CHAPTER - III
PLAN AND PROCEDURE

In the preceding chapters the problem for the present study has been traced in the light of theoretical and research background. The present chapter deals with the method and procedure adopted in conducting the present study.

The present chapter describes the following steps of method and procedure:

3.1 Research Design
3.2 Sample
3.3 Tool Used
3.4 Identification of Variables
3.5 Procedure of Data Collection
3.6 Design of Yogic Practices
3.7 Statistical Techniques Used

3.1 RESEARCH DESIGN
Keeping in view the nature of the present study, the experimental method was considered to be the appropriate one. In the present study 'Pre-Test and Post-Test Design' under controlled conditions was followed. The duration of the experimental work was of six months.

3.2 SAMPLE
"Sampling is a process by which a relatively small number of individuals, objects or events are selected and analyzed in
order to find out something about the entire population from which it is selected” (Kaul, 1984, p.111). It is a ‘miniature replica’ of the population at least with respect to the characteristics under investigation if not in all respects. A good sample should be adequate and true representative of the whole population (Aggarwal, 2007, p.166).

The population of the present study was senior secondary school students. The sample of the study was consisting of 100 residential school students of Gita Niketan Awasiya Vidyalya, Kurukshetra and S.M.B. Gita Senior Secondary School, Kurukshetra. The sample of the study was drawn purposively from these schools through two stages. In the first stage, schools were selected and in the second stage subjects were selected on equal match pair bases for the study.

3.3 TOOLS USED

In order to test the hypotheses it is necessary to collect evidences. For each and every type of research certain instruments are used for collecting the relevant information. Such instruments are called tools. There are various tools used in research as questionnaire, observations, interviews and psychological tests. The selection of tool depends upon the type of data required and the nature of the problem.

Keeping in view the nature of the problem, the researcher used the following tools for collection of data:

1. For the measurement of emotional states, The Eight State Questionnaire Scale (8SQ scale) by Cattell et.al, (1976) was used.

2. For the measurement of concentration, Digit-Letter Substitution Test by Wechsler D. WAIS-R (1981) was used.
3. In the present study, total marks obtained by the senior secondary school students in the final exam were considered as their academic achievement.

3.3.1 Description of the Emotional States (8SQ) Questionnaire Scale

Most human mood states are complex. If there just two states could be plotted as a single point against x and y coordinates to show just what the mixture y is for any individual at any point in time. However coordinated factor analyses have repeatedly shown that substantially more than two distinct states can be found in questionnaire responses. The 8SQ has been designed to include the best defined eight among them.

Table-3.1 presents brief descriptions of the eight states based on item loadings and known correlates in the objective test domain (Cattell and Scheier, 1961; Cattell and Warburon 1967; Hundleby, Pawlik, and Cattell, 1965). It should be kept in mind that the criterion relationship established in the objective test domain may not perfectly coincide with those relationships to be discovered in the self-report domain. The correlates were known, are set out in table 3.1 primarily for their heuristic value, and thought checking with the questionnaire scales of the 8SQ in certainly required.

3.3.1(a) Design of the Test

An individual's score on each of the eight scales is based on twelve items per form. To avoid spurious "contiguity" correlation and reactive inhibition effects, the items are "cycled" i.e. a sequence of items concerned with the same state is not allowed to occur. The construction design also insured that as many left-hand (true) as right-hand (false) items contributed to the total
scale on any one state to avoid a response set. Whenever possible, an attempt has been made to bring in some suppressor action, i.e., since some items load more than one factor, to arrange for the items scoring on one factor to have balanced positive and negative loading on other unwanted factors.

**TABLE – 3.1**

**DESCRIPTION OF EIGHT EMOTIONAL STATES USED**

<table>
<thead>
<tr>
<th><strong>SCALE</strong></th>
<th><strong>EXAMINEE DESCRIBES SELF AS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Worried, easily rattled, tense, emotionally upset, easily angered, high strung, easily annoyed.</td>
</tr>
<tr>
<td>Stress</td>
<td>Feeling a lot of pressure, unable to take time off and relax, constantly on the go, feeling hectic, experiencing great strain, unhappy with own performance, experiencing lots of demands.</td>
</tr>
<tr>
<td>Depression</td>
<td>Unhappy, disagreeable, pessimistic in poor spirits, disappointed.</td>
</tr>
<tr>
<td>Regression</td>
<td>Confused, unorganized, unable to concentrate, experiencing difficulty copying, acting impulsively.</td>
</tr>
<tr>
<td>Fatigue</td>
<td>Exhausted, no energy, sluggish, tired, needing rest, weary, below par in performance.</td>
</tr>
<tr>
<td>Guilt</td>
<td>Regretful, concerned about own misdeeds, experiencing difficulties sleeping, unkind, and dissatisfied with self.</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Sociable, outgoing, adventuresome, talkative, enthusiastic.</td>
</tr>
<tr>
<td>Arousal</td>
<td>Alert, keyed up, excited stimulated, keen and sharp senses.</td>
</tr>
</tbody>
</table>
Other principles used in the construction of the 8SQ were [a] to use four alternative and preventing the subject from making the "lazy" choice one subject category if only three options were presented, [b] to keep the frequency of choices of the four alternatives approximately in a normal distribution for most items, with a few showing a predominance of more extreme responses; [c] to avoid more "face validity" than is inescapable by finding items which load sufficiently on the state factors but are not too obvious and therefore are fake; and [d] to select items of predominantly state quality rather than trait quality.

3.3.1(b) Reliability

Consistency is the generic term covering reliability homogeneity and transferability. All three concern the agreement (consistency) of a test will itself but reliability asks how far a testing agrees with a retesting; homogeneity, how far one part of a test agrees with another, and transferability, how far the meaning of the test on one population agrees with the meaning on another population.

If we agree that a major emotional state does not usually alter within an hour, but may alter in half a day and change completely in a month then we may test reliability on a state battery by an immediate retest. Table 3.2 shows the reliabilities calculated in an immediate retest for a group of undergraduates.

These are of-course underestimates of the true reliabilities, since even in an hour emotions can change, and having to take the same test again immediately might be expected to produce some carelessness. A method of extrapolation from retests after 1, 2, 3, 4, and 5 hours might improve these estimates.
### TABLE - 3.2
RELIABILITY COEFFICIENTS FOR THE 8SQ SCALES:
IMMEDIATE RETEST

<table>
<thead>
<tr>
<th></th>
<th>Form A</th>
<th>Form B</th>
<th>Form A+B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anxiety</td>
<td>.91</td>
<td>.90</td>
<td>.94</td>
</tr>
<tr>
<td>2. Stress</td>
<td>.95</td>
<td>.92</td>
<td>.96</td>
</tr>
<tr>
<td>3. Depression</td>
<td>.96</td>
<td>.92</td>
<td>.96</td>
</tr>
<tr>
<td>4. Regression</td>
<td>.94</td>
<td>.94</td>
<td>.96</td>
</tr>
<tr>
<td>5. Fatigue</td>
<td>.92</td>
<td>.92</td>
<td>.95</td>
</tr>
<tr>
<td>6. Guilt</td>
<td>.96</td>
<td>.90</td>
<td>.96</td>
</tr>
<tr>
<td>7. Extraversion</td>
<td>.96</td>
<td>.96</td>
<td>.97</td>
</tr>
<tr>
<td>8. Arousal</td>
<td>.92</td>
<td>.88</td>
<td>.94</td>
</tr>
</tbody>
</table>

N=45 male and female undergraduates

The reliability in terms of a stability coefficient i.e. after a lapse of considerable time period on the other hand should not be as high as for a trait measure. Indeed, if the test measures pure state and if research show that people do not differ in their mean state level, this "reliability" should be zero. Table-3.3 shows the results from retesting a group of undergraduate after a week. It is evident that there is some probability that everyone does not start from the same mean position in their swings of mood, at least on such states as extraversion, guilt, depression, and regression. That is to say, there are slight constant and stable differences among people on their mean state level. This creates a special problem for standardization.
### TABLE 3.3

**Stability Coefficients for the 8SQ: Retest after One Week**

<table>
<thead>
<tr>
<th></th>
<th>Form A</th>
<th>Form B</th>
<th>Form A+B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anxiety</td>
<td>.31</td>
<td>.29</td>
<td>.59</td>
</tr>
<tr>
<td>2. Stress</td>
<td>.32</td>
<td>.29</td>
<td>.56</td>
</tr>
<tr>
<td>3. Depression</td>
<td>.48</td>
<td>.22</td>
<td>.60</td>
</tr>
<tr>
<td>4. Regression</td>
<td>.44</td>
<td>.34</td>
<td>.62</td>
</tr>
<tr>
<td>5. Fatigue</td>
<td>.26</td>
<td>.18</td>
<td>.55</td>
</tr>
<tr>
<td>6. Guilt</td>
<td>.36</td>
<td>.32</td>
<td>.59</td>
</tr>
<tr>
<td>7. Extraversion</td>
<td>.42</td>
<td>.38</td>
<td>.62</td>
</tr>
<tr>
<td>8. Arousal</td>
<td>.31</td>
<td>.19</td>
<td>.53</td>
</tr>
</tbody>
</table>

N = 129 male and female undergraduates

Table 3.4 presents the correlations between corresponding scales in Form A and Form B or equivalence coefficients.

