

## **CHAPTER III**

### **METHODOLOGY**

In this chapter the selection of subjects, selection of variables, experimental design, pilot study, orientation of the subjects, criterion measures, reliability of data, reliability of instruments, testers competency, subject's reliability, training program, training schedule, training procedure, test administration, collection of data and statistical technique which have been described.

#### **3.1 SELECTION OF SUBJECTS**

For the present investigation forty-five Oligomenorrhea women were selected randomly from Sholinganallur Chennai. Their age ranged between 25-35 years. All the Adult women with Oligomenorrhea subjects were assigned to with diet modifications), Ex. Gr.II (Yogic practices without diet modifications), each. For sixteen weeks and control group (C.G) no training was provided during the period of study

#### **3.2 SELECTION OF VARIABLES**

The Sports University and Madras University and also with help of professional experts in yoga, the following risk factors were selected.

#### **3.3 SELECTION OF DEPENDENT VARIABLES**

##### **1. Physical variables**

1. Flexibility

##### **2. Physiological Variables**

(1). Systolic blood pressure

- (2). Body mass index
- (3). Resting pulse rate

### **3. Psychological Variables**

- (1). Stress
- (2). Anxiety
- (3). Adjustment

### **3.4 SELECTION OF INDEPENDENT VARIABLES**

- 1. Experimental group I – Yogic practices with diet modifications.
- 2. Experimental group II - Yogic practices without diet modifications.
- 3. Control group (C.G)–No training.

### **3.5 EXPERIMENTAL DESIGN**

The study was formulated as a random group design, consisting of pre- and post-test. Forty-Five Oligomenorrhea women were randomly selected and divided into three equal groups. The assigned as with diet modifications), II (Yogic practices without diet modifications), and control group (C.G) (no training). risk factors such as Flexibility, Systolic blood pressure, Body mass index, Resting Pulse Rate, stress, adjustment and anxiety. The experimental group participated in their yogic practices with and without diet modifications training period.

### **3.6 PILOTSTUDY**

The pilot study was to conducted to ensure the intensity and duration of the training programme within the limits of the subject's capacity to produce their desired effect. For this purpose totallyfivesubjects were selected and given yogic practices with and without diet modifications (fivein each group) respectively to determine the intensity and duration of a training session.

### **3.7ORIENTATION OF THESUBJECTS**

Prior to the yogic practices with and without diet modifications. Commonly used yogic practices with and without diet modifications were selected after consulting an expert in yogic practices for the co-operation of the subjects. The method and the value of yogic practices were explained and performed first by the investigator. The investigator got full co- operation and motivated them to involve completely and execute the training to their extreme level for the maximum output from thesubjects.

### 3.8 CRITERIAN MEASURES

**TABLE V**  
**CRITERIAN MEASURES AND TEST INSTRUMENTS USED**

<b>VARIABLES</b>	<b>CRITERIAN MEASURES</b>	<b>INSTRUMENT USED</b>
Flexibility	Centimeters	Sit and Reach test
Systolic blood pressure	Mm/hg	Citizen make digital B.P monitor.
Body mass Index	Weight(kg)/ Height (mt) <sup>2</sup>	Stadiometer, weighing machine
Resting Pulse Rate	Beats/ min	Digital Heart Rate by National Company, Japan.
Stress	Marks	Stress questionnaire constructed by Dr.LathaSatish (1997)
Anxiety	Marks	Questionnaire (Spiel berker)
Adjustment	Marks	Adjustment Inventory by H.S. Asthana

### 3.9 RELIABILITY OF DATA

The reliability of data were ensure to establishing the instrument reliability, tester reliability, test competency and subject's reliability.

### 3.10RELIABILITY OF INSTRUMENT

Equipments are well standard in laboratory which were used in the study had been obtained from standard firms which catered to need of various research laboratory in india and abroad.

### 3.11 TESTERS COMPETENCY

The intra class correlation coefficient obtained for test-retest data are presented in Table VI.

**TABLE VI**  
**INTRA CLASS CORRELATION COEFFICIENT OF TEST – RETEST SCORES**

S.No	VARIABLES	COEFFICIENT OF CORRELATION
1.	Flexibility	92*
2.	Systolic Blood Pressure	93*
3.	Resting Pulse Rate	91*
4.	Body Mass Index	90*
5.	Stress	89*
6.	Anxiety	93*
7.	Adjustment	94*

\*Significant at 0.05 level

### 3.12 TRAINING PROGRAMME

The subjects were selected and divided at randomly and into three groups and the ex.group I underwent yogic practices with diet modifications and ex. group II underwent yogic practices without diet modifications from 6.00 am to 8.00 am for the duration of sixty minutes from Monday to Friday (5 days/week) for 16 weeks, whereas the control group (C.G) no training. The yogic practices with and without diet modifications for the selected experimental groups are presented in the following order.

1. Ex. Group I –Yogic practices with dietmodify
2. Ex. Group II – Yogic practices without dietmodify
3. Control group (C.G) –No Practices.

## 3.13 TRAINING SCHEDULE

Table VII

<b>PRACTICISING SCHEDULE OF EXP. GROUP I, II for I TO IV WEEKS. (40- 45 minutes)</b>					
<b>S . No</b>	<b>Name of the practices</b>	<b>Duration of the practices</b>	<b>Rep</b>	<b>Breath Of the practices</b>	<b>Total Duration of the practices</b>
1	Prayer - starting	one. min	-	-	two min
2	Surya Namaskar	one. min	six	-	six min
3	Tadasana - Asana	Thirty. Secs	three	two	two min
4	UthithaParsuvakonasana - Asana	Thirty. Secs	three	two	two min
5	Padahastana - Asana	Thirty. Secs	three	two	two min
6	Vajrasana - Asana	Thirty. Secs	three	two	two min
7	Marjari - Asana	Thirty. Secs	three	two	two min
8	Paschimotanasana - Asana	Thirty. Secs	three	two	two min
9	UthanaPadasana - Asana	Thirty. Secs	three	two	two min
10	PawanaMuktasana - Asana	Thirty. Secs	three	two	two min
11	Bhujangasana - Asana	Thirty. Secs	three	two	two min
12	Dhanurasana - Asana	Thirty. Secs	three	two	two min
13	AnulomVilom - pranayama	one. min	two	-	two min
14	Surya Bhedana - pranayama	one. min	two	-	two min
15	Kapalabhati - pranayama	one. min	two	-	two min
16	Sitali - pranayama	one. min	two	-	two min
17	Mantra Meditation	seven. min	-	-	seven min

