Methodology

In this chapter, the procedure adopted for the selection of subjects, experimental variables, experimental design, details of interventions, procedures for test administration, collection of data and methods employed for statistical treatment are described.

3.1 Selection of Subjects

Forty women intercollegiate volleyball players of Bharathidasan University, Tiruchirappalli (Tamilnadu state) were selected as subjects for the study. They play Volleyball at College level competitions. Their age ranges from 18 to 23 years.

3.2 Selection of Variables

Based on the relevant literature that are viewed and in accordance with the views of professional physical education personalities, the importance of variables at the high level performance, availability of equipment, feasibility aspect of measurement, the following variables are selected for this study. The dependent physical and physiological variables are flexibility, cardio respiratory endurance, heart rate, systolic blood pressure and diastolic blood pressure. Hematological variables are blood cholesterol, high density lipoproteins and low density lipoproteins. Psychological variables are Competitive trait anxiety, competitive state anxiety (cognitive), competitive state anxiety (somatic), competitive state anxiety (self confidence) and sports achievement motivation. Performance related variables such as volley pass and serving in volleyball. The independent variable used in this study is yogan practice.
3.3 Experimental Design

Experimental design is the blue print of the procedure that enables the research to test the hypotheses by reaching valid conclusions about the relationship between independent variables and dependent variables. For this study the true experimental randomized group design has been employed. To find out the effects of yogic practices on the variables like flexibility, cardio respiratory endurance, heart rate, systolic blood pressure, diastolic blood pressure, blood cholesterol, high density lipoproteins, low density lipoproteins, competitive trait anxiety, competitive state anxiety (cognitive), competitive state anxiety (somatic) and competitive state anxiety (self confidence), sports achievement motivation, volley pass and serving in volleyball are used.

3.4 Experimental parameters

The following criterion measures are chosen for testing hypotheses.

1. Flexibility
2. Cardio respiratory endurance
3. Heart rate
4. Systolic blood pressure
5. Diastolic blood pressure
6. Blood cholesterol
7. High density lipoproteins
8. Low density lipoproteins
9. Competitive trait anxiety
10. Competitive state anxiety (cognitive)
11. Competitive state anxiety (somatic)
12. Competitive state anxiety (self confidence)
13. Sports achievement motivation
14. Volley pass
15. Serving
3.5 Reliability of instruments

Instruments like the stethoscope, stop watch and sphygmomanometer have been calibrated in standard units. To determine the reliability of the instruments, each of the variables are recorded two times under similar conditions using the same instrument and also the scores are compared with other scores taken from the instruments reports received from other reputed firms (e.g. Blood test)

3.6 Tester’s Competency and Reliability of Tests

To determine the reliability of the measurements adopted in this research, the tester correlated the data of ten subjects selected at random from two groups. Tester’s competency is evaluated by determining reliability of the tests. Blood tests are administered twice and Intra class correlation is computed between the two measures on each. The reliability coefficients are shown in table-1. The coefficients of reliability are significant at level for all the tests under investigation which had reliability coefficients more than 0.632 required for 8 degrees of freedom at 0.05 level of significance
Table-1: Tester’s Reliability

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Test</th>
<th>Coefficient of Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Flexibility</td>
<td>0.91</td>
</tr>
<tr>
<td>2.</td>
<td>Cardio respiratory endurance</td>
<td>0.95</td>
</tr>
<tr>
<td>3.</td>
<td>Heart rate</td>
<td>0.96</td>
</tr>
<tr>
<td>4.</td>
<td>Systolic blood Pressure</td>
<td>0.95</td>
</tr>
<tr>
<td>5.</td>
<td>Diastolic blood pressure</td>
<td>0.96</td>
</tr>
<tr>
<td>6.</td>
<td>Blood cholesterol</td>
<td>0.91</td>
</tr>
<tr>
<td>7.</td>
<td>High density lipoproteins</td>
<td>0.89</td>
</tr>
<tr>
<td>8.</td>
<td>Low density lipoproteins</td>
<td>0.88</td>
</tr>
<tr>
<td>9.</td>
<td>Competitive state anxiety</td>
<td>0.96</td>
</tr>
<tr>
<td>10.</td>
<td>Competitive trait anxiety (Cognitive)</td>
<td>0.95</td>
</tr>
<tr>
<td>11.</td>
<td>Competitive trait anxiety (Somatic)</td>
<td>0.91</td>
</tr>
<tr>
<td>12.</td>
<td>Competitive trait anxiety (self confidence)</td>
<td>0.95</td>
</tr>
<tr>
<td>13.</td>
<td>Sports achievement motivation</td>
<td>0.91</td>
</tr>
<tr>
<td>14.</td>
<td>Volley pass (volleyball)</td>
<td>0.88</td>
</tr>
<tr>
<td>15.</td>
<td>Serving (volleyball)</td>
<td>0.91</td>
</tr>
</tbody>
</table>

