

CHAPTER-III

METHODOLOGY

In this chapter, selection of subject, selection of variables, experimental design, pilot study, criterion measures, reliability of data, reliability of instrument, tester's competency, subjects reliability, training schedule, training procedure, administration of the test, collection of data and statistical technique for analyzing the data have been described.

3.1 SELECTON OF SUBJECTS

For the purpose of study, ninety women who were suffering from diabetes mellitus, were volunteered as subjects. Their age ranged from 35 to 45years. The purpose sampling technique was employed to pool the subjects from various health sectors, factories of Nagercoil. All the subjects were taking anti-diabetic drugs and diet as suggested by their physician / diabetologist. In fact almost all the patients were very much conscious about their diabetic diet. Since all the patients attended this study from their respective homes, therefore diet control phase was not possible. Before the group were divided for experimental treatment, all the subjects were screened medically with the help of professionally qualified diabetologist. so that the researcher chosen that place. All the subjects were assigned into two experimental groups (A and B) and one control group (C), each consisting 30 subjects.

Group A - Yogic Practices.

Group B – Naturopathy Practices.

Group C - Control group.

3.2 SELECTIONS OF VARIABLES

The researcher reviewed the available scientific literature pertaining to the Asana, Pranayama, Kriya, Relaxation, Meditation and Kriya, Mud therapy, Sun bath and Fasting on selected Physiological, Biochemical and Psychological variables.

In the present study following variables were selected.

3.2.1. INDEPENDENT VARIABLES

The selected training programme included naturopathy practices, and yogic practice respectively. The justification of selecting these training programs are as follows: Yoga improves the functioning of the respiratory, circulatory, digestive and hormonal systems. Regular practice of yogasana helps to keep our body fit, controls cholesterol level, reduces weight, normalizes blood pressure and improves heart performance. Yoga can be a powerful enhancement in regular training exercises. Moreover, basic levels of physical fitness can be excellently maintained by indulging in a selected yogic routine. Yogic exercises deal with the vital organs of the body, on which health depends. This seems to be a useful means for diabetics.

The primary aim of the any diabetic treatment is to reduce the increased level of glucose in the blood and also increase the uptake of insulin by the cells. Naturopathic treatment helps to work on every cell of our body to eliminate toxins and enhance its physiological functioning to optimal levels. Diet therapy: This therapy is not only given to regulate blood sugar levels but a patient is also prescribed certain juices are to help improve the disorder. Hydrotherapy: In this form of therapy a combination of baths, packs and warm water enema are given as a remedy. Hydrotherapy helps improve a person's metabolism and controls blood sugar levels, enhances the body's capability to use glucose and the enema

helps cleanse toxins from the colon, detoxify the system. Mud therapy: Helps eliminate toxins and corrects imbalances in the digestive and endocrinal systems (which are normally under-active in diabetics).

a. YOGIC PRACTICES

Surya Namaskar

Instant Relaxation technique (IRT)

Quick Relaxation technique (QRT)

Deep Relaxation technique (DRT)

Yogasans

Pranayama

“Om” meditation

b. NATUOPATHY PRACTICES

Enema

Fasting

Mudpack

Hip bath

Sun bath

3.2.2. DEPENDENT VARIABLES

The variables like Fasting glucose level and 2-hour postprandial blood sugar measures blood glucose are common symptoms in Diabetic persons. They affect the Activities of Daily Living (ADL) of the patient. So the above mentioned Clinical variables are taken into account. The psychological variables like stress act as a main role in inducing sugar level which leads to job dissatisfactions in their work. The physiological variable like pulse rate and blood pressure in high level which affect diabetic patients. For the same Physiological, Biochemical and Psychological variables are considered for this study.

a). PHYSIOLOGICAL VARIABLES

Resting Pulse rate

Blood pressure

b). BIOCHEMICAL VARIABLES

Fasting blood sugar level

Postprandial blood sugar level

c). PSYCHOLOGICAL VARIABLES

Stress

Job Satisfaction

3.3. EXPERIMENTAL DESIGN

The study was formulated as a true random group design, consisting of a pre test and post test. In this programme, yogic training was given to experimental group A, group B

was given with naturopathy practices and control group C was not given any kind of practices. Initially pre test was conducted and after the experimental period of Twelve weeks, post test scores were obtained from all the three groups. The differences between initial and final scores on physiological, biochemical and psychological variables considered as the effect of yogic practices and naturopathy practices on subjects. The mean differences were tested for significance using Analysis of Covariance (ANCOVA).

3.4. PILOT STUDY

The pilot study was conducted with five patients and the difficulties were noted and rectified. The calculated intra-class correlation of the pilot study shows that there was significant difference in physiologically in Resting Pulse rate, and Blood pressure. Biochemical in Fasting blood sugar level, and Postprandial blood sugar level. Psychologically in Stress and Job Satisfaction.

3.5. CRITERION MEASURES

By glancing the literature, and in consultation with professional experts, the following variables were selected as the criterion measures in this study.

Table - I

VARIABLES		Test / Instruments	Unit of Measurements
Physiological Variables	Blood Pressure	Digital pulse measuring apparatus	mmHg
	Resting Pulse Rate	Digital Blood Pressure measuring apparatus	Pulse per Minute

Biochemical Variables	Fasting Glucose	Blood Analysis	mg./dL
	Post prandial Glucose	Blood Analysis	mg./dL
Psychological Variables	Stress	Latha Sathish Stress Questionnaire	Numeric Values
	Job Satisfaction	Job Satisfaction Scale	Numeric Values

3.6. RELIABILITY OF DATA

The reliability of data was ensured by using standard instruments and by establishing tester competency for the reliability of the test.

3.7. RELIABILITY OF INSTRUMENTS

The following questionnaire, scale and instruments were used for recording the physiological, biochemical and psychological variables of Blood Pressure, Resting Pulse rate, Fasting Glucose level, Post prandial Glucose level, Stress and Job and are found reliable. All the instruments used were standard and therefore their calibrations were accepted accurate enough for the purpose of the study.

1. Digital pulse measuring apparatus
2. Digital Blood Pressure measuring apparatus.
3. (Glucose Oxidase) ÷ Peroxidase method
4. Dr Latha Sathish Stress questionnaire

5. Job Satisfaction Scale

3.8. TESTER'S COMPETENCY

Reliability was established by the test, re-test process. Ten subjects from all the three of groups were tested under the supervision on selected variables. The repeated measurements of individuals on the same test are done to determine reliability. It is a Univariate not a bivariate situation; it makes sense then to use a Univariate statistics like the intraclass correlation coefficient (Baumgartner and Jackson, 1975).

The intraclass correlation coefficient obtained for test – retest data are presented in Table - II.

Table – II

Sl.No.	Variables	Coefficient of Correlation
1	Blood pressure	0.91*
2	Resting Pulse Rate	0.93*

Table value required for 8 (df) at 0.01 level of significant is 0.765.

As for psychological variables Stress and Job Satisfaction, the authors of the questionnaire have determined reliability and the same was adapted for this study, conducted by the scholar himself and considered as reliable.

3.9. SUBJECTS RELIABILITY

The test and retest also conducted the subject reliabilities the same subjects were used, under similar condition by same tester. The co-efficient of reliability were significant at 0.05 level, for the above test under investigation.

Table – III

YOGIC PRACTICES TRAINING SCHEDULE

Sl.No.	Name of Yogic Practices	Repetition	Duration
1.	Shavasana (QRT)	One time	4Minutes
2.	Pawanmuktasana	One time	2Minutes
3.	Ardha halasana	One time	1Minutes
4.	Makrasana	One time	2Minutes
5.	Bhujangasana