Table VIII

<b>PRACTICISING SCHEDULE OF EX. GROUP I, II for V TO VIII WEEKS. (55-60 mins)</b>					
<b>S . No</b>	<b>Name of the practices</b>	<b>Duration of the practices</b>	<b>Rep</b>	<b>Breath of the practices</b>	<b>Total Duration of the practices</b>
1	Prayer - starting	two min	-	-	two min
2	Surya namaskar	one min	six	-	six min
3	Virabhadrasana - Asana	forty Secs	four	three	three min
4	UthithaParsuvakonasana - Asana	forty Secs	four	three	three min
5	Tadasana - Asana	forty Secs	four	three	three min
6	Paschimotanasana - Asana	forty Secs	four	three	three min
7	Upavishtakonasana - Asana	forty Secs	four	three	three min
8	ArdhaHalasana - Asana	forty Secs	four	three	three min
9	PawanaMuktasana - Asana	forty Secs	four	three	three min
10	Salabasana - Relaxation	forty Secs	four	three	three min
11	AnulomVilom - pranayama	one min	three	-	three min
12	Chandra Bhedana - pranayama	one min	three	-	three min
13	Kapalabhati - pranayama	one min	three	-	three min
14	Bhastrika - pranayama	one min	three	-	three min
15	Sitali - pranayama	one min	three	-	three min
16	NadiSuddhi Pranayama - pranayama	one min	three	-	three min
17	Yoga Nidra	ten min	-	-	ten min

Table IX

<b>PRACTICISING SCHEDULE OF EX. GROUP I, II for XI TO XII WEEKS. (75-80mins)</b>					
<b>S . No</b>	<b>Name of the practices</b>	<b>Duration of the practices</b>	<b>Rep</b>	<b>Breath of the practices</b>	<b>Total Duration of the practices</b>
1	Prayer - starting	two min	-	-	two min
2	Surya namaskar	one min	six	-	six min
3	Virabhadrasana - Asana	fifty Secs	five	four	five min
4	Padahasthasana - Asana	fifty Secs	five	four	five min
5	UthithaParsuvakonasana - Asana	fifty Secs	five	four	five min
6	ParivrittaTrikonasana - Asana	fifty Secs	five	four	five min
7	Upavishtakonasana - Asana	fifty Secs	five	four	five min
8	PawanaMuktasana - Asana	fifty Secs	five	four	five min
9	SethuBandhasana - Asana	fifty Secs	five	four	five min
10	Makarasana - Asana	fifty Secs	five	four	five min
11	Yogi Breathing - pranayama	one min	four	-	four min
12	Kapalabhati - pranayama	one min	four	-	four min
13	Bhastrika - pranayama	one min	four	-	four min
14	NadiSuddhi Pranayama	one min	four	-	four min
15	Yoga Nidra	-	-	-	Thirteen min

**Table X**

<b>PRACTICISING SCHEDULE OF EX. GROUP I, II for XIII TO XVI WEEKS. (85-90 mins)</b>					
<b>S . No</b>	<b>Name of the practices</b>	<b>Duration of the practices</b>	<b>Rep</b>	<b>Breath of the practices</b>	<b>Total Duration of the practices</b>
1	Prayer - starting	Two min	-	-	two min
2	Surya namaskar	One min	six	-	six min
3	Virabhadrasana - Asana	Sixty Secs	six	six	six min
4	Padahasthasana - Asana	Sixty Secs	six	six	six min
5	ParivrittaTrikonasana - Asana	Sixty Secs	six	six	six min
6	Konasana - Asana	Sixty Secs	six	six	six min
7	Vajrasana - Asana	Sixty Secs	six	six	six min
8	Marjariasana - Asana	Sixty Secs	six	six	six min
9	BaddhaKonasana - Asana	Sixty Secs	six	six	six min
10	VipareethaKarani - Asana	Sixty Secs	six	six	six min
11	Yogic Breathing - pranayama	One min	six	-	six min
12	Kapalabhati - pranayama	One min	six	-	six min
13	NadiSuddhi - Pranayama	One min	six	-	six min
14	Mantra Meditation	-	-	-	fifteen min

### 3.14 DIET MODIFICATIONS FOR EXPERIMENTAL GROUP -I

(Food advised) Milk, green tea, Lime juice.

Vegetables (carrot, beetroot, cabbage, beans, tomatoes, mangoes).

Fresh Fruits (pomegranate, banana, apple, orange, grapes)

Honey, butter, Almonds, Coconut, Dates.

Green leaves and vegetables (manathakali, pasalai like spinach, broccoli, kale etc) Nuts

Whole grain Cereals Rice or chapatti.

Grains - 30%

Dairy products - 20%

Vegetables and fruits - 27%-

Pulse, oil,fat- 18%

If calories - Per day 2500 calories

Carbohydrates -1500

Fat - 750

Protein - 250

## Food intake

Breakfast : Ragi Idly, Red Rice dosa,pesarattu, sambar, vadai, chattni, bonda, milk.

Snacks: Dry fruits, or fresh fruits or juice.

Lunch : Rice, sambar, vegetables, fruits curd, or buttermilk.

Snacks :Nuts, fruits, sprouts, vegsalad.

Dinner :White corn chapatti, dhal, veg salad, fruits and milk.