3.7 Orientation of subjects

Prior to the administration of a test the subjects are oriented by informing them about the purpose of the test, method of test administration and demonstration to familiarize them with this type of test.
3.8 Administration of Interventions

In this study, the interventions are heart rate, systolic blood pressure, diastolic blood pressure, blood cholesterol, high density lipoproteins and low density lipoproteins. The variables blood cholesterol, high density lipoproteins and low density lipoproteins can be tested only in the clinical laboratory. So the investigator has tested the above variables in a reputed pathological laboratory by taking the blood samples from the subjects. Remaining tests were conducted by the investigator from the following procedure.

Flexibility

Sit and reach

**Purpose:** To measure the amount of trunk flexion and the ability to stretch the back muscles (hamstrings)

**Test administration:** one has to with his/her legs fully extended and the bottom of his/her feet flat against a board projecting from the wall. Then he/she has to extend (stretch ) his/her arms and hands forward as far as possible and hold for a count of three while your partner uses a ruler to measure the distance in (centimeters ) between the board and his/her fingertips.

**Scoring:** Distance before the edge (not able to reach his/her toes) is expressed as negative score, those beyond the edge is expressed as a positive score.

Cardio Respiratory endurance

Cooper’s 12 minutes running or walking test

**Purpose:** To measure the cardio- respiratory endurance of the subjects.

Facilities and equipment; A 400 meters outdoor track, cones stop watches and a whistle
**Methodology**

**Procedure:**

Cones are placed around the track to indicate portions of completed laps. All the subjects start together on a signal. They are instructed to try to cover as much distance as possible in twelve minutes. They are allowed to walk but should be encouraged to run at an even pace that can be maintained. Runners are given a signal when eleven minutes have passed. At the end of twelve minutes the test administrator would blow the whistle, and the runners note the last cones they have passed.

Scoring: Distance run in twelve minutes would be recorded in meters.

**Heart Rate**

Measuring the resting heart rate.

**Test Objective**

The objective is to measure the resting heart rate in the normal position.

**Description**

The heart beat of the individual is measured with the earphones of the stethoscope placed in the tester’s ears, the bell of the stethoscope would be placed on the left side of the heart, so that one could measure his/her own heart beat.

**Equipment**
- Stethoscope and watch.

**Scoring**
- Heart rate was measured for one minute.

**Blood Pressure**

Measuring the systolic blood pressure and diastolic blood pressure.

**Test Objective**

The objective is to measure the blood pressure (systolic and diastolic) in the normal position.
Description

The method used to measure the systolic and diastolic blood pressure is relatively simple. The cuff of the sphygmomanometer is wrapped around the forearm above the elbow, with earphones of the stethoscope in the tester’s ears; the bell of the stethoscope is placed on the bronchial artery just above the hollow of the elbow. The cuff is pumped up until the artery collapsed, which is no pulse beat could be heard. Pressure is then slowly released as the tester watched the gauge or mercury column. When the first sound of the pulse is heard, the reading in millimeters of mercury at that instant is recorded as systolic blood pressure. The tester continued to release pressure slowly until a very dull, weak beat is noted. At that instant the pressure in millimeters of mercury is noted as diastolic pressure. The measure is recorded with the systolic blood pressure first and the diastolic blood pressure later.