### TABLE 3.4

**Equivalence Coefficients for the 8SQ Scales in the form A and form B**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>.83</td>
</tr>
<tr>
<td>Stress</td>
<td>.74</td>
</tr>
<tr>
<td>Depression</td>
<td>.82</td>
</tr>
<tr>
<td>Regression</td>
<td>.82</td>
</tr>
<tr>
<td>Fatigue</td>
<td>.89</td>
</tr>
<tr>
<td>Guilt</td>
<td>.86</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.87</td>
</tr>
<tr>
<td>Arousal</td>
<td>.88</td>
</tr>
</tbody>
</table>

N = 45 male and female undergraduate
For establishing the reliability of the test of 8SQ scale for the present study in the Indian situations, the test was administered to 30 senior secondary school students belonging to S.M.B. Gita Senior Secondary School, Kurukshetra. To the same students test was administered at the gap of 30 days. The correlation was worked out on the basis of scores of these two tests. The correlation coefficient was found to be 0.78. The test retest reliability coefficient was high. So, it reflects that the test of 8SQ scale could be taken to be reliable.

3.3.1 (D) Validity

Validity in the case of a scale has its most precise meaning as concept validity. This means the correlation of the scale score with the pure factor constituting the concept (e.g. anxiety arousal, etc) the scale was intended to measure.

<table>
<thead>
<tr>
<th>Concept</th>
<th>From A</th>
<th>From B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>.62</td>
<td>.58</td>
</tr>
<tr>
<td>Stress</td>
<td>.86</td>
<td>.47</td>
</tr>
<tr>
<td>Depression</td>
<td>.58</td>
<td>.90</td>
</tr>
<tr>
<td>Regression</td>
<td>.55</td>
<td>.96</td>
</tr>
<tr>
<td>Fatigue</td>
<td>.90</td>
<td>.84</td>
</tr>
<tr>
<td>Guilt</td>
<td>.48</td>
<td>.40</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.92</td>
<td>.67</td>
</tr>
<tr>
<td>Arousal</td>
<td>.84</td>
<td>.72</td>
</tr>
</tbody>
</table>

N= 235 Air Force Enlisted Men
The concept validity which come from the basic factor-analytic research and constitute the real proof that the scales are measuring underlying factorial dimensions are shown in Table 3.5. These values are taken from the factor structure matrix which gives the direct correlation between the scale and the factor.

An inspection of the values in Table 3.5 reveals that the concept validities for each of the psychological states ranged from excellent to moderate. Continued item refinement is necessary to increase the moderate concept validity of some of the scale. One rationale for interpreting the coefficients in Table 3.5 is that they represent upper limits of the predictive potential of individual scales. That is, it is extremely unlikely that the stress scale, Form A, for example will be found in actual practice to correlate by itself more than .86 with any concrete criterion. This limit could, of course, be exceeded if stress were combined with other 8SQ scale in the multiple regression equation to predict some criterion. But by itself stress is unlikely to correlate more than .86 with an independent criterion. An inspection of the values in Table 3.5 shows that for the most part, these are gratuitous upper limits and the scales have generally excellent predictive potential.

3.3.1 (d) Administration of the Scale

The 8SQ can be administered to an individual or to a group. The simple and clear instruction printed on the cover page of the test booklet make the 8SQ virtually self-administrating. After the examinee has read the instructions, the administrator should answer any questions that may arise. The administrators should also reinforce the state quality of the test by the comment.
"Remember" you are being asked to make the answer that tells best how you feel now, at this moment. In the present study, 8SQ scale was administered to a group.

Answers should be marked on the separate answer sheet and not in the reusable test booklet, except when an examinee is confused by the answer sheet. The examiner should make certain that the examinee fills in necessary identification information and understands how to use the answer sheet.

If the examiner occasionally considers it desirable to read the instructions aloud with the examinee and discuss certain point in order to be sure the examinee understands what is required, this practice is permissible. In each situation the examiner must be the judge of the best way to get the instruction across to the examinee.

Although there is no time limit, it is convenient to have certain expectations. The average time for completion is 20-25 minutes for one form. About 20% of the examinees can finish in less than 20 minutes while about 20% of them will take more than 25 minutes. The examiner may encourage those who appear to be working too slowly to increase their pace.

3.3.1(e) Scoring of 8 SQ Scale

Each question on the 8SQ has four options and is scored 0, 1, 2 or 3. The score of each item contributes to only one factor total. Since there are 12 items per state on each form, the highest possible raw score per form is 36 (for the two forms, 72). Answer sheets can be either hand scored with a stencil key or machine scored.
Hand scoring is accomplished easily and rapidly with a key. The same key is used with both forms of the test. The answers appear as pencil marks in the boxes on the given answer sheet. Simply fit the key over the answer sheet and count the marks visible through the holes for each factor, allowing a 3, 2, or 1 as indicated by the number printed above the hole. Add these scores and enter the total in the space indicated at the bottom of the sheet.

Before scoring quickly examine each answer sheet to make sure that there are no un-scored responses, e.g. marking more than one alternative or not marking any choice at all. If such errors do not occur, the examinee, if still present, should be asked to redo the affected items correctly.

If this is impossible for any reason, and the sheet must be scored, a full scale score may be estimated for any affected scale by (1) obtaining the scores from the items in that scale which have been correctly answered, (2) multiplying that score by the total number of items in that scale, (3) dividing this result by the number of items answered and (4) rounding the answer to the nearest whole number. For example, if an individual accidentally left two items blank on the extraversion scale of Form A and received a raw scale score of 25 for him. If there is any reason to suspect that the answers have been left blank intentionally or if more than one item or two is missing from a single scale this estimation procedure is not recommended.

The technician should also look for unusual answering patterns, e.g., wherein every odd-numbered items is answered "a" and every even numbered item is answered "b" etc. Systematic answer patterns may reflect an invalid protocol.
Computerized machine scoring of the 8SQ answer sheets is available through IPAT’s Test Services Division which will provide the test user with raw scores and standard scores on each of the eight scales.

### 3.3.2 Description of Digit Latter Substitution Test (DLST) for measuring concentration

The DLST depends on selective attention/concentration and memory. It is easily understood and performed and suitable for subjects of all ages, including school students. DLST depends on different components of psychomotor performance from the SLCT, namely: (a) sensory information processing ability; (b) central integration of learning and memory, and (c) motor function and coordination. The DLST was developed from Digit Symbol Substitution Test (DSST), one of the subsets of the Wechsler Intelligence Scale. Substitution tests are essentially speed-dependent tasks that require the subject to match particular signs-symbols, digits, signs that are already known to those taking the test. Thus, there is no question of a need to learn new symbols while being tested. Such learning ability is definitely not one of the aptitudes on trial. For this reason, the DLST was used instead of the DSST. Substitution tasks involve visual scanning, mental flexibility, sustained attention/concentration, psychomotor speed, and speed of information processing.

The DLST worksheet consists of an 8 rows x 12 columns array of random digits 1-9. Subjects are seated with the worksheet upside down until the start of the test. They were also given a coding sheet naming the specific letter to substitute for each digit 1-9 in that particular test, the same coding applying to an entire test group. Subjects were instructed to make their own
choice of letter substitution strategy, whether horizontally, vertically, or selecting each particular digit randomized in the array one at a time. They were told to substitute as many target digits as possible in the specified time of 90 seconds. Finally, they were instructed to turn over the worksheet and start the test. Each test was timed on a standard stopwatch.

3.3.2 (a) Scoring of Digit Letter Substitution Test (DLST)

Because the test were administered with such a short intervening time interval, immediately before and after an intervention of only 22.5 minutes, different worksheets and coding were used for each test, with different digit-letter pairing in the key and differently randomized arrays of digits on the worksheet.

Scoring the DLST counts both the total number of substitutions attempted, and the number of wrong substitutions. Net score is obtained by deducting the latter from the former. Scoring was carried out by persons unaware of when the assessment was made, whether it was ‘before’ or ‘after’ the intervention (Pardhan and Nagendra, 2009).

The use of this DLST protocol to study immediate effects has already been validated for the Indian population (Natu and Aggarwal, 1997).