Nutrients: Carbohydrates - 60%

Fats - 30%

Protein

Vitamins

Minerals - 10%

Water

### **3.15 YOGIC PRACTICES**

#### **3.15.1 YOGA PRAYER**

**SHANTHI MANTHRA (At the time of starting)**

**Om.....Om.....Om.....**

**SahanaVavathu,**

**SahanouBhunaktuSahaveeryamKarvavahaiTejaswin**

**aaVadhitamastu,**

**MaVidvishavahai.**

**Om.... Shanthi..... Shanthi..... Shanthi hi.....**

3.15.2

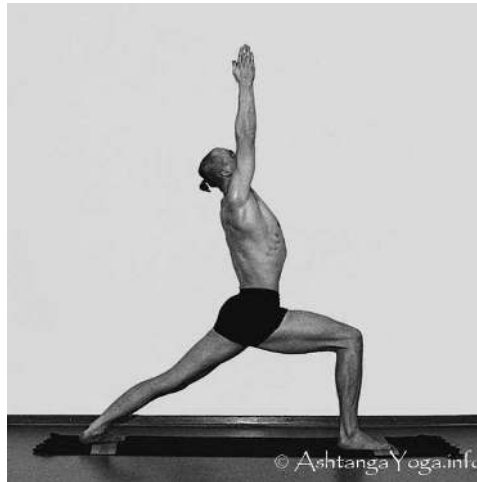
**SURYANAMASKAR**



**Figure 10: SURYANAMASKAR**

### 3.15.3 ASANAS

#### VIRABHADRASANA- THE WARRIOR POSE



**Figure 11: VIRABHADRASANA**

#### **METHOD OF PRACTICE:**

1. Stand erect while balancing the body weight on both the legs proportionately.
2. Now, stand in mountain pose, keeping the feet together and hands by the side.
3. Now separate the feet 4 feet apart, while maintaining the balance.
4. Now turn the right foot about 45 degrees to the left.
5. Holding onto the above position, try rotating the left foot 90 degrees to the left, so that it is positioned directly to the side.
6. Next, try to bend the left knee until the thigh is almost parallelly aligned with the ground.
7. Make sure you keep the knee either behind or directly over the ankle. Maintain the balance in this posture.
8. Now gradually raise the arms over the head.
9. After you have both the hands straight upwards, gradually pull down the left arm and bring it to the level of the ears and pointing ahead.

10. While the left hand is pointing forward, the right hand takes a posture aiming backwards.
11. Now train the focus on a particular point in front of you and breathe gradually.
12. Take approximately 5 deep breaths in this position.
13. Gradually bring the hands and legs to the normal position.

### **TADASANA –MOUNTAINPOSTURE**



**Figure 12: TADASANA**

- 1 Stand with both feet touching from the heel to the big toe, keeping the back straight and the arms pressed slightly against the sides with palms facing inward.
- 2 Slightly tighten or flex the muscles in the knees, thighs, stomach and buttocks maintaining a firm posture. Balance your weight evenly on both feet.
- 3 Inhale through the nostrils and lift the buttocks off the legs arching the back and thrusting the abdomen forward and tilt the head as far back as possible

## PADAHASTASANA

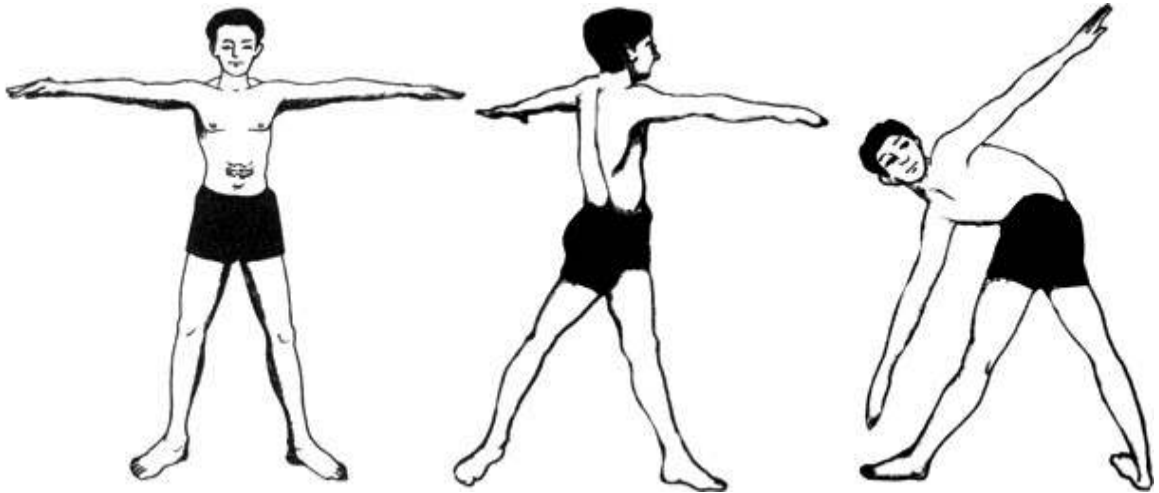


**Figure 13: PADAHASTASANA**

### METHOD OF PRACTICE:

1. Stand upright with the feet parallel and the heels about six inches apart.
2. Inhaling raise the hands straight above the head, palms outwards.
3. Exhaling, bend the head and trunk from the waist as far back as you can without tipping over, with upper arms touching the ears.
4. Inhaling, bend forward from the waist, keeping the knees straight and the upper arms touching the ears.
5. As soon as the arms extend straight above the head, start exhaling and continue to bend the head and trunk forward from the waist.
6. Reach forward and catch hold of the big toes with the thumbs, index and middle fingers.
7. Holding out the breath, pull the big toes and move the forehead into the space between the knees. Keep the legs straight and the knees stiff.
8. Maintain this position for a few seconds while holding out the breath.
9. Start inhaling and return slowly to the upright position in the reverse order.

## PARIVRITTA TRIKONASANA



**Figure 14: PARIVRITTATRIKONASANA**

### METHOD OF PRACTICE:

1. Stand erect. Keep the feet sufficiently apart.
2. Inhaling, raise and stretch out the arms sideways to shoulder level and parallel to the floor with palms facing downward.
3. Exhale slowly and breathe normally a few times.
4. Take a deep breath.
5. Exhaling slowly, rotate the trunk and head together from the waistline all the way around to the left without moving the feet or changing the position of the arms, and complete the exhalation. Hold this position for a few seconds while holding out the breath.
6. Hold this position for a few seconds while holding out the breath.
7. Take a deep breath again.
8. Exhaling slowly, extend the right arm downward towards the left big toe without

9. bending the knees. While the right arm is moving downward, bend down the head and trunk slowly to the left from the waist.
10. Rest the fingertips of the right hand on the left big toe.
11. Raise and stretch the left arm straight up and bring it in line with the lowered right arm, keeping the left palm turned inward.
12. Holding out the breath, turn the head to the left and look up quickly at the fingertips of the left hand.
13. Still holding out the breath, again turn the head downwards and look down quickly on the left big toe and look up at the fingertips of the raised hand a second time.
14. Maintain this position as long as you can comfortably hold out the breath.
15. Inhaling, release the right hand, twist the trunk and head back and rise up slowly to the erect standing position, lowering the left arm to the shoulder level and rotating the right arm sideways up to shoulder level in a wide circle.
16. Exhale slowly and take a few normal breaths.
17. Repeat the whole exercise, twisting the trunk and head to the right.