Competition trait Anxiety

Competition trait anxiety is measured through the sports competition anxiety test questionnaire (SCAT) developed by Martens (1977). The SCAT questionnaire is designed to measure the degree of trait anxiety experienced prior to the competition. SCAT questionnaire is given to all the subjects. Fifteen items are adopted from SCAT for this investigation. The complete questionnaire is scored as follows. The items 2, 3, 5, 8, 9, 12, 14, and 15 are scored as

- Hardly ever - 1 point
- Sometimes - 2 points
- Often - 3 points

The items 6 and 11 were scored as

- Hardly ever - 3 points
- Sometimes - 2 points
- Often - 1 point.
Items 1, 4, 7, 10 and 13 are not scored. The scores that can be obtained by a subject are ten points and the maximum is 30 points. There is no right or wrong answers. The subjects are not allowed to spend too much time on any statement. The subjects are asked to choose the word that described how best they usually feed when participating in sports and games. A copy of the questionnaire is given in the appendix.

**Validity of the questionnaire SCAT**

Content (or face) validity essentially refers to expert judgment about the representatives of SCAT items for measuring competitive A-trait. In the initial construction of SCAT, 75 items were modified for sport competition from standard A-trait scales or were developed by author specifically for SCAT. Six judges assessed these 75 items for content validity and grammatical clarity. Each of the judges were qualified researchers in sports psychology or motor learning and had either conducted research on anxiety in sport or were known to be knowledgeable on this topic. Item evaluation was facilitated by providing each expert with a concise statement of the purpose of the inventory a list of 75 items to be rated for content validity on a 1-7 scale, and a yes-no response on each items grammatical clarity. With two exceptions, only those items that all judges rated as having high content validity (i.e., a score of 6 or 7 from each expert) and being grammatically clear were retained in the item pool. The two exceptions were items that required only minor grammatical changes. Of the 10 items in SCAT –c, all received a mean content validity rating of 6.5 or higher. The one modified item for SCAT –A was not content analysed.

The concurrent validity of SCAT was examined by investigating relationship between SCAT and four general A-trait inventories and five selected personality inventories that should demonstrate predictable relationship with A-trait.
Competition state Anxiety

Competition state anxiety is measured through the Competition state anxiety inventory -2 (CSAI-2) by Martens, Burton, Vealey, Bump and Smith. The CSAI-2 questionnaire is designed to measure the competition state anxiety prior to the competition. The CSAI-2 questionnaire is given to all the subjects before the competition.

The CSAI-2 is scored by computing a separate total for each of the three sub scales. The scores that can be obtained by a subject is 9 points and the maximum is 36 points. The cognitive A subscale is scored by adding the responses for the following 9 items: 1, 4, 7, 10, 13, 16, 19, 22 and 25. The somatic A –state subscale is scored by adding the responses to the following 9 items: 2, 5, 8, 11, 14, 17, 20, 23 and 26. scoring for the item 14 must be reversed in calculating the score for the somatic A- state sub scale as indicated below ;

Not at all -4
Somewhat -3
Moderately so -2
Very much so -1

The state self confidence subscale is scored by adding the following items: 3, 6, 9, 12, 15, 18, 21, 24 and 27.

For all the questions except 14
Not at all -1
Somewhat -2
Moderately so -3
Very much so -4

There is no right or wrong answers. The subjects are not allowed to spend too much time on any statement. The subjects are asked to choose the word that
described how best they usually feel when participating in sports and games. A copy of the questionnaire is given in the appendix.

**Validity of the questionnaire CSAI-2**

The American Psychological Association’s (1974) standards for educational and Psychological Tests recommends the self report inventories be first validated by demonstrating concurrent validity with previously validated tests. Thus concurrent validity is inferred when anew inventory is congruent with or divergent from theoretically predicted relationships using previously validated tests.