3.3.2 (b) Reliability of Digit Letter Substitution Test (DLST)

Reliability of the test of DLST was determined through test-retest method. The test-retest reliability refers to consistency of scores obtained by the same individual when reexamined with the same test on different occasions. Since the parallel forms of test of DLST were not available, the parallel tests reliability was
not worked out. The split half technique was not used because the items were not arranged according to their difficulty level, the number of items was not very large and the number of items belonging to different classes was not the same.

For establishing the reliability of the test of DLST, the test was administered to 30 senior secondary school students belonging to S.M.B. Gita Senior Secondary School, Kurukshetra. To the same students test was administered at the gap of 30 days. The correlation was worked out on the basis of scores of these two tests. The correlation coefficient was found to be 0.74. The test retest reliability coefficient was high. So, it reflects that the test of DLST could be taken to be reliable.

3.4 IDENTIFICATION OF VARIABLES

In the present study, three types of variables were worked upon. These variables were independent variable, dependent variables and intervening variables. Different variables in each of these categories have been detailed out.

3.4.1 Dependent Variables

These were the variables which acted as a criterion to see the effect of independent variable. These were as follow:

- Emotional States
- Concentration
- Academic Achievement

3.4.2 Independent Variable

The independent variable i.e. yogic practices were manipulated in order to see the effect on the emotional states, concentration, and academic achievement of senior secondary school students. There was an only one independent variable i.e.
yogic practices, which has been explained in detailed under the heading 3.6 Design of Yogic Practices.

1. Emotional States

To see the effect of the yogic practices on the emotional state, 8SQ scale was used in two stages. First stage was: before giving the yogic practices, pre-test was administered. The second stage was: after giving the treatment i.e. yogic practices, post-test was administered. The emotional states include the following different states/ sub-variables i.e. stress, anxiety, depression, regression, fatigue, guilt, extraversion, and arousal on which the effect of yogic practices was observed. Both the pre-test and post-test were the parallel forms of the 8SQ scale.

2. Concentration

The second factor under consideration was to know the effect of yogic practices on concentration. This was measured on the basis of DLST administered by the investigator. According to DLST test used the ‘concentration’ means to bring to common point, to focus, intense mental application, and complete attention on which the effect of independent variable i.e. ‘yogic practices’ was observed.

3. Academic Achievement

The effect of yogic practices on the third dependent variable i.e. ‘academic achievement’ of senior secondary school students was considered. At the first stage, before giving the treatment i.e. yogic practices, exam marks obtained were considered as pre-test score. At the second stage, after giving the treatment i.e. yogic practices’ exam marks obtained were considered as post-test score. The academic achievement was
measured as the percentage of marks obtained by students’ in their exam before pre-test and after post-test.

3.4.2 Intervening Variables

Certain variables which cannot be measured directly may have an effect on the outcome. In the experimental study like this there are many intervening variables that can be considered e.g. teacher, school, socio-economic status, physical environment of school and hostel, food, study habits, grade level, etc. All these variables were either controlled experimentally or statistically or equalized. The steps taken to control the effect of these variables have been detailed out below:

Steps Taken To Control Intervening Variables:

Before conducting the experiment, it was considered necessary to identify as well as control all those variables that could affect the dependent variables. The intervening variables and the controls employed on intervening variables have been discussed below:

- **Grade level:** It was held constant as the sample in the present study were taken as senior secondary school students.

- **Teacher’s Behavior:** Inter-teacher variations were eliminated as the investigator carried out the yogic practices by him. Further, the various tests were also administered by the investigator himself.

- **Food:** Both experimental and control group students’ were given similar type of food to eliminate its impact on the mental and emotional level of students.
• **Emotional state:** Emotional state of both experimental and control group was checked in the pre-test by 8SQ scale and were selected for the experiment with no significance difference between the experimental and control groups.

• **Physical environment of the school and hostel:** Both the groups provided the same type of environment in school as well as hostel. All samples were selected randomly from the senior secondary school students who were residing in the hostel campus. They were given same and equal time period for playing, studying and recreational activities.

### 3.5 PROCEDURE OF DATA COLLECTION

After selection of sample, tools and deciding the techniques for data collection, arrangements were then made to carry out the yogic practices. The investigator visited different schools of Kurukshetra to find out the suitable conditions for the study. At last the investigator selected two schools i.e. S.M.B. Gita Senior Secondary School, Kurukshetra and Gita Niketan Awasiya Vidyalya, Kurukshetra. First of all, the investigator contacted Principals of the respective schools to seek permission. After meeting the principals and Warden of both hostel personally, the investigator arranged with them the specific time for the administration of the pre-test and schedule for yogic practices. The time for the yogic practices was decided from 5-6 am in the hostel campus.

Three days before the task of data collection, the investigator again contacted principals, chief warden of both hostels and their associates for providing all possible facilities for successful completion of the present research work. They
helped the investigator in every respect and made suitable
arrangements to conduct the study.

The investigator reached the institution a little before the
scheduled time i.e. at 5 am and explained the whole of the
programme and purpose of the study to the hostel warden,
associates and students. In the first phase, 8SQ scale and Digit
Letter substitution Test were administered. During the
administration of tests, the investigator explained the meaning of
difficult words to the students. The investigator encouraged
students to give response/answer how they feel at that moment,
don't answer according to how you usually feel, but rather how
they feel right here and now. The investigator encouraged the
students to give answer as soon as possible. The investigator
discouraged the tendency to change answers.

The present study was carried out on 100 senior secondary
school students under controlled conditions. 50 students for
experimental group and 50 for the control group were selected
randomly out of senior secondary school students present in the
hostel campus on equal match pair bases. Pre-test was
administered on 50 students of experimental group and 50
students of control group.

In the second phase, the investigator applied yogic
practices on the senior secondary school students of experimental
group. No yogic practices were applied on the control group. The
yogic practices were selected in consultation with yoga experts of
"Bhartiya Yoga Samsthan", Kurukshetra for a period of 60
minutes every day for sixth months i.e. from April to September.
In third phase, after completion of yogic practices, investigator
carried out the post-test of 8SQ scale and DLST. The investigator carried out the whole programme in controlled conditions. At last, the investigator collected all the tests together and thanked the students and hostel wardens, and principals for their kind co-operation.

The following diagram represents the research design of the study:

3.6 DESIGN OF YOGIC PRACTICES

The yogic practices were scheduled for a period of six months. The approximate time for the scheduled programme was about an hour each day. The following order lists the sequence of events that were taken up during the practice period.

3.6.1 Prayer
3.6.2 Yogāsanas
3.6.3 Pranayama
3.6.4 Laughter

3.6.5 Meditation (Dhyana)

3.6.6 Discussion and Guidance

3.6.1 Prayer

The prayer section included the chanting of the word Omkar “OM” three times each day followed by Gayatri Mantra three times.

\textit{Om Bur Bhawa Sava Tattasavitur Varenayam |}
\textit{Bhargo Devasya Dhimahi Diyo Yo Na Parachodyat ||}

\textit{“Sarve Bhavantu Sukhina Sarve Santu niramaya |}
\textit{Sarve Bhadrani Pasyantu Ma Kashchiddu Khabhad Bhavet”||}

Patanjali Yog Pradeep
(Sadana Padah /32, p.410)

The prayer is meant to create a feeling of compassion and universal love in the mind of participants. It produces a congenial atmosphere for the practice of yoga.

3.6.2 Yogāsanas

The prayer was followed by Yogāsanas. The following Asanas were used in the yogic practices.

1. SUKHASANA

This is simple Asana related to meditation. One can sit comfortably for a sufficiently long period in this Asana.

- By sitting long in this Asana our body, Prana, sense organs and mind feel little fatigue. The joints in the lower part of the body become less stiff. It also increases our habit of sitting in a proper manner.
It regulars the process of inhalation and exhalation.

This Asana is useful for sitting long in sharavn-mannan.

Continuous of this Asana bring peace to the mind.

**Technique**

Be seated on Asana. Stretch straight both of the legs. Place one foot under the other knee and the other foot under the first knee. The neck and spine should usually remain erect but without any tension. Both the hands should remain in Gyana Mudra. Keep the eyes closed with ease. Keep the mind steady and peaceful. The process of inhaling and exhaling should remain normal. Point of concentration: Agya Chakra *(Sharma and Suman, 1999, p.47).*

2. **SIDDHASANA**

As the name implies SiddhAsana is considered to be best Asana among all Asanas of meditation.

When our Prana and Mind get steady all the seminal nerves get relaxed. As a result the movement of semen gains an upward tendency which is very helpful in the preservation of celibacy.

One gains total control over oneself if one controls either
one's *Prana* or Seminal energy or *Vrittis* (mental function) or mind. It is on this sense that *Siddhasana* is of special significance.