## VAJRASANA



**Figure 15: VAJRASANA**

### METHOD OF PRACTICE

1. Sit with legs extended together, hands by the side of the body, palm resting on the ground, fingers of the hands together pointing forward.
2. Fold the right leg at the knee and place the foot under the right buttock. Sole will remain inside.
3. Similarly folding the left foot. Place it under the left buttock.
4. Hands resting on the respective thighs.
5. Sit erect, gaze in front close the eyes.
6. While returning to the original position, bend little towards right side take out the left leg and extend it.
7. Similarly extend the right leg and return to the original position.

## UPAVISTHAKONASANA - WIDE ANGLE FORWARD BEND

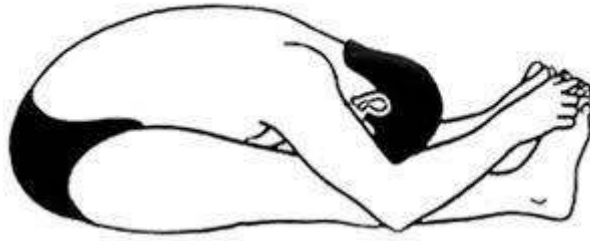


**Figure 16:UPAVISTHAKONASANA**

### **METHOD OF PRACTICE:**

1. To start with, first assume the Dandasana Posture.
2. Bend the torso back slightly taking the support of the hands.
3. Open the legs to an angle of 90 degrees.
4. Press the hands hard against the floor and slide forward the buttocks.
5. Widen the legs another 10 to 20 degrees or as much as comfortable.
6. Press thigh muscles and bones to the ground. The knee caps will then point straight up towards the ceiling.
7. Point the toes straight up to the ceiling.
8. Press the legs also to the floor.
9. Bend forward pushing the hands forward on the ground. With each exhalation, keep moving forward as much as you can.
10. Stay in the pose for 1 minute.

## PASCHIMOTANASANA



**Figure 17: PASCHIMOTANASANA**

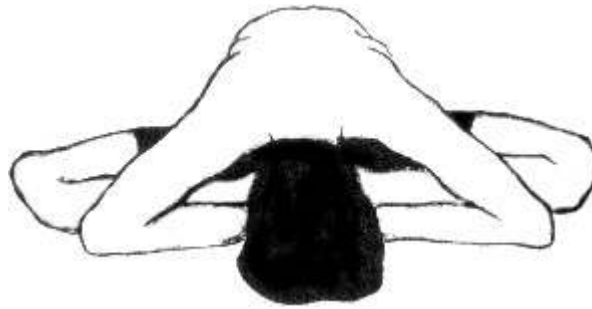
### **METHOD OF PRACTICE:**

Sit upright in Sukhasana, keeping the head, neck and spine erect.

1. Stretch the legs straight out in front of you and keep them together.
2. Keep the knees straight.
3. Place the palms on the respective knees.
4. Bend the trunk and head slowly forward and downward from the waist. While doing this, slide forward the hands along the shins and grasp the corresponding big toes with the index finger, middle finger and thumb of each hand without bending the knees.
5. Keep the head between the upper arms and pull the big toes steadily, while doing so, bend further forward, curve the spine and aim the forehead towards the knees.
6. Take a deep breath and exhale slowly.
7. Lower the head down as far as you can towards the knees, drawing in the abdominal muscles gently, still grasping and pulling the big toes and keeping the knees straight.
8. Bend the arms and rest the elbows gradually on the floor.
9. Using the elbows as levers, rest the forehead on the knees which should not

10. be raised orbent.
11. Exhale completely.
12. Holding out the breath, stay in this posture for a few seconds or as long as you are comfortable.
13. Return slowly and smoothly in the reverse order to the starting position.
14. Freely exhale and inhale until the breathing returns to normal.

### **BADDHAKONASANA**



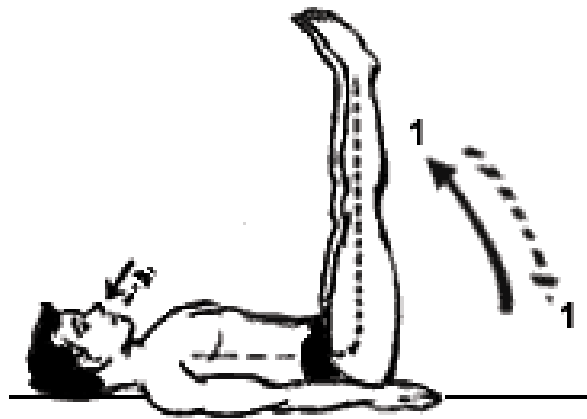
**Figure 18: BADDHAKONASANA**

#### **METHOD OF PRACTICE:**

1. Bend forward and place the elbows on the thighs and press them down gently.
2. Inhale deeply and exhale slowly. While exhaling, draw in the abdomen and bend the pelvis and trunk forward from the posterior bones slowly without jerks, at the same time lowering the elbows outside the shin.
3. When you have bent forward as much as you can, place the forehead gently on the floor in front of the feet without raising the seat and rest the forearms and elbows on the floor.
4. Keep the elbows in a line. This is the final position.

5. Maintain this position motionlessly for about five seconds or as long as you can comfortably hold out the breath.
6. Breathe normally if you can increase the duration of the posture.
7. Inhale slowly and while inhaling, release the feet, straighten the arms, stretch out the legs.
8. Raise the trunk and head together and resume the erect sitting position slowly.
9. Take only two turns as this is a strenuous posture.
10. After completing the practice, relax for a few minutes in Savasana.