The concurrent validity of the CSAI-2 is examined by investigating the relationships between each of the CSAI-2 sub scales and eight selected A-state and A-trait inventories. The same three samples of athletes that are used to evaluate the CSAI-2’s internal consistency also are tested for the part of the new inventory’s concurrent validation. Athletes in all samples completed SCAT and a second A-trait inventory and the CSAI-2 and a second A-state inventory within one hour of when they have actually competed.

**Sports achievement motivation**

The standard psychological tool developed by Kamlesh (1983) is used in measuring achievement motivation. This test consists of 20 partly completed sentences. Each partly completed sentence has two answers, which are equally good to make the incomplete sentences meaningful and complete. Among the two answers the more appropriate one is the correct response. The respondents must make a check mark (✓) on any one of the two answers that fits to them best. The inventory was revalidated by the investigator by administering it on inter college women volleyball players. Hence the inventory in its original form is used in this investigation. A copy of questionnaire is given in appendix.
**Scoring**

The inventory is scored with the help of a scoring key. A score of two is given for the correct answer and zero for the wrong. Unanswered statement is not taken for consideration. The obtained score for each partly completed sentence is added and it is considered as individual score. The range of score is 0 to 40. The larger is the score the higher is the achievement motivation of the subject.

**Validity of the Questionnaire SAMT**

The validity quotient (.55) obtained by Kamlesh showed a marked relationship between the level of achievement motivation and sports achievement. More over, he also obtained the reliability quotient of 0.70, which is quite high.

Various researchers like M.Kamlesh, Mc Cleland, Havelka, Becanac, Wills, Singer etcetera have used this SAMT questionnaire for their research. There can be no better evidence to prove the validity of the questionnaire than this

**Russell - Lange Volleyball test**

**Serving test**

**Markings**

Chalk line across the court 5feet inside and parallel to end line Chalk line across court parallel to and 12 ½ feet apart from the line under the net, chalk lines 5 feet inside and parallel to each side line extending from line under the net to line are made. Each area is marked with numbers.

**Test Administration**

The subject serves ten times in a legal manner into a target on the court across the net. Let serves are repeated. Each service is scored according to the value of the target area in which the ball lands. A ball landing on the lines is given the higher value.
Scoring

Final scoring is the total points secured by hitting the target area during ten serves. If foot fault occurs in trials the score is zero.

Volleying test

In this test the subject volleys as rapidly as possible against the wall.

Markings: A line 10 feet long marked on the wall at net height, 7½ feet from the floor 10 feet long and 3 feet from the wall.

Procedure: The subjects start the volley from behind the 3-foot line, with an underhand movement tosses the ball to the wall, and then volley the ball repeatedly against the wall above the net line for thirty seconds. The ball may be set up as many times as desired or necessary: It may be caught and restarted with a toss as at the beginning. If the ball gets out of control, It must be retrieved by the subject and put into play at the 3 foot line as at the beginning. The score consists of number of times the ball clearly batted (not tossed) from behind the 3 foot line to the wall above or on the net line. The best score of 3 trials is recorded. Rest periods between trials are allowed.

The above variables are used for pre test. The same variables are used again for the post test in the same sequence. This study aims at finding out if there is any significant improvement (difference) between the pre test and the post test by applying the yogic practices.

3.9 Administration of Treatment

In the present study yogic practices are given as treatment to the experimental group for twelve weeks on six days a week and Sunday as active rest. The method of doing the yogic practices are clearly explained and demonstrated to the subjects and they are asked to do the yogic practices in a systematic manner. It helps the investigator to get the successful application of
interventions. The details of the selected yogic practices are described briefly in the following section.

3.10 Description of Yogic Practices

Yogic practices are asana, pranayama and meditation. The selected yogic practices are given as experimental treatment and the duration of time for each asana and the order of doing are given below. The yogic practices are Padmasana, Vajrasana, Yogamudra, Pachimottanasana, Matsyasana, Shalabasana, Bhujangasana, Vibareethakarani Mudra, Pawanmuktasana, Dhanurasana, Sarvangasana, Halasana, Pathahasthasana, Trikonasana and Shavasana. Pranayamas are Nadisuddhi pranayama, Nadishodhana pranayama, Sitali pranayama, Meditation as Breath Counting Meditation.