- All ailments connected with semen are cured.

**Technique**

Fold the left foot and place its heel between the anus and the genital organ at the semen nerve. Now fold the right foot and place its heel at the root of the genital organ. The feet or legs should be so nicely arranged that the ankle joints should be one upon the other. Place both fingers and toes of both feet in between the things and calves. Both hands should be kept in *Gyana Mudra*, neck and spirits quite straight, keep the eyes closed with ease.

Point of concentration: *Agya Chakra* (*Sharma and Suman, 1999*, p.49).

3. **PADMASANA**

Amongst the four *Asanas* of meditation *Padmasana* comes foremost. Just as lotus remains in water, but remains above the water level likewise, the practitioner of this *asana* though living in this world attains the capacity of detachment from the world.

The importance of *Padmasana* can be understood by the following facts:

- The body remains fully erect in this *Asana*.
- By sitting for longer period in *Padmasana*, blood circulation
in the feet is reduced. The blood thus saved can be utilized in the brain for meditation.

- Spine remains automatically erect in this Asana, circulatory system functions in a normal manner and nervous system is strengthened.

- With the soles of the feet being upward and both hands on the knees in Gyana Mudra, the outward flow of vital energy from the pores of our fingers and feet stops. The entire energy remains within.

- It helps to cure sciatica and all kinds of rheumatic pains of the legs and feet.

- Pressure of the heel on the stomach improves the digestive power.

- It accelerates the concentration of the mind that helps the process of mediations.

- Our Motor Senses (Karma-Indriyas) and senses of perception (Gyana-Indriyas) are set at rest in this Asana. Energy spent through these senses is preserved.

- Finely, by concentrating on the point in the middle of the eyebrows in Padmasana our nervous system becomes strengthened.

**Technique**

Be seated on the Asana and stretch the legs in front by joining them together. Fold the right leg and place the heel of the right foot on the left side of the naval. Similarly fold the left leg in such a way that the left heel is positioned on the right side of the naval. Bring both the heels closer to each other. Keep the neck and spine erect. Place both of the hands on the knees in
**Gyana Mudra.** Close the eyes gently (Sharma and Suman, 1999, p.50).

4. **TADASANA**

*Tadasana* is so named as like a palm tree (Tad in Hindi) the position of the body remains straight in this *Asana*. It serves as a link between the sitting and the standing *Asanas*. It is useful for all persons in general but for ladies and children in particular it is most beneficial.

- Due to traction in 206 bones, caused by this *Asana*, it has proved to be very effective in increasing the height.
- It removes heaviness of buttocks in females and the obesity of the tummy. When we stretch our body all the nerves in the abdominal region get stretched due to which all the nerves in the region are straightened to their natural position and extra fat on the buttocks and pelvic region is reduced?
- It cures such ailments as arthritis, rheumatism, pain in calves.
- It energies the heart, activates the lungs and make our shoulders strong.
- Shivering of hands and feet in old age is stopped.
- Finally it enthusiastic the mind and dispels lethargy from the body.
**Technique**

Lie on the back at the *Asana*. Join the heels and toes. Inhaling, stretch the hands backwards to head. Stretch the hands to the maximum at one end and the feet at the other. Hold the breath for few seconds. Exhaling, relax and return to the original position slowly, breathe in a normal way. Concentrate on the whole body.

- The most important thing to be kept in mind while performing this *Asana* is that the practicing must first inhale the breath and then stretch the body. Repeat this process twice, but do take rest between the two rounds.

- This *Asana* can be done in a standing pose also. Inhale and start stretching the arms above the head towards the sky. Raise the heels too. Lace the thumbs of both hands and form a firm lock. Maintain your balance. The benefits of this pose are similar to those in the lying pose and the advantages mentioned above are also the same (*Sharma and Suman, 1999, p.60*).

5. **YOGMUDRA**

After the physical body is purified by practicing *Asanas* and taking proper food, *Mudras* are practised in advance *Sadhana*.

- When the abdominal intestines do not function properly, they develop knots and start contracting. All these disorders are rectified...
by this *Mudra*.

- All the disorders of liver, such as lack of blood supply and swelling etc. are cured.
- All the part of urinary system is toned up and their functional capability also improves.
- It also arrests the enlargement of the prostrate glands.
- It makes up the flow of blood in the brain.

**Technique**

Sit in *Padmasana*. Keep the neck and waist erect. Extend the arms behind the back. Grasp the left wrist with right hand. Close the left hand thumb inside the fist. Chest may be stretched forward. While inhaling, stretch the body upwards and than exhaling, bend the head and trunk forward and downward from the hip-joined very slowly over the heels and finely rest the forehead gently on the ground. Breathe normally and maintain this posture comfortably for a while inhaling and stretching the hands and back forward a little and revert back and take rest.

Point of concentration: *Manipur Chakra*.

The important point to be kept in mind here is that the grasped wrist should touch the waist-line and must remain stretched (*Sharma and Suman, 1999, p.70*)

6. **GYANA MUDRA**

In order to attain a spiritual state of mind and twisting the parts of the body in a specially restrained manner is called a ‘Mudra’.

After physical body is purified by practicing *Asanas*, *Pranayama*, and taking right type of food, *Mudras* gains
importance since they are directly connected with our mind, nervous system, glandular system and involuntary organs of our body.

The practice of this Mudra is beneficial for alleviating the disorders of the brain.

- This Mudra is practised to reduce the instability of the mind and to faster our spiritual development. It is a suitable pose for meditation and Pranayama.

- Fifteen minutes of continuous practice of Gyana Mudra brings about a transformation in our corporeal elements.

The posture of the hand placed on the knees in which the forefinger and thumb of each hand join each other while the other fingers are pointing out towards the earth, is known as Gyana Mudra. Sit in any Asana suitable for meditation for the practice of this Mudra (Sharma and Suman, 1999, p.157).

7. VAJRASANA

'Vajra means adamant'. Sitting in this Asana will provide stability to the sitter like an adamant, hence the name. Also owing to its impact on Vajra Nadi, our body becomes as strong Asana adamant. It is therefore called Vajrasana. Some sadhakas experience difficulty while sitting in some meditation Asanas.
They are advised to sit in Vajrasana for meditation since it provides a firm base to the body.

- Owning to the pressure of thighs on the calves heat it generated in the foot nerves. This activates the pelvic region. The digestive system is toned up. Due to the traction of knees, thigh etc. these organs of the body are strengthened.

- Since the neck and the back-bone remain straight in this Asana and the body relaxed, it provides rest all organs of the body.

- Fatigue caused by excessive walking and cycling is alleviated.

- If one sits in Vajrasana for 5-7, minutes only, one can derive all the benefits that one can enjoy for long walking exercise.

  The ailment of varicose vein can be cured by this Asana.

**Technique**

Sit erect in the asana. Stretch out the legs fully in front and keep them close together. Place the palms of both hands on right side putting the entire weight of the body on them. Fold back the knees simultaneously. Sit on them with ease. Bring the knees and toes close to each other. Rest the palms on the respective knees. Sit erect, relaxed body and breathe normal. Stay in this asana for a while.

Point of concentration: Manipur Chakra (Sharma and Suman, 1999, p.76)
8. BHUJANGASANA (The Cobra Posture)

This asana is called Bhujangasana as the posture resembles a Cobra. A serpent’s body is extremely flexible. Naturally this asana makes our body quite flexible. While doing SuptVajrasana, the hands are stretched beyond the head resulting in the sufficient flow of blood in the upper part of the spine. In Bhujangasana too, when we raise our neck and stretch it backward, blood flows toward that part. As a result of which it imparts strength and flexibility to this part of body.

Spine is one of the most important organs of the body it is an extension of the brain itself and it, therefore tones up the function of the brain also. This asana keeps the vertebrae in good alignment. It corrects minor deformities in the cervical, thoracic and lumber regions of the spine. Perhaps no other asana benefits spine so much internally as Bhujangasana.

- It makes the backbone flexible. It cures such painful diseases as spindliest, slip disc and back pain in a few days’ time. It imparts strength to the root-nerves and tones up our nervous system.
- It gives relief to patients suffering from diabetes pain in the kidney, cough, asthma and stomach-ache.
- It regulates the function of the adrenal glands and thereby promotes emotional poise.
- It is helpful in setting right the position of the uterus. It
also regulates the menstrual cycle as well as the incomplete menstruation.

- It cures tonsillitis and other ailments of the throat.

