were analyzed using SPSS 10. There have been indications that the three subscales of the MRS (measuring the psychological, somato-vegetative and urogenital dimensions) are not independent (Heinemann, 2004). Bearing this in mind, it was
decided to do a factor analysis with oblique rotation using the direct oblimin method, rather than an orthogonal rotation.

**Scoring:**

The score increases point by point with increasing severity of subjectively perceived complaints in each of the 11 items (severity expressed in 0 to 4 points in each item). By checking one of the 5 possible boxes of "severity" for each of the items, the respondent provided her personal perception.

The total score of the MRS ranges between 0 (asymptomatic) and 44 (highest degree of complaints). The minimal/maximal scores vary between the three dimensions depending on the number of complaints allocated to the respective dimension of symptoms:

- Psychological symptoms: 0 to 16 scoring points (4 symptoms: depressed, irritable, anxious, exhausted)
- Somato-vegetative symptoms: 0 to 16 points (4 symptoms: sweating/flush, cardiac complaints, sleeping disorders, joint & muscle complaints)
- Uro-genital symptoms: 0 to 12 points (3 symptoms: sexual problems, urinary complaints, vaginal dryness).

The composite scores for each of the dimensions (sub-scales) is based on adding up the scores of the items of the respective dimensions. The composite score (total score) is the sum of the dimension scores. Each item’s response was recorded against respective participant’s form number in the Microsoft excel sheet.

**5.1.2 Greene Climacteric Scale**

The purpose to use Greene Climacteric Scale (GCS) was to provide a brief but comprehensive and valid measure of climacteric symptomatology. The development of the GCS, a scale of 21 items, was motivated by the examination of seven separate
studies in which the number of items on the scale to assess the climacteric varied considerably (from 17 to 36). Greene (1976) initially conducted a factor analysis on a list of 30 symptoms reported by women aged 40-55 using a 30 item questionnaire in the United Kingdom. He identified three symptom clusters and labelled them as vasomotor, somatic and psychological. This was followed by an analysis on an Indian population by Indira and Murthy (1980) who also used the same 30 item questionnaire and found eight factors. Other studies (Hunter et al, 1986; Holte & Mikkelson, 1991; Kaufert & Syrotuik, 1981; Mikkelson & Holte, 1982; Abe et al, 1984) found between four and seven factors.

The Scale was originally constructed on the basis of a factor analysis of symptoms presented by a group of climacteric women attending a menopause clinic (Greene, 1976). It has subsequently been modified to take account of findings from five later factor analytic studies carried out by researchers in other countries using both general population and clinical samples (Greene, 1984, 1990). The wording of each symptom has also been standardised so reflect that most commonly used in each of these studies.

**Scoring:**

The Scale is designed for completion by the subject, but if desired or necessary, it could be used in the form of a structured interview. Each symptom is rated by the subject according to its severity using a four point rating scale. Such a rating method was used in the original factor analysis (Greene, 1976) and gives greater sensitivity to the measures than does a binary present/absent rating. Scores are assigned as follows:

Not at all = 0
A little = 1
Quite a bit = 2
Extremely = 3

The symptoms are related to psychological (anxiety and depression), somatic and vasomotor functions in the climacteric. Each response was filled against each participant’s form number in the Microsoft excel sheet.

DATA ANALYSIS

MRS: The factor analysis was done with oblique rotation using the direct oblimin method, rather than an orthogonal rotation. The usual strategy in doing factor analysis is to retain only those factors with eigenvalues larger than 1. The reason for this is that this criterion ensures that a factor accounts for at least as much variance as a single variable (Bennet, 1977). However, applying this criterion produced only two factors! Examination of the eigenvalues showed that the third largest eigenvalue was 0.985. Since this is not much less than unity, it was decided to extract three factors rather than apply the usual thumb rule.

GCS: Factor analysis the technique involves analyzing the intercorrelations among large numbers of symptoms in order to identify which symptoms cluster together to form groups or factors. This allows one to delineate the different facets of the symptom picture and to identify those symptoms which are an essential part of the syndrome and those which are not. The data was analyzed with the data reduction of responses of each participant for factor analysis in the SPSS version 10.0.

5.2 Cognitive variables

5.2.1 Six-letter cancellation test

The six letter cancellation task consisted of a test worksheet which specified the six target letters to be cancelled and had a ‘working section’ which consisted of letters of the alphabet arranged randomly in 22 rows and 14 columns. The participants were
asked to cancel as many of the six target letters as possible in the specified time, i.e., 1:30 minutes. They were told that there were two possible strategies, i.e., (i) doing all six letters at a time or (ii) selectively any one target letter out of the six and were asked to choose whichever strategy suited them. They were also told that they could follow a horizontal, vertical or a random path according to their choice (Natu & Agarwal, 1997). As this test was administered before and after the eight weeks of intervention, to avoid any test–retest effect, parallel worksheets were prepared by changing the target letters and the sequence of letters (Agarwal, Kalra, Natu, Dadich & Deswal, 2002).