1. **Padmasana** (The lotus pose)
   
   Sit with legs extended forward. Fold one leg and place its foot on the top of the opposite thigh. The sole of the foot must be upward and the heel should touch the pelvic bone. Fold the other leg and place its foot on the top of the other thigh. Breath: Normal breathing.

2. **Vajrasana** (The thunder bolt pose)
   
   Stand on the knees with the feet stretched backward and big toes crossed. The knees should be together, heels apart. Lower the buttocks on to the insides of the feet, the heels at the sides of the hips. Place the hands on the knees, palms downward.

   Breath: Normal breathing.
3. **Yoga mudra (The psychic union pose)**

   Sit in padmasana and close the eyes. Hold one wrist behind the back with the other hand. Slowly bend the trunk forward until the forehead touches the ground. Slowly return to the starting position.

   Breath: Inhale slowly and deeply in the starting position. Exhale while bending forward. Breath deeply and slowly in the final position. Exhale while returning to the starting position.

4. **Paschimottanasana (The back stretching pose)**

   Sit on the floor with the legs straight in front of the body, the lower arms on the thighs. Relax the whole body, especially the back muscles. Slowly bend the body forward. Try to grasp the big toes with the fingers and the thumps. If this is impossible then hold the heels, the ankles or the legs as near to the feet as possible. Again consciously relax the back and the leg muscles keeping the legs straight without utilizing the back muscles, only using the arms, pull the trunk a little lower toward the legs. This should be a process without any sudden movement or excessive strain anywhere in the body. If possible without strain, touch the knees with the forehead. Remain in the final pose for a comfortable length of time, trying to further, relax the whole body and then slowly return to the starting position.

   Breath: Breath normally in the sitting position. Exhale slowly while bending forward. Inhale while holding the body motionless. Exhale as you pull the trunk further forward with the arms. Breathe slowly and deeply in the final pose. Inhale while returning to the starting position. If the final pose is not held for a longtime, breath may retain outside. (Swamy Sathyananda Saraswathi 1993)

5. **Matsyasana (The fish pose)**

   Sit in Padmasana. Bend backward, supporting the body with the arm and elbows, until the crown of the head touches the ground. Hold the big toes and rest
the elbows on the floor. Arch the back as much as possible. Remain the final pose for 5 minutes. Do not strain.

Breath: Breath deeply and slowly in the final pose. (Swamy Sathyananda saraswathi 1993)

6. **Shalabasana** (the locust pose)

   Lie on the stomach with the hands under the thighs, palms facing downward, stretch the legs and tense the arms. Raise the legs and abdomen as high as possible without bending legs. Practice up to 5 minutes

   Breath: Inhale deeply in the lying down position. Retain the breath inside while raising the legs and abdomen. Exhale while returning to the starting position.

   (Swamy Sathyananda saraswathi 1993)

7. **Bhujangasana**  (The cobra pose)

   Lie on the stomach with the legs straight and the feet extended. Place the palms flat on the floor under the shoulders. Rest the forehead on the ground and relax the body. Slowly raise the head and the shoulders off the ground, bend the head as far back as it will go. Try to raise the shoulders without using the arms, only utilizing the back muscles. Now bring the arms into action and slowly bend the back as much as possible without strain until the arms are straight. Keep the navel as near to the ground as possible. Hold as long as it is comfortable. Practice up to 5 times.

   Breath: Inhale while raising the body from the ground. Breathe normally in the final pose. If the final pose is held for a short time, retain the breath inside.

   (Swamy Sathyananda saraswathi 1993)
8. Vipareetakarani Mudra (The inverted attitude)

   The method is same as for sarvangasana, except the chin is not pressed against the chest in final pose. The trunk is held at a 45 degree angle to the ground instead of at a right angle.