**Technique**

Lie down on the abdomen. Bring the heels and toes together and stretch them to the maximum form behind. Now bend the elbows and place the palms on either site of the chin. The gap between the palms may be equal to the gap between the shoulders. Pull back the elbows as much as possible, touching the body, and resting on the ground. The position of arms should not change. The forehead should touch the ground. Inhaling bring the chin forward and start raising the head as far back as possible, as much so that it may touch the spine. Now inhaling raise the chest and abdomen up to the naval. Breathe normally and stay in this posture. While exhaling lower the trunk very slowly but not the head. When trunk comes down completely, then rest the forehead on the ground. Thereafter relax in *Shithilasana*.

Point of concentration: *Vishudhi Chakra*.

- The most important point to be kept in mind here is that while attaining the final position the breath should be inhaled completely.

- While doing this *asana*, there should be minimum weight on the palms but maximum pressure on the pelvic region. This way the *asana* gives the maximum benefit. And this is also a good indication of perfection.

- While practicing this *asana*, there should be no gap between the heels and that the toes should also remain stretched. *(Sharma and Suman, 1999, p.83)*
NOTE: Persons suffering from hernia should not practice this Asana.

9. SHALABHASANA (The Locust Pose)

'Shalabh' means a 'locust' in 'Sanskrit'. The final position of this Asana resembles a locust when it lowers its head and raises its tail, hence the name Shalabhasana. It tones up the abdominal region.

- The most inflexible part of the spinal column is its lower extremity. This Asana makes it resilient and strong. It removes all the ailments of the back bone i.e. specially cervical spondylites, slip disc, backache etc.

- By raising the abdomen to the maximum, the energy situated in the lower part of this body starts flowing upward into the brain and consequently it imparts great strength to the part.

- Because of the stress on the lower portion of the abdomen, this region is strengthened. Ankles calves and thighs are toned up.

- It prevents diseases arising from the wind, bile and phlegm (Vat, Pitt and Cough)

- It gives strength to lungs and heart.
**Technique**

Lie flat on the abdomen. Bring both the palms of the hands under the thighs in such a way that the palms should stick to the thighs and nearer to each other. Moreover the palms should be facing upwards. Stretch the heels and toes of both of the feet together. Rest the chin on the ground. While inhaling and without bending the knees raise the legs and the hind part of the body up to the waist. Normalizing the breath, stay in this posture as long as possible. Exhaling return slowly and relax in *Shithilasana*. Point of concentration: *Swadhishtan Chakra* (*Sharma and Suman, 1999, p.85*).

10. **DHANURASANA**

This *Asana* is called *Dhanurasana* because a body in this posture resembles that of a bow that help us in hitting at our aim. Likewise after the assimilation of energy the *sadhaka* becomes active and agile. This posture is especially beneficial for two important organs of our body, namely abdomen and back.

By raising the knees, this *asana* strengthens the muscles of the abdomens thighs and buttocks. It is particularly beneficial for women as it rectifies the menstrual disorders and those of the uterus.

- It makes the body and spine flexible by stretching the bones and muscles together. It reduces the rigidity in the lower part of the spine.
- It stimulates the muscles and veins of neck, shoulders, arms, lungs, calves, thighs, ribs, knees, and feet.
- It improves the elasticity of the waist, rectifies the position of the naval, and reduces obesity.
- *Dhanurasana* promotes digestion, prevents diarrhea, intestinal weakness, and ailments of kidney and liver.
- It corrects the defects of blood pressure and tones up the entire nervous system.
- It has a stimulating effect on the glandular system, nervous system, and muscular system.

**TECHNIQUE**

Lie down on the abdomen. Fold both the knees and grasp the ankles with hands. All the forefingers should be on one side only. Bring the knees close to each other while exhaling raise the knees first as high as possible, then inhaling raise the neck and the hind part of the body, normalize the breath. Stay on in this position for some time. Return slowly and take rest in *Shithilasana*. Point of concentration: *Swadhishthan Chakra*. *(Sharma and Suman, 1999, p.86)*

11. **PAWANMUKTASANA**

'Pawan' mean 'wind' and 'mukta' means release or removal in Sanskrit. One part of *Prana* is known as *Apan* which has a downward movement. By practicing this *asana* the
wind (the gas in the abdomen) passes out easily. Hence this asana is called Pawanmuktasana.

- When the right knee is pressed on the abdomen ascending colon is affected. When the left knee is pressed on the abdomen, the descending colon and signed colon are affected; when both the knees are pressed on the abdomen, the naval and transverse colon are affected.

- When the foul gas is expelled one gets rid of uneasiness. Abdomen feels a sense of relief and disorder of heart and lungs are alleviated.

- It prevents the tendency to excess of fats on the abdomen.

- Productive organs are strengthened and nocturnal emissions stopped.

- By the pressure of the right knee on the abdomen and that the left leg on the stomach, both the liver and spleen are affected respectively.

- It strengthens the Apan-Pran.

**Technique**

Lie down on the back and straighten the legs. Put together the heels and toes of both of the feet and stretch them forward. Stretch also the arm on respective sides with palms turned down. Fold the right leg from the knee. Interlock the finger of both the hands and inhaling place them on the right knee and press it on the abdomen. Stay in this position for a few moments. Now start exhaling, lift the head and try to touch the nose with bent knee. Inhale and bring the head back in the normal position. Relax the body. Repeat this practice with the left knee and thereafter with both the knees. Return back and relax completely.
The important point to be kept in mind here is that the toes should be kept stretched forward. Secondly do not forget to exhale when the nose is brought in touch with the bent knees. Moreover the leg and the knee of the foot that remains stretched should in no case be loosened. When both the knees in this asana are bent, the nose should be placed in between the knees. Finally squeeze the body to the maximum (Sharma and Suman, 1999, p.89)

**12. MAKRASANA (The Crocodile Posture)**

‘Makra’ means Crocodile in Sanskrit. It is called Makrasana since the practitioner assumes the posture of a crocodile. In other Asanas the backbone is moved forward and backward, left and right and also in a circular movement. But in Makrasana, the spine is twisted. This is its unique specialty.

- By twisting the upper and the lower part of the spinal cord in opposite directions the spine becomes elastic. Ribs and lungs are strengthened.
- It gives relief in breathing problems and cures diabetes.
- It has a beneficent effect on the left and right side of the abdominal muscles and colon. As a result it prevents constipation and stimulates the entire naval region and abdominal organs.
- As both the heels are brought close to buttocks our thighs muscles of the knees and the nervous system are
strengthened. They become supple and flexible.

- It cures all the disorders of the spine as cervical spindliest slip disc and backache etc.
- Finally, it aids in normalizing our blood pressure.

**Technique**

Lie down flat on the back. Keep the heels and toes together. Bend the legs in such a manner that the heels should touch the hips. Now spread the hands to the left and right side in the line with the shoulders. Keep the palms facing in sky? Starts inhaling and turn both of the knees to the right and neck towards the left and place the left ear and the knees on the ground, exhaling return back. Now inhaling turns the knees to the left and the neck to the right and places the right ear and the knee on the ground, exhaling return back.

Point of concentration: *Swadhishtan Chakra*

- The important point to be kept in mind here is that in the entire process of this *Asana*, the heels and hips should not remain apart. They must be kept in close touch with each other. When the knees are turned towards the left and the right, they must be placed on the ground. The heels and the toe of one foot must rest on the heel and the toe of the other foot. The knees also should be kept fully stretched. *(Sharma and Suman, 1999, p.91)*

13. **CHAKRASANA (The Wheel Posture)**

*Chakra* means wheel in *Sanskrit*. In this posture the body is arched backward and resembles the wheel, hence the name.

There are only a few *asanas* where in the abdomen and
spine is specially benefited. Whereas *Chakrasana* gives exercise to several parts of the body simultaneously in a short time. It strengthens soles ankles muscles, knees, thighs, waist, back, abdomen, lungs, shoulders, arms, wrists, palm and brain but it is particularly effective in strengthening and resisting the spinal column, since the vertebrae of the spinal column which has small gaps in it get connected with one another when we bend backward in this *asana*.

Throughout the whole day, in all our day activities we usually bend forward. This causes deformities in our spine.

- Owing to the flexibility of the spine, the circulation of blood in the body improves and the nervous system is tones up.
- The powerful backward bending of the abdominal organs and lungs make them supple and healthy. It also corrects the menstrual disorders of women as well as those of uterus.
- The supply of blood in the brain improves many known and unknown ailments, such as head-ache migraine etc.
- This *asana* helps in curing the pains in the lumber region, slip disc; cervical spindliest but patients of these diseases should practice this *asana* under the guidance of an expert Yoga-teacher.
- Physical weakness is removed. Shivering in hands and feet stops and paralysis is cured.
Technique

Lie down on the back. Bring the heels near the buttocks by bending the legs and keep a little distance between the feet. Bending both of the hands under the shoulder, place them in such a way that the palms should rest on the ground and the direction of the fingers should be towards the feet. Now inhaling and putting pressure on the hands and feet lift the back neck and head to the maximum. Normalize the breath and stay in this position. While exhaling return slowly and relax the body.