### UTTANAPADASANA



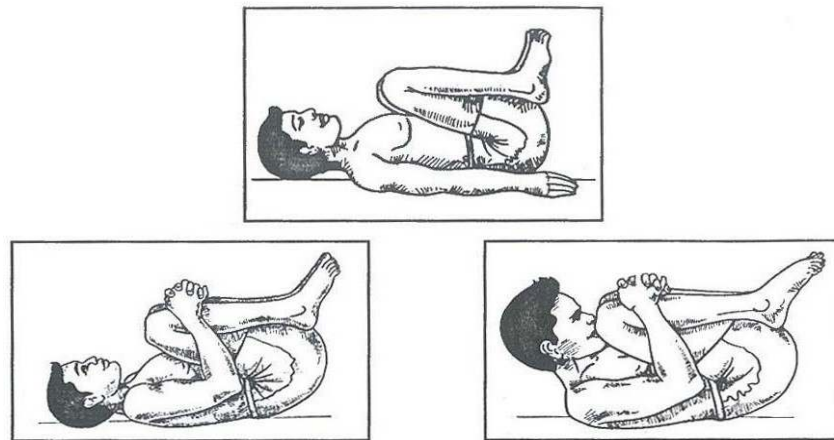
**Figure 19:UTTANAPADASANA**

#### **METHOD OF PRACTICE:**

1. Lie down on the back with legs together, straight extended, the toes erect and hands straight and palms resting on the floor to acquire the supine pose.
2. Exhale and inhaling start raising both the legs upward and stop when they make an angle of 90 degrees with the floor.
3. Keep the sight at the toes of the feet.
4. Continue normal breathing and try to maintain the posture steady.

5. While raising the legs, keep both legs straight and closetogether.
6. Keep the toes together and stretched pointingupwards.
7. In the beginning, try to maintain this for 5 to 10seconds.
8. While releasing, inhale and exhaling, bring both the legs down, back onthe floor.

### PAVANAMUKTHASANA



**Figure 20: PAVANAMUKTHASANA**

#### **METHOD OF PRACTICE:**

1. Lie on the supine posture.
2. Slightly bend the both knees; and close to thechest.
3. Inhale the breath and the arms around the both legs.
4. Finally Exhale, and raise the head and chest and try to touch the chin to the between the knees.
5. Inhale and exhale five breaths and then come to normal position.

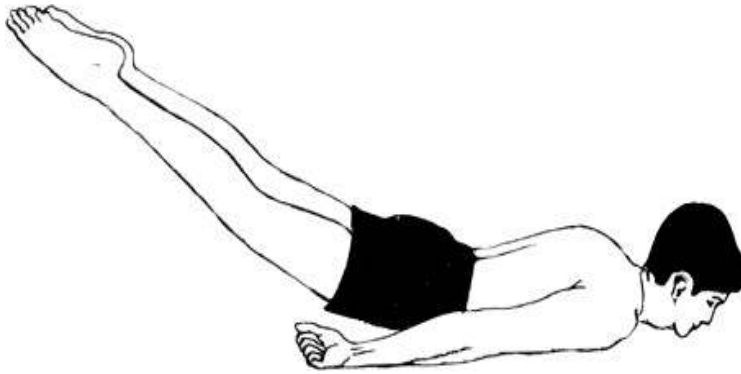
## VIPARITHAKARANI



**Figure 21: VIPARITHAKARANI**

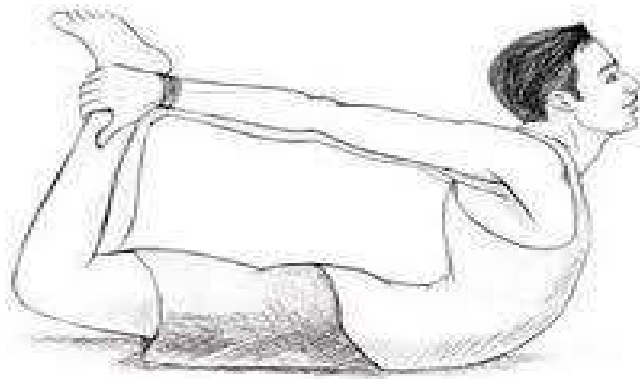
### **METHOD OF PRACTICE:**

- 1 Lie on back and relax the wholebody.
- 2 Fold the legs over the stomach and lift it highup.
- 3 with help of hands; Support the buttocks and the chest as lift them.
- 4 then rest the elbows on the floor and strengthen thelegs.
- 5 Focus the eyes on the big toes andhold

**SHALABHASANA****Figure 22:SHALABHASANA****METHOD OF PRACTICE:**

- 1 Lie on the floor with the abdomen touching the mat.
- 2 Rest the chin on the floor with arms at the sides. The heels and toes must be held together.
- 3 Inhale and lift both the legs above the floor. While lifting the legs, pressure must be applied on the fists.
- 4 Relax and feel the stretch on the muscle of the back.

## DHANURASANA

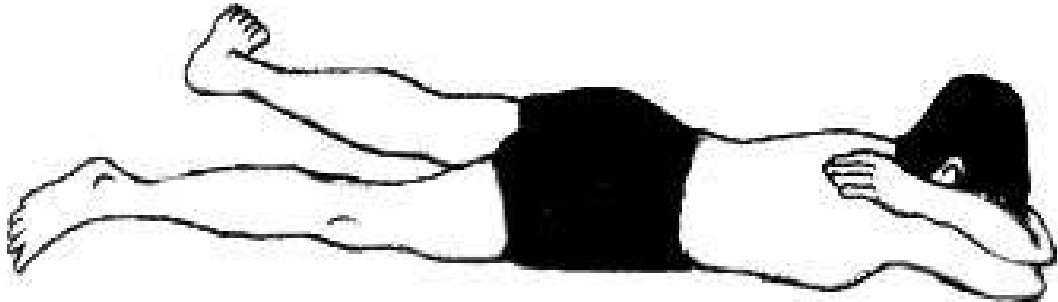


**Figure 23: DHANURASANA**

### **METHOD OF PRACTICE:**

1. Lie with abdomen, chest and chin resting on the ground.
2. Stretch the arms on the sides. Keep the feet a little apart.
3. Bend the legs backwards and grasp the corresponding ankles firmly.
4. Hold the arms stiff and straight. Keep the knees sufficiently apart.
5. Raise the chin and bend the head and neck backward without raising the chest.
6. Inhaling, pull the legs slowly upward towards the ceiling (not the head).
7. While pulling hard against the ankles, raise the knees, thighs, hips, the lower region of the navel, chest, shoulders, chin, neck and head upward all together until the body is balanced on the navel region which alone should touch the floor.
8. Arch the back as much as possible with the arms and legs tugging at each other.
9. Slowly bring the big toes, the inner edges of the feet and the knees closer and join them together.
10. Keep the head up and backward as far as you can and look up.
11. Hold the breath and maintain the posture until any strain

## MAKARASANA



**Figure 24: MAKARASANA**

### **METHOD OF PRACTICE:**

- 1 Lie on prone position place both hands crossed around head or rest the forehead on it, relax all the muscles, continue normal breathing.
- 2 Bring the arms forward and fold them. Then place the forehead on the folded elbows and relax the neck.
- 3 Spread the legs and keep them at a distance of a foot or so, with the heels inside and the toes outside. Then relax the legs.
- 4 Keep the whole body relaxed. Try to touch as many parts of the body to the floor as possible. Keep the breathing normal and the head in a position which is comfortable.