   Breath: Retain inside while assuming and returning from this asana. Practice normal breathing when the body is steady in the raised position. (Swamy Sathyananda Saraswathi 1993)

9. Pawan muktasana (wind releasing posture)

   Lie down on the back. Keeping legs together, hug tightly the drawn up knees against the chest, so that the palms are place on elbows. Raise the head and touch the chin with the knees. Keep the breath normal and toes stretching outside. Place the head on the ground when the neck gets tired.

   Breath: Normal breathing (Yoga an instruction Booklet Vivekananda Kendra, 1972)

10. Dhanurasana (The bow pose)

    Lie flat on the stomach and inhale fully. Bend the knees and hold the ankles with the hands. Tense the leg muscles and arch the back. Simultaneously raise the head chest and thighs as high as possible, keeping the arms straight. Hold for as long as comfortable, practice up to 5 times.

    Breath: Breath may be retained inside the final pose or slow deep breathing may be practiced. (Swamy Sathyananda Saraswathi 1993)

11. Sarvangasana (Shoulder stand pose)

    Lie flat on the back with the feet together, the arms by the sides and palms flat on the ground. Using the arms as levers raise the legs and back to a vertical position. Bend the elbows and use the arms as props to steady the back by pressing
it with the palms. The trunk and legs should extend straight up, forming a right angle with the neck, the chest pressing against the chin.

Breath: Retain the breath inside while assuming and returning from this asana, practice normal breathing when the body is steady in the raised position. (Swamy Sathyananda saraswathi 1993)

12. **Halasana** (The plough pose)

   Lie flat on the back with the arms straight and beside the body, palms facing downward. Keeping the legs straight, slowly raise them to the vertical position above the body. Only use the stomach muscles to raise the legs. Do not use the arms. Simultaneously bend the trunk upward, hips first, slowly lower the legs over the head and touch the floor with toes of both feet. Keep the legs straight, bend arms and place the hands on the back as in sarvangasana. Relax the body.

   Breath: Retain the breath inside while assuming and returning from the pose. Breathe slowly and deeply in the final pose. (Swamy Sathyananda saraswathi 1993)

13. **Pathahasthasana** (the forward bending pose)

   Stand with the trunk erect and the hands beside the body. Slowly bend the head forward as though there are no muscles in the back. Place the fingers underneath the toes or touch the ground with the palms to the fingertips. If this is not possible then bring the fingertips as near to the ground as possible. Try to bring the forehead to the knees. Maintain this pose up to 1 minute then slowly return to the starting position.

   Breath: Exhale as you bend forward. Breathe slowly and deeply in the final pose. Inhale as you return to the starting position.
14. **Trikonasana** (The triangle stretch pose)

Stand erect with feet about three feet apart. Raise the arms sideways to form one line. Turn the body to the right while bending the knees slightly. Bring the right hand to the right foot, keeping the two arms in line with each other. Look up at the left hand. Return to the standing position. Keep the arms in a straight line. Repeat to the opposite side, practice 5 times.

Breath: Inhale while raising the arms. Exhale while bending. Inhale while straightening to the vertical position (Swamy Sathyananda Saraswathi 1993)

15. **Shavasana** (The corpse pose)

Lie flat on the back with the arms beside and in line with the body, palms facing upward. Move the feet slightly apart to a comfortable position and close the eyes. Relax the whole body. Do not move any part even if discomfort occurs. Let the breath become rhythmic and natural. Become aware of inhalation and exhalation. Count the number of respirations: 1 in, 1 out, and so on. Continue to count for a few minutes. If the mind starts to wander bring it back to the counting. If you can keep the mind on the breath for a few minutes, the mind and body will relax.

**Pranayama**

The Pranayama exercises are related to the control of the breath. Breathing is an act in which we take air from the atmosphere into our lungs, absorb oxygen and expel the air again. Inhalation of air is called ‘puraka’, holding the breath ‘kumbhaka’ and exhalation of air is called Rechaka.