Point of concentration: *Manipur Chakra*.

- The important thing to be kept in mind here is that heels should not be raised. Raised the trunk upward to the full capacity so as to mould the body in the shape of a chakra or a wheel. Keep the hands and heels firmly fixed on the ground and should not be allowed to move while returning, keep the head straight bring the shoulder slowly to the ground and then the trunk.

- Young boys and girls, interested in the maintenance of their youth and energy must practice this *Asana* and thereby enjoy its benefits.

Caution

Head patients and those suffering from high blood pressure should avoid this *asana*. (*Sharma and Suman, 1999, p.93*)

14. *HALASANA*

In this *Asana* the posture of the body looks like a plough and hence the name *Halasana*. The main thrust of this *asana* is on the spine which is stretched to the maximum capacity. Along with the spine many glands are also stimulated.

- The spine in this pose is stretched up to three inches more
than its length. As a result it becomes more resilient and healthy. It also aids in lengthening the size of the body.

- As the bones do not release calcium they do not suffer from faulty holes and rigidity. Besides this *asana* helps in supplying adequate quantum of blood into bones.

- All the glands thyroid, parathyroid, kidneys, spleen, liver, pancreas, adrenal, seminal, etc. get contracted in this *asana*. When we return to the original position they get expanded. In this way, these glands are benefited internally.

- By stretching the spinal cord all the nerves connected with the spine and the muscles are stimulated in such a manner that one is absolutely relived of fatigue. Body gets relaxed and doubly energized.

- Since the lungs are pressed from inside they release maximum quantity of carbon dioxide. When we come back to the starting position they are filled with fresh oxygen and as result their functional capacity is stimulated.

- In the final position of this *Asana* the flow of blood is pointed towards the coronary vessel. This feeds the heart and the shape of the heart is not unnecessarily enlarged.

- Due to the flow of blood towards the face it gains in luster.
The pressure on throat will improve the function of the vocal cord.

- The pressure exerted on palms and arms relieves the shivering of hands and strengthening of shoulders.

- Since all the organs of the abdomen are pressed inside they get strengthened. Due to its impact on pancreas diabetes is cured. It gives relief in gastric troubles and constipation.

- All the muscles from the toes to buttocks are tones up and benefited.

- This asana also helps in reducing obesity.

- It cures sterility.

**Technique**

Lies flat the back stretch the arms straight and bring the toes and heels together. Now stretch the toes forward. The palms will face the ground. Keep the arms by the sides along with the body. Keep the body fully stretched. While inhaling raise the legs together slowly and press the palms down on the floor, raise the legs beyond the head till they come parallel to the floor. Now move the legs forward until the toes touch the ground. In this pose the waist will remain raised a little from the ground. Now take the toe together more forward. Chin should touch the lock of the throat. The hands will stick to the ground and bring the arms nearer to each other. Normalizing the breathing, hold this posture as long as comfortable.

Be very careful while returning to the original position. Balancing the weight of the body on the palms and resting each vertebra of the spine on the ground bring the leg very slowly until they rest on the ground. The more slowly spine is brought to
the ground the more resilience it will gain.

Point of concentration: Vishudhi Chakra.

❖ The important point to be kept in mind in this posture is that throughout the performance of this asana the legs should remain straight. Heels and toes should not remain apart. The toes throughout should remain fully stretched without any jolts and jerks. There should be no relaxation in the stretch of the hands and arms. (Sharma and Suman, 1999, p.95)

15. SARVANGASANA

‘sarva’ means all and the ‘Ang’ means limb in Sanskrit. All the parts of the body are affected and benefited while assuming this posture and hence the name Sarvangasana.

In other Asanas one or more organs of the body is influenced but in this Asanas all parts of our body are affected. This Asana is performed at the end since while performing other Asanas the body gets warmed up and also geared up to facilitate the practice of this posture and enable us to derive more benefits than otherwise.

❖ The principal benefit of Sarvangasana is felt in the improved functioning of brain, nervous system, ductless glands, respiratory system, blood circulation, abdomen and promoting our physical health and charm.
This asana is equally useful for children, young men and women and persons in advanced years of age.

By keeping the body in a vertical position, the cervical part of the spine is stimulated.

The brain is strengthened normally by the flow of fresh blood. But since the chin is pressed into the throat, an increased flow of blood into the brain is obstructed. Sarvangasana in this respect is considered to be more beneficial than Sirshasana.

This posture is especially useful in the purification and rectification of blood circulation.

It cures all the disorders of the throat and prevents tonsillitis. Sound becomes melodious and it also imparts strength to throat, eyes, nose, ears etc.

Due to the supply of blood in all the organs, all the cells in the body are activated. Skin gains in beauty. As the blood flows into the roots of the hair, this Asana prevent grayness and the fall of hair.

This asana has been found very useful in the treatment of sterility in women and their uterine and menstrual disorders.

It cures such ailments as piles, deafness, violation of celibacy, under development of body, natural emissions, mental disorders, diabetes, loss of memory and intelligence etc.

Diaphragm rises towards the brain. It improve digestive and relieves constipation.
It removes fatigue and enhances physical strength.

On returning to the normal position, the blood flows back, towards our feet. Thus by this process all the organs of the body are revitalized.

**Technique**

Lie down flat on the back. Keep the legs straight. Brings the toes and heels together and stretch the feet toward. Stretch the arms along and close to the body. Palms should face the ground. The whole body must be straight from top to toe.

Start inhaling and raise the legs upward slowly from the hip joints. Brings the legs to a 90° angle and stay a while in this position. Exhaling and pressing the palms on the floor take the legs beyond the head making them parallel to the ground. Normalize the breath and stay on in this position for some time. In this position the toes will remain fully stretched and knee will not bend. Now support the back with the hands and stretch the legs upward toward the sky slowly. Place the palms on the back as far below as possible and in such a way the whole body stands straight upon the shoulders. The chin should touch the chest. Now relax the toes and maintain this position for the duration as comfortably as possible. Breathe in the normal manner.

Now stretching the toes and keeping the knees straight take the legs slowly beyond the head parallel to the ground. Remove the support of the hands from the back; place them on the ground nearer to each other. Stay in this posture for a few moments. Balancing the weight of the entire body on the palms, come back to the ground very slowly, touching each vertebra of the spinal column on the floor, stay in this position again for a while with
the knees and toes fully stretched. Thereafter bring down the legs slowly, place them on the ground gently. Relax the body. Point of concentration: *Vishudhi Chakra* (*Sharma and Suman, 1999, p.97*).

16. **SIMHASANA (THE LION POSTURE)**

The lion is known as the king of the jungle. His roaring not only adds to his physical health but also makes his presence felt in the forest. It is in this way that the usefulness of this *asana* is felt on our body. Hence it is called *Simhasana*.

- It alleviates the ailments of tonsils, stammering and throat.
- It promotes the healthiness of eye, ear and nose and keeps the lungs and food pipe absolutely clean.
- Due to its effectiveness on the seminal gland, it saves our seminal energy.

**Technique**

Facing the sun, sit in *Padmasana* Stretch the hand forward. Bring the palms closer to each other with fingers placed on the ground reversely. The body should rest on the knees. Keep the throat and chest stretched outward. Now open the mouth and stretch the tongue out as much as possible. While inhaling, start roaring like a lion. The roar should be so long as to influence the throat, chest and abdomen. Roar should be repeated three times.
Return to the original position and massage lightly the middle *nadi* of the throat.

**Point of concentration:** *Vishudhi Chakra.*

- The important point to be noted here is that roaring should be well controlled and not jarring. Instead of producing a harsh sound laid more emphasis on affecting the throat nerves (*Sharma and Suman, 1999, p.109*).

17. **SHAVASANA**

It is necessary to follow a few instructions while performing *Shavasana*. Persons who do not know how to take rest look shattered. They don’t have the requisite strength to do anything. Bones in a dead man become rigid, that is not the case in *Shavasana*. *Shavasana* in reality is not a dead body posture, but a most beneficial *asana*, an *Asana* practiced with a view to secure complete relaxation to all parts of the body and remove tensions both external and internal. Nerves and blood vessels are relaxed.

Children, young and old persons, males and females and even ailing persons can take to this *Asana* with advantage. Whether a labourer or a farmer, rest in *Vajrasana*, rest in *Shithilasana* etc. But taking rest in *Shavasana* is the most
significant, because it is in this posture that our body, prana, mind and sense-organs are energized and revitalized. It establishes a wonderful harmony between the external and the internal organs it brings about a co-ordination between the three parts of our body-the physical, astral and the causal.