### **3.15.4 YOGIC BREATHING**

This is a preparatory breathing practice for Pránayama. It corrects the wrong breathing pattern and increases the vital capacity of the lungs. It has three sections.

#### **A. ABDOMINAL (DIAPHRAGMATIC) BREATHING (ADHAMA)**

##### **STHITI: VAJRÁSANA**

##### **METHOD OF PRACTICE**

1. Place the hands resting on the thighs in CinMudrá.
2. Inhale, (püraka) deeply, slowly and continuously, the abdomen bulges out. Before exhaling stop the breath for a few seconds effortlessly.
3. Exhale, (recaka) the abdomen is drawn inwards continuously and slowly. Before the breath is reversed, stop the breath for a second.
4. Repeat this breathing cycle five times.
5. There should be no jerks in the whole process. It should be smooth, continuous and relaxing.

#### **B. THORACIC (INTERCOSTAL) BREATHING (MADHYAMA)**

##### **STHITI: VAJRÁSANA**

##### **METHOD OF PRACTICE**

1. Place the hands resting on the thighs in cinmayamudrá.
2. While inhaling, expand the chest cage forwards, outwards and upwards. While exhaling relax the chest wall and return to resting position.
3. Repeat this breathing cycle five times.

### **C. UPPER LOBAR (CLAVICULAR) BREATHING (ÁDYA)**

#### **STHITI: VAJRÁSANA**

#### **METHOD OF PRACTICE**

Sit in any meditative posture.

Place the hands resting on thighs in ádimudrá.

While inhaling raise the collar bones and shoulders upwards and backwards. While exhaling drop down the shoulders to the resting position.

#### **Full Yogic Breathing**

Full yogic breathing is a combination of all the three sections of sectional breathing.

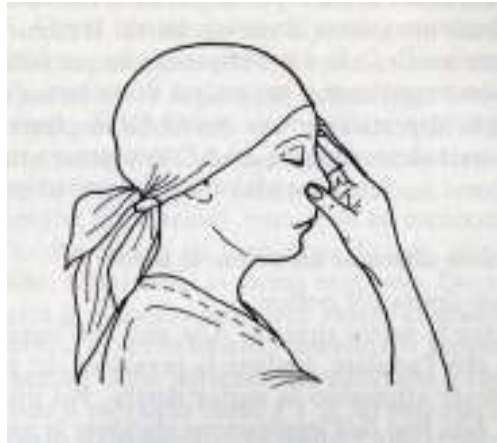
#### **Sthiti: Vajrásana Practice**

1. Place the hands resting on the abdomen at the navel in Brahma Mudrá.
2. During inhalation, the Adhama, Madhyama and Ádyapránayama occur sequentially. Now exhale in the same Method of Practice (abdominal, chest and clavicular).
3. Repeat this breathing cycle five times.

**ANULOMA VILOMA SURYAANULOMAVILOMA - RIGHTNOSTRIL****Figure 25: SURYAANULOMAVILOMA****METHOD OF PRACTICE:**

- 1 Sit erect in Padmasana and Adopt Nasikamudra
- 2 Close the left nostril with fingers
- 3 Inhalation and exhalation through right nostril.

## CHANDRA ANULOMA VILOMA-LEFT NOSTRIL YOGA BREATHING



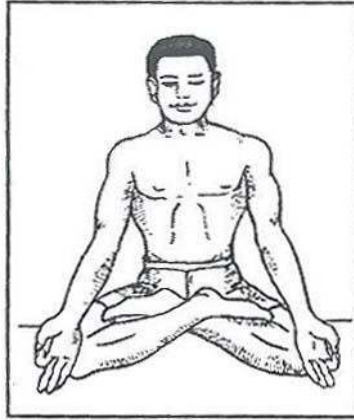
**Figure 26: CHANDRA ANULOMA VILOMA**

### **METHOD OF PRACTICE:**

- 1 Sit erect in Padmasana and Adopt Nasikamudra
- 2Close the right nostril with fingers
- 3Inhalation and exhalation through left nostril.

## KAPALABATHI

(Frontal Brain Cleaning Technique – HathayogaPradipika)



**Figure 27: KAPALABATHI**

### **METHOD OF PRACTICE:**

1. Sit in any meditative posture.
2. With the normal Breath and the abdomen (expand) and exhale forcefully and carefully with a forceful contraction of abdomen muscles after that Inhale passively where as exhale is very conscious.
3. The subjects exhale give rhythmic force be applied to the three chakras (Manipuraka, Swadhishtana and Mooladhara Chakras) . When practising, the abdomen would be pushed upwards.
4. Repeat 5 – 10 times.

## **BHASTRIKA**



**Figure 28: BHASTRIKA**

### **METHOD OF PRACTICE:**

1. Sit in any meditative posture or in any convenient asana but Vajrasana is preferred.
2. Close the both hand fingers and keep on the chest after that on either side of the body at shoulder level.
3. Inhalation very slow and steady than exhale for 2 or 3 times.
4. Fast inhale and release the both fists and also raise both hands up.
5. Forceful exhale and closing the fists, bring the hands on the chest.

## NADISUDDHIPRANAYAMA



**Figure 29: NADISUDDHI PRANAYAMA**

### METHOD OF PRACTICE:

1. Any meditative posture
2. Keep the left palm on the left knee with Chin Mudra
3. Keep the right hand in Nasika Mudra
4. with the right thumb close the right nostril and breathe in slowly left nostril.
5. After that through the left nostril and breathe out gently through the right nostril. Breathe in gently through the same and exhale through the left as mentioned above.