**Pranayama breathing**

1. Sitting position.
2. Initially start with inhale right nostril.
3. Block the right nostril with right thump and inhale for 5 seconds through the left nostril.
4. Block the left nostril also with fingers and hold the breath inside for 5 seconds.
5. Open the right nostril and exhale for 10 seconds. The total duration of process is 20 seconds.
6. The reversal of process is done . Block the left nostril with right index finger and inhale for 5 seconds through right nostril.
7. Close right nostril as well and hold in breath for 5 seconds.
8. Open the left nostril and exhale for 10 seconds. This also takes a total duration of 20 seconds.
9. Repeat these processes of the Pranayama for a total duration of 10 minutes.

**Nadi Sudhi**

The subjects are asked to sit on Padmasana, close their eyes, and close the right nostril with their right thumb. They are instructed to inhale slowly through the left nostril as long as they can do it with comfort and not to make any sound during inspiration and then to exhale slowly. This is done twelve times. This constitutes one round. Then the same is done 12 times through the right nostril.

**Nadi Shodhana**

Nadi means a channel, shodhana means that which purifies. This variety is called the purifier of the nadis especially because it helps to clear both the nostrils which are used alternatively for inhalation and exhalation.

The subjects are asked to sit in padmasana posture. They inhale through the left nostril by closing the right nostril with the thumb in ‘nasika Mudra’. Open the right nostril close the left after a deep ‘kumbhaka’. Then they change and inhale through the left to right nostril by closing the left nostril. They open the left
nostril close and the right nostril to exhale slowly. This completes one round, and thus 9 more number of rounds is repeated.

**Sitali**

Sitali means pleasantly cold. This variety has a cooling effect. The subjects are asked to sit in a suitable posture, the tongue is drawn out of the mouth and its sides are turned upward to form a channel. During ‘puraka’ (inhaling) the air is slowly sucked in through this channel. After the puraka, the tongue is taken in the mouth is closed. ‘kumbhaka’ (breath holding) is done, and then ‘rechaka’ (exhaling) is done through both the nostrils. About ten to twenty such rounds may be gone through in a sitting.

**Meditation**

Meditation is also one of the yogic practices. Meditation is uncritically attempting to focus your attention on one thing at a time. In order to practice this effectively the following essential things are required.

**A quiet environment:** For this one is required to have a quiet room, as one usually keep for worship. This greatly helps in minimizing distraction.

**Passive attitude:** This is the most important thing in eliciting the relaxation response. One should not bother about any disturbing thought that come to his mind he should let the matter go away and then concentrate on his practice.

**Comfortable position:** This is important to prevent undue muscle tension in the body. Any posture that would give a person maximum relaxation, such as the cross – legged lotus posture is good.
Breath counting meditation

The subjects are asked to sit in padmasana posture with their eyes closed in a comfortable room. They take deep but not forced belly breathes, focus their attention on each part of the breath: they inhale, they pause and they exhale. As they exhale they say ‘one’ continue counting each exhale by saying two … … three … … four … … five … … six … … seven … … eight … … nine … … ten. They begin again with one, and continue for 5 minutes.
### Table- 2 : Yogic Practice Schedule

<table>
<thead>
<tr>
<th>S.No</th>
<th>Yogic Practice</th>
<th>Name</th>
<th>Duration (minutes)</th>
<th>Total (minutes)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Asanas</td>
<td>1. Padmasana</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Vajrasana</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Yoga mudra</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Pachimottanasana</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>5. Matsyasana</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>6. Shalabasana</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>7. Bhujangasana</td>
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<tr>
<td></td>
<td></td>
<td>8. Vibareethakarani Mudra</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>9. Pawan muktasana</td>
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3.11 Statistical Technique

To study the effect of yogic practices group (experimental group) along with control group and to find out the significant mean differences among them, the analysis of covariance (ANCOVA) technique was employed. To study the effect of Offensive players (spikers) and Defensive players (setters and liberos) of yogic practices group and to find out the mean difference, the Analysis of covariance technique was employed.

Following these guidelines and variables the experimental group received special treatment (yogic practices) the control group is left only with usual physical exercises. Pre test and post tests are conducted. The findings are based on these scores using the above statistical tools.