- This is the best way to take complete rest.
- Muscles are completely relaxed by Shavasana. Energy from the non-fatigued organs is redistributed to the fatigues ones. All the organs of the body, both external and internal are relieved of stresses and strains.
- It alleviates all the tensions of body and mind.
- It is very officious in restoring to sound sleep. Practitioners of this asana complete the quota of sleep in lesser time and make us more calm, alert and energetic.
- It reduces high blood pressure to normal level and regulates respiratory system.
- A natural harmony between the body and mind is established. A constant practice of this asana also helps us to gain a contentment of heart and a greater equinity of mind.
- Heart disease, insomnia, nervous debility, mental imbalance, lack of memory, fear-psychosis and many other psychological ailments are alleviated by this asana.
- Practice of asana after meals rectifies the digestive system (Sharma and Suman, 1999, p.105).

3.6.3 PRANAYAMA

A sound and healthy body is must for the practice of
Pranayama. But for the correct understanding of Pranayama, it is necessary to have a workable knowledge of air, Paraná, the respiratory organs of the gross body, the different veins and arteries connected with our circulatory system as well as the main centers of Paraná, where from life flows into the main organs of the body. We know that from our birth to death our breathing process continues unabated. Breath and Paraná are two different things altogether. But we cannot see them apart from each-other. Breath is Sthula (gross) and Paraná is Suksham (Subtle). It is the vital force. Breath is the external manifestation of Paraná. Paraná permeates everything and everywhere. It is through the agency of breath that we partake of this vital force ceaselessly. All the things of the world that have life, energy and mobility and mobility are infused with Paraná. Man in Sanskrit is called Prani because he possesses Paraná (Sharma and Suman, 1999, p.123)

The energy that activates or vitalizes our nervous system is the same energy that permeates the whole universe. The process by which the Paraná is controlled by the regulation of breath is called Pranayama. A person, who knows the art of controlling his Paraná, also comes to know the art of controlling the universal Pranic-Energy.

In Rig-Veda the description of Pranayama is described in the following verse:

*Davaimo Vatovat aa Sindhora Paravata*  
*Dhaksha Te Anya Avata Shadanyo Vatu Yadaya*

The two types of Vayus namely, Pran and Apan are constantly flowing in our body. The one pervades the region from
the throat to the heart and the other expands to the outer regions of air. *Pran-Vayu* gives us strength, health and zest and *Apan-Vayu* relieves us of weakness and disease. (Sharma and Suman, 1999, p.125)

According to *Pantanjali’s Yoga Sutra*

*Tasmin Sati Shavas-Prashwas Yogiti Vichhed Pranayama* 2

Patanjali Yog Pradeep

(Sadhana Padah/2, p.49)

That is the control of the act of breathing both inhalation and exhalation after attaining stability in *Asana* is *Pranayama*.

The practice of *Pranayama* is divided into three parts: (1) *Rechak* (Exhalation) (2) *Purak* (Inhalation) and (3) *Kumbhak* (Retention of the breath). Retention of breath within is called internal *Kumbhak* and after exhaling and holding it externally is external *Kumbhak* (Sharma and Suman, 1999, p.125).

*Pranapan Sanayago Pranapan Hatorit*  
*Pranayama iti Prokto Rechak Purak Kumbhakai*  
(Yajya Valkya/6, p.2)

The union of *Pran-Vayu* and *Apan-Vayu* is called *Pranayama*. *Pranayama* means the practice of *Rechak*, *Purak* and *Kumbhak*.

First of all the *sadhak* make his breath deep and rhythmical in a gradual manner. In this way he will be able to make headway in the practice of internal *kumbhak*. After the successful retention of breath internally the *sadhak* will be able to make good headway in the practice of external *Kumbhak*. Some times such a process can be started with the help of some *Yogāsanas*. But it is actually through the technique of *Pranayama* that the duration of
Kumbhak can be increased.

**Techniques of Pranayama**

There are various types of Pranayama. But the investigator selected three Pranayama that are more useful for adolescents. Padmasana and Sidhasana are the best postures for the practice of all kinds of Pranayama. The neophytes who cannot sit in these Asanas can perform Pranayama in sukhasana.

1. **Anulom-Vilom Pranayama**

   Neophytes, who start the practice of Pranayama from the very beginning, will find this technique of Pranayama very useful. Though simple in practice, yet it is very helpful in making the respiratory system deep and rhythmical.

   It strengthens all the respiratory organs which are quite instrumental in further advancement of the practice of Pranayama.

**Technique**

**Ist Stage:** Sit in Padmasana or any other Asana of meditation. Place both of the hands on the knees in Gyana Mudra pose, with the neck and spine absolutely straight. Keep the eyes gently closed.

**II Stage:** Now inhale slowly through the left nostril and expel through the right nostril as above. In other words if inhalation is in 5 counts from left nostril, exhalation should also be in 5 counts from the right. Inhale in 5 counts from right and
exhale in 5 counts from left.

**III Stage:** As above sit in any Asana and start inhaling through the left nostril slowly and steadily. Hold the breath according to the capacity. Exhale through the right nostril slowly and gently. The ratio between inhalation-retention and exhalation should be 1:2:1. In other words inhale in 5 counts from left nostril, retain in counts and exhale in 5 counts from right nostril. Repeat the same process from the other side also (Sharma and Suman, 1999, p.152-53).

2. **Kapal Bhati**

Previously we had practiced such techniques of Pranayama that are primarily meant to impart health to all the organs of the abdomen. ‘Kapal-Bhati’ Pranayama is a technique of Pranayama that purifies the intellect. ‘Kapal’ in ‘Sanskrit’ means the skull and ‘Bhati’ means to ‘shine’. ‘Kapal-Bhati’ makes the skull shine. Hence, this Pranayama is known as ‘Kapal-Bhati’. Since this exercise cleanses the skull, this is taken as one of the Shat-Kriyas of six cleaning process, also. But at the same time it is counted as a very important Pranayama.

According to Patanjali’s Yoga Sutra,

Pracchardanavidarnabhyam Va Pranasya ||34||

Patanjala Yoga Sutra

(Samadhi Padah/1, p.103)
Forcible expulsion of abdominal breath through the nose and its retention is ‘Kapal-Bhati’.

It seems that this Sutra (aphorism) gives us many hints about ‘Kapal-Bhati’ Pranayama and its technique. When we practise this Pranayama with devotion and dedication the magnetic power of Apan Vayu starts ascending from the mid of the spinal cord towards the skull and purifies the cerebellum part of the brain and when the breath is expelled out with greater force, this purifies the cerebrum Shahasrar. Thus this Pranayama is instrumental in the purification of the entire skull and all that it contains.

- It flushes out the accumulated impure residual air in the lungs, which cannot be flushed out by normal exhalation. By its practice completely fresh supply of air reaches the lungs. Due to a large absorption of oxygen. It makes the blood purer and stimulates the normal circulation of blood in the body.

- It purifies the nostrils and the respiratory system. Wind pipe becomes flexible and the functioning of the respiratory system improves as it is massaged properly.

- This Pranayama has an unparalleled capacity for augmenting the power of memory and thinking.

- The Cerebrum Nadi is purified and bile is expelled out.

- The agitated mind becomes calm and expansive with regular practice.

**Technique:**

Sit in Padmasana. Hold the knees firmly with the hands. Close the eyes gently. Keep the spine and neck erect. Look
cheerful. First inhale completely through the nostrils and apply *Mool-Bandh*. Now make a short and sudden expulsion of breath through the nostrils with force and repeat it a number of times in quick succession. In the beginning let there be a little pause between the successive expulsions, so the normal breath is automatically inhaled inside and the capacity for successive forceful expulsions is regained every time (*Sharma and Suman, 1999, p.139-42*).

3. **Bhramari Pranayama**

The world ‘*Bhramari*’ comes from the Sanskrit ‘*Bhramar*’ which means a bee. In this *Pranayama* the buzzing sound of a bee (*bhramar*) is produced while doing *Rechak*. Hence, named as ‘Bhramari *Pranayama*’. This *Pranayama* is in fact a spiritual exercise as it is importantly instrumental in spiritual development. Though its techniques are very simple, it is a very effective type of *Pranayama* as it helps us to ascend to the advanced state of meditation.

- By exhaling through the nostrils and making the sound of a bee, all the veins and tissues of the brain are stimulated. Such ailments as insomnia and epilepsy, connected with the brain disorder are cured.
- Blood and bone marrows are purified.
- It imparts purity to semen which after being purified takes an upward movement towards *Braham-Randhr*.
- It tones up the vocal cord and makes our sound sweet.
- Our breath becomes steady and subtle.
- The power of concentration of mind is accelerated.
- For practitioners who aspire to achieve success in Samadhi, this Pranayama is very effective.