## SHEETALIPRANAYAMA

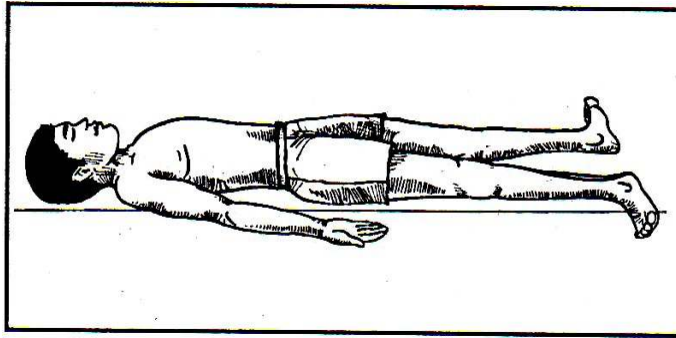


**Figure 30: SHEETALI**

### **METHOD OF PRACTICE:**

1. Sit in a comfortable meditative posture like padmasana, siddhasana or vajrasana.
2. Keep the spine erect and eyes gently closed.
3. Roll the tongue and extend it out.
4. Inhale deeply through the rolled tongue.
5. After the inhalation gently draw the tongue in, close the mouth and exhale slowly through the nostrils.
6. Feel the coolness and relaxation.

### 3.15.5 YOGANIDRA



**Figure 31: YOGA NIDRA**

#### **METHOD OF PRACTICE:**

Yoga Nidra is an ancient Indian Yogic method for providing complete rest to body and mind. Yoga sleep was ignored for centuries and it reached the edge of extinction. At this juncture Paramahansa Swami Satyanand Saraswati, the founder of Bihar School of Yoga has brought it back to the knowledge of thousands. Since then, many are being benefited.

Yoga Nidra is the elaborate extension of Savasana (Shanti Asana).

#### **Process:**

Lying in Savasana, the mind is concentrated on normal breathing. Slowly all the thoughts are given up. All the major and minor parts of the body are visualized i.e., mentally viewed, their shapes are recalled and let loose one after the other continuously in the following sequence.

#### **Right hand:**

Thumb → fore finger → middle finger → ring finger → little finger → back of the palm → the palm → wrist → fore arm → elbow → upper arm → shoulder.

**Right leg:**

Big toe → second toe → fourth toe → little toe → the upper part of the foot → sole → heel → ankle → calf → knee → thigh → thigh joint.

**Left leg:**

As in right leg

**Left hand:**

As in right hand

**Back:**

From the bottom of the backbone to the neck → the right side of the back → the back of the right shoulder → the left side of the back → the back of the left shoulder → the back of the neck.

**Abdomen, chest and throat:**

Navel → the left side of the navel → lower side of the navel (including the urinary organ) → the right side of the navel → the upper side of the navel → the central part of the chest → right breast → left breast → the pit below in the throat → throat.

**Head:**

Chin → lower lip → tongue → upper lip → right nostril → right cheek → right ear → right eye → left eye → left ear → left cheek → left nostril → tip of the nose → the centre of the eye brows → forehead → right side of the head → back of the head → left side of the head → top of the head.

Each above said part of the body, in the above said order, should be concentrated upon for about 10 to 20 seconds. The shape should be visualized by the mind with closed eyes.

While looking so, the concerned spot should be freely let loose. The entire process may be completed in about 15 to 30 minutes. This is called one round. More rounds may be

practiced according to the choice and necessity of the aspirant (Sadhak

With regular practice, the sadhak will then be able, to not only loosen the outer areas but will also succeed to loosen and relax the depths of the body.

It is better to practice this on the bed itself as preliminary step for sleep. This helps in getting peaceful sound sleep. Mind and body get complete rest. They are totally relaxed. As the quality of sleep improves, sleeping duration is also reduced. The time is saved, which can be utilized for Yoga Sadhana.

**During Yoga Nidra Practice, the following feeling may generate:**

- 1) The body seems to be either heavy or light.....
- 2) On some parts of the body, we feel like having burning sensation or cooling sensation....
- 3) We feel as if either some insects creeping on or biting it or pulling it up or shivering on our skin.....
- 4) The body feels as if, either it is flying in the sky or floating in an ocean or being pressed deep in the earth....
- 5) The tongue feels some taste, ears listen some sound, nose smells some fragrance, closed eyes feel the glow of lights.
- 6) Some areas of skin feel the touch of either hot air or cool breeze.
- 7) Though the breath is normal, still it is felt either running with great speed or going to standstill....

Similar to above, the practitioner may have, some other feelings also. In spite of such distractions, the practitioner should not deviate his concentration.

As these feelings may be for few seconds only and so, one should try to continue the process without moving the body at all. (Certain movements of body will be happening without control – like due to breathing, heart beats, blood circulations, digestion etc., one should not worry about such and should not be disturbed at all).

**Advantages:**

- 1) Every person meets many people every day. Similarly, in Yoga nidra the practitioner meets his own self, part by part.
- 2) The practitioner gets sound sleep. Time is not wasted in waiting for sleep.
- 3) The tiredness of the body is relieved. Though the sleeping time is reduced by the sound sleep, all the parts of the body are relaxed to their maximum and they are re-changed with energy.
- 4) Tension, anxiety, depression, stress, strain, negative thoughts, high blood pressure etc. are controlled.
- 5) The practitioner feels physically stable and mentally peaceful. The instability in the behaviour is controlled.
- 6) Psychological problems especially in women are prevented.
- 7) Memory, will power and inner energies are developed and so it is an important aid to students.
- 8) The sadhak becomes introvert. Knowledge is developed.
- 9) Regular practice of yoga nidra plays a big role in the higher practices of concentration, meditation and self-realization.

Yoga nidra is a delicate micro process. Therefore, the mind should be completely sub-merged in the exercise. In the initial stage, it should be practiced either under the guidance of yoga experts or alternatively listening to the specially recorded audio cassette for this purpose.

### 3.15.6 MANTRAMEDITATION

Mantra is that by meditating on which the jiva or individual soul attains freedom from samsara, the phenomenal world. It aids to attain dharma (virtue) artha (wealth), Kama (pleasure) and moksha (Liberation).

Six parts of a mantra:

- 1) Rishis gavemantras;
- 2) The mantra has a supernatural being;
- 3) The mantra has a seed;
- 4) The mantra has a metre;
- 5) Every mantra has a shakti;
- 6) The mantra has a kilaka, pillar or pin.

Potencies of different mantras: - A few tips on Mantra chanting: -

The mantras are meant to trigger a particular state of mind conducive for meditation.

The mantras are the ‘means’ and not the end.

The ideal time for chanting the mantras is in the morning. Don’t chant the mantras in the middle of a busy activity.

Allot a particular place and time for the chanting of the Mantras.

Repeat the mantras until the mind becomes sufficiently prepared for meditation.

Chant loud and clear on the beginning stages, which will slowly get absorbed inside us.

Do not worry about the pronunciation in the beginning stages. Have reverence and the sense of submission while we chant.

We have to wait for the sound of the mantras to sink into us deeply after reciting mantras.

### **3.16 TESTADMINISTRATION**

#### **3.16.1 PHYSICAL FITNESS VARIABLE**

##### **3.16.1.1 FLEXIBILITY (SIT AND REACH)**

###### **Purpose**

To estimate the trunk flexibility

###### **Equipments**

Yardstick and measuring steel tape

###### **Procedure**

Place the yardstick on the floor and put an 18 inch piece of tape across the 15 inch mark on the yard stick. The tape should secure the yardstick to the floor. The subject sits with the O end of the yardstick between the legs. The subject heel should almost touch the tape at the 15 inch mark and be about 12 inch apart with the legs held straight. The subject bends forward slowly and reaches with parallel hand as far as possible and touches the yardstick. The subject should hold this reach long enough for the distance to be recorded.

###### **Scoring**

Perform three trials. The best score recorded in inch.

### 3.16.2 PHYSIOLOGICAL VARIABLES

#### 3.16.2.1 SYSTOLIC BLOOD PRESSURE

**Purpose:** - To measure the systolic blood pressure.

**Standardized Equipment** : - digital portable blood Pressure monitor made by Citizens

**Procedure** : -The level of blood pressure was recorded at the starting and end of the practising periods using the citizen equipment in a relaxed position, since the equipment was fully automatic, the value was recorded accordingly.

**Scoring** : -The level of the systolic blood pressure is indicated on the digital monitor.

#### 3.16.2.2 BODY MASS INDEX

**Purpose**

To measure the body mass index of the selected subjects.

**Equipment**

Stadiometer, weighing machine

**Procedure**

This is a simple calculation, using the most basic tools in our height and weight. The height of the subject was measured in meters. The weight of the subject was measured in kilograms. The following formula was used to measure the BMI

$$\text{BMI} = \text{Weight}(\text{kg}) / \text{Height}(\text{m})^2$$

**Scoring**

The BMI score was recorded after computing through the BMI formula.

**3.16.2.3 RESTING PULS RATE****Purpose**

To measure the heartbeat per minute of the selected subjects.

**Equipment**

Digital Heart Rate Measuring Monitor.

**Procedure****3.16.3 PSYCHOLOGICAL VARIABLES****3.16.3.1 STRESS****Purpose**

To measure the stress constructed by Dr. Latha Sathish questionnaire used to assess the stress level of the adult women with oligomenorrhea.

**Equipment**

**Dr. Latha Sathish's stress questionnaire (1997)** used to assess the stress level of adult women with oligomenorrhea.

**Procedure**

The stress Questionnaire describing 52 events which causes mental stress was given to the adult women with oligomenorrhea and asked to fill yes or no along with the level of control exercised by them over event. The Level of control is in 3 groups. Complete control, Partial control and no control.

### Scoring

The answer is 'yes' a score of one, two and three is assigned for complete control, partial control and no control respectively. If answer is 'no' then no score is assigned as the event does not bring any stress to the subject. The level of the stress is arrived to take into account of the score obtained by the subject. Lowest score is consider as low stress

### Norms

#### Level

0 -17 Mild Stress

18 - 35 Moderate stress

36 - 52 severe stress Control Index

0-51 complete control over stress 52-105 Partial control over stress 106- 156 No control over stress.

### 3.16.3.2 ANXIETY

#### Purpose

Purpose of anxiety test is measure Anxiety level of subjects

Equipment Anxiety Questionnaire developed by Taylor.(1952)

#### Procedure

Questionnaire organized in group setting and the subjects seated. The researcher given instructions and requested to them read carefully.

### 3.16.3.3 ADJUSTMENT

**Purpose** :To assess the adjustment level of the subjects

**Equipment** :Adjustment Inventory by H.S.Asthana  
consisting of 42 questions

### **Procedure**

Answer the following. Your answer should be exactly according to your natural liking or disliking. If your answer is 'YES' encircle the 'YES' against the question. If your answer is 'NO' encircle the 'NO' against the question. Remember you have to answer all the questions. Read them carefully.

### **Scoring**

1. For question numbers 19, 37, 42, if answered No, it gets a score of one.
2. For question numbers 19, 37, 42, if answered Yes, it gets a score of zero.
3. For questions other than 19, 37, 42, if answered Yes, it gets a score of one.
4. For questions other than 19, 37, 42, if answered No, it gets a score of zero.
5. The score can be in the range from 0 to 42.
6. The higher the score the better the adjustment.

### **Procedure**

Questionnaire organized in group setting and the subjects seated. The researcher given instructions and requested to them read carefully.

### **3.17 COLLECTION OF DATA**

To both experimental groups were treated with yogic practices with and without diet modifications for about 16 weeks (5 days/week).

The selected criterion variables were collected by administering the test as per standardized procedures sixteen the programme. Similarly, blood sample was collected from individuals

### **3.18 STATISTICAL TECHNIQUE**

The investigator has analyzed by (ANCOVA) scientific results obtained by application of various methodologies discussed above and the results are analyzed and presented in form of detailed discussion graphs and various tables in the next chapter.

## CHAPTER - IV

### RESULTS AND DISCUSSIONS

#### 4.1 OVERVIEW

Oligomenorrhea women were selected as subjects. Their age was ranging from 25 to 35 years. The subjects were selected into three groups namely Ex. group I (yogic practices and diet) , Ex. group II (yogic practices not diet) and control group (C.G) (no practices). The Oligomenorrhea women were analyzed with the differences in the measures of Flexibility, Systolic blood pressure, Body mass index, Resting Pulse Rate, stress, adjustment and anxiety.

The subjects are selected randomly but the groups were not equated in relation to factors to be examined hence the difference between the means and three groups pre and posttest were taken into an account during the analysis of covariance, where the final means were adjusted for difference in the initial means and the adjusted means were tested for significance difference. When the adjusted posttest means were significant the Scheffe's post hoc test was administered.

#### 4.2 TEST OF SIGNIFICANCE

This is the important portion of thesis to achieve the conclusion by examining the hypotheses. The hypotheses testing procedure is done either by accepting the hypotheses or rejecting the same in accordance with the results obtained in relation to the level of confidence.

This test is called as the test of significance because it tests if the differences between groups or within many groups scores are significant or not. If the obtained F-value is greater than the table value, the null hypotheses are rejected since that there exists

significant