**Scoring:**

The scoring was done by a person who was unaware when and on whom the assessments were made, whether the participant was engaging in yoga or control group and whether the assessment was ‘pre’ or ‘post’ of eight weeks intervention. The total number of cancellations and wrong cancellations were scored and the net scores were calculated by deducting wrong cancellations from the total cancellations attempted.

**DATA ANALYSIS**

The baseline data for SLCT was not normal as observed in Kolmogorov Smirnov test. Hence non parametric (Mann Whitney and Wilcoxon signed rank) tests were used to analyse the data. SPSS version 10.0 was used for analysis.

### 5.2.2 Punit Govil Intelligence Memory Scale

The participant is supposed to write the responses to the questions asked by the administrator. Out of ten, eight tests are verbal; one test pertains to geometrical drawing and one on recognizing objects. The reliability of this scale has been tested and the norms for adults (>20 years) with no psychiatric / neurological illnesses are
available. PGIMS is incorporated as one of the important tests to evaluate cognitive functions and organic brain dysfunctions (Pershad, 1994). Administration takes 15-20 minutes per participant.

**Scoring:**

**Subtests I & II:** 1 Score for each correct response, maximum total scores will be 6 and 5, respectively.

**Subtests III:** Alphabet and counting backward – 3 scores if all correct within 15 seconds, 2 if takes longer than 15 seconds, 1 if there is 1 mistake or omission, separately for alphabet and backward counting.

Counting backward by 3’s – 3 scores if all correct within 30 seconds, 2 if takes longer than 30 seconds, 1 if there is 1 error or omission.

**Subtests IV:** Summation of digits forward and backward is the score for this subtest.

**Subtests V:** 1 score for each word correctly recalled (total 10).

**Subtests VI:** 1 Score for each clause correctly reproduced (maximum score 12).

**Subtests VII:** 1 Score for each correct reproduction of the associated word of the pair (total 5).

**Subtests VIII:** 1 Score each for the correctly reproduced pair, separately for each trial. Summation of scores on 3 trials is the final score (total 15).

**Subtests IX:** 1 Score for each type of geometrical figure correctly reproduced in sequence and number. Thus cards 1 to 3, 2 scores each, card 4, 3 scores and card 5, 4 scores (total 13).

**Subtests X:** Each object correctly recognized and named is to be given a score of 1 number of wrong identified objects are to be deducted from the earned score (total 10).

**DATA ANALYSIS**
The baseline data of 8 out of 10 PGIMS subtests was not normal as observed in Kolmogorov Smirnov test. Hence non parametric (Mann Whitney and Wilcoxon signed rank) tests were used for between group and within group analysis of data individually for all the ten subtests. SPSS version 10.0 was used for analysis.

5.3 Psychological variables

5.3.1 Perceived stress scale

The PSS was designed for use in communities with at least junior high school education. It has 10 questions on about the feelings and thoughts during the last month. The participant was instructed to fill in the responses by ticking the option best suited to her depending on the last month experience of feeling stressful and coping with it.

Temporal Nature: Because levels of appraised stress should be influenced by daily hassles, major events and changing in coping resources, predictive validity is expected to fall off rapidly after four to eight weeks.

**Scoring:**

PSS scores are obtained by reversing responses (i.e. 0=4, 1=3, 2=2, 3=1, 4=0) to the four positively stated items (Item 4th, 5th, 7th and 8th) and then summing across all scale items. A short four item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scale.

**DATA ANALYSIS**

The data for PSS was normally distributed as observed in Kolmogorov Smirnov test, hence parametric (Independent sample’s t test and Paired sample’s t) tests were used
to analyze the between group and within group differences. The data were analyzed by SPSS version 10.0.

5.3.2 Eysenck’s Personality Inventory

The EPI items have been carefully reworded so as to make them understandable to even the subjects of low intelligence / education. It is a 57-item dichotomous questionnaire rating the three psychological states: Neuroticism (24 items), Extroversion (24 items) and Lie scores (9 items). The ‘L’ score of 5 is set as the cutting point where inventory answers cease to be accepted.

**Scoring:**

The scoring is accomplished by aligning the scoring keys furnished with the manual counting one for each underlined answer uncovered by the holes in the keys. EPI can also be scored computerized, a scoring program written in FORTRAN prepared by Alan Hendrickson which is included in the manual.

**DATA ANALYSIS**

The data for EPI (Extroversion and Neuroticism) was normally distributed as observed in Kolmogorov Smirnov test, hence parametric (Independent sample’s t test and Paired sample’s t) tests were used to analyze the between group and within group differences. The data were analyzed by SPSS version 10.0.

6. RESULTS

6.1 Climacteric symptom assessments

6.1.1 Factor analysis of Menopause Rating Scale

6.1.2 Factor analysis of Greene Climacteric Scale

6.2 Cognitive variables

6.2.1 Six-letter cancellation test

6.2.2 Punit Govil Intelligence Memory Scale