**Technique:**

Sit in Padmasana or any other convenient Asana. Keep the neck and spine straight. Close the eyes gently. Close both the ears with the thumbs. Put the first two fingers one the eyes and the last two finger on the lips as shown in this picture. Inhale slowly through the nostrils and fill the lungs with air. Now exhale slowly through the nostrils, producing buzzing sound of a Bhramer. This is one round. Gradually increase the rounds. On mastering this Pranayama practice Antrik Kumbhak after inhalation. This way the buzzing will be more rhythmical and effective.

**Important Note:**
- Concentrate on the buzzing sound.
- Buzzing should be rhythmical.
- In the last round remove the thumbs from the ears before inhaling (Sharma and Suman, 1999, p.146-47).

**3.6.4 Laughter**

Man today is so much occupied with worldly activities and so badly involved with the strains and stresses of life that the he has hardly any time left for laughter without inhibitions. Trails and tribulations of life coupled with polluted environment have enveloped his life with darkness and disappointment sadness and despondency.
Laugher is a natural activity, an activity that in no time reduces to dust all the dreadful circumstances of life. Laughter exercise has a miraculous effect on all the systems of our body, namely the Digestive system, the Respiratory system, Circulatory system and Glandular secretion. This miraculous advantage is latent only in laughter and Pranayama. Laughing in indeed a boon granted only to a human being and that too to a man of fortune. It is said that really, the wealthiest man is he who knows the secret of happiness. The person whose treasures are full to the brim, but who either cannot claim to be called wealthy. True wealth is happiness, zeal, pranic energy. If we harness these properly to our life we can get every worldly comfort. This is only the outward true face to laughter.

Ultimate goods lie in realizing that happiness is the perennial source of ananda which flows automatically and naturally within. Happiness emanates from continuous laughter and is attained by practice. Practice of daily laughter reveals that physical laughter is slowly and gradually being converted into inner happiness.

When our face shines with the luster of laughter, we become the center of attraction but no one cares at all for use when we cease to laugh. Just think for ourselves. What is the
secret of success of the profession that we choose as the source of our livelihood? It is but natural that a businessman who sells his articles to his customers with a smile on his face will attract more and more of them towards himself. In the same way, an employee who carries out his duties with a smile on his face gains the confidence and admiration of his superiors and colleagues. That enhances his credibility and reputation. A householder who remains cheerful all the times turns his home into a paradise on earth. A little smile on a doctor’s face alleviates the ailment of patients by fifty per cent.

Now we must have understood if for certain how much beneficial is laughing in its effectiveness on man’s life. One chief reason of this effectiveness is that it restores our gross and subtle body to a natural position and thereby tones up their functional capability. Let us therefore include the practice of laughing in our daily sadhana only for a minute and thereby make our life active and free from tension. Let us make our face more lustrous and activate each and every cell of our body. By its multifarious uses, let us make our life more and more happy and useful (Sharma and Suman, 1999, p.120-22).

3.6.5 MEDITATION (DHYANA)

Dhyana is a simple and a very significant practice of Yoga. What is most surprising is that in our daily life we practice Dhyana in all walks of life? We are incapable of doing anything without Dhyana. Sitting or standing eating or drinking, in the shop or in the office, reading or teaching or preparing meals—in short for all the activities of the world concentration is essential. But the important thing to be understood in the performance of these activities is the degree of Dhyana needed for the fulfillment
of these worldly activities.

*Dhyana* means the detachment of sense organs from outward objects after having achieved the stability of our body. It means to draw away the mind from the pursuit of perishable objects, circumstances and sensual thoughts and cultivate the habit of focusing it on the self within. *Dhyana* also means to cultivate an unwavering intelligence. Looking inwardly is also *Dhyana*. Effacement of accumulated *sanskaras* one by one is *Dhyana*. The preparation for the purification of our gross body, astral body and causal body is in reality the preparation for meditation. All our mental modifications are centered at one place and it is possible through meditation only. According to *Patanjali’s Yoga Sutra*,

*“Dhyana Nirvishyam Mana”*

That is the state of mind where there are no sensual thoughts is meditation.

A proper understanding of the nature of the mind is very helpful in meditation. We all know by experience that our mind is restless. It runs at a very high speed. But it has some qualities too, and they are: (1) Mind entertains only one thought at a time. (2) It assumes the same form or substance that it broods upon and indulges fully in its enjoyment. (3) The nature of the mind is such that it functions both inside and outside the body. (4) When it absorbs the forms of the most significant object, it can display an extraordinary power. Based on these facts practice of controlling the mind may be started.

**Techniques of Meditation:**

(i) *Pran-Apan Meditation*

Sit in *Padmasana* or any other convenient *asana* suitable
for meditation. Make the natural breathing a slightly deeper. Breathe comfortably and exhale unobtrusively. Breathe in and breathe out with a feeling and continue watching the in-coming and out-going breath intensely. Do not stop watching it even for a second. Be a full witness to the aspiratory and expiratory process. After some time the breath will become short and subtle, but at the same time we will be conscious of the breathing activity. On the level of consciousness, feel its inward and outward movement.

While inhaling watch keenly through which side of the nostril, the breath is coming in, whether it is coming in through the left-nostril, or from the right-nostril or through both (Sharma and Suman, 1999, p.161-71).

(ii) Trataka

It involves fixing the gaze on a small object without moving the eyelids. For practicing this, take a sitting posture like Padamasana, Swastikasana, and Vajrasana or just sit cross-leg with straight back. Keep the hands on the knees. Keep the mouth closed and the face calm. Place a small lamp or the traditional lamp used in puja in front at a distance of four or five feet and gaze at the flame. The lamp must be placed free from breeze so that the flame remains steady. Go on watching the flame without winking. The muscle of the eyes will be strained slightly. Concentrate the mind on the flame. After a while, you will be oblivious of the flame, and tears will appear and flood the eyes. Then close the eyes and hold the mind in concentration for a while. Then wipe the tears, blow the nose closed and move the eyeballs first in a clockwise direction and then in a reverse fashion, moving them into the four corners of a big square
imagined before you. Then move the eyes diagonally, then vertically and after that horizontally. This is a very good eye exercise.

*Trataka* is a technique for cleansing the eyes. It is a very good way of training the usually wandering mind to be still. It is also possible to do *Trataka* with the eyes closed. This may be practiced several times a day, say for one or two or more minutes each time. It may be done while sitting in a chair or lying in a bed or in a position wherever, it is not necessary to pay any particular attention to your surroundings (*Shankar, 2006*).

**3.6.6 DISCUSSION AND GUIDANCE**

It helps students to improve upon any physical difficulties that may arise while performing yogic activities. It also helped the instructor to make the students to know about their inappropriate postures during the yogic activities so that they may produce refinement in their performance. It also helped to relive students to get answered of related individual queries if any, to make the programme more beneficial and appropriate. The discussion was arranged to guide the subjects and help them to think actively, boldly, freely over practical application of various principles and concepts of yoga, so as to enable them to see, analyze and understand their emotional states inducing personal, familiar, social, moral and educational problems.

**Precautions**

1. The *asana* with all inverted postures (where the legs are raise over the head) should not be performed by females who are menstruating.

2. *Asanas* which involve greater stretch to portions of body
are not recommended if any person is suffering from peptic ulcer, hyperthyroid or sensitive cases of endocrine gland disorders.

3. When bending the body backwards it is to be made sure not to make any violent jerks, as this may injure rigid muscles.

4. After finishing some of the asana, the breathing will be rather rapid. Do not repeat the posture until the acceleration of the breathing has diminished.

5. There should never be more than normal pressure on the back, arms, and the ankle joints while doing yoga.

6. Excessive strenuous breathing is avoided to those suffering from chronic nasal problem.

7. If one has not flexed up with other exercises before, it is advised not to attempt right away the final stages of this posture unless he has a naturally very flexible spine.

8. Do not force the spine and allow it to move comfortably. Otherwise you may injure the nearby muscles and the pain may last a few weeks.

9. The yogic practices need to be practiced in guidance of expert trainer only to avoid any toward happening to weak and non-expert practitioner.

10. The practitioners to be instructed to avoid heavy spicy meals at night so as to have a sound sleep. Further it is to be instructed not to undertake breakfast and come only with liquid intake like lemon water at least one hour before the start of practice.
3.7 STATISTICAL TECHNIQUES USED

Depending upon the design and objectives of the study following statistical techniques were used for the analysis of the data.

1. Mean and Standard Deviation were calculated to find out the nature of the data.

2. The t-test was employed to find out the significance of difference between pre-test and post-test scores in terms of emotional states, concentration and academic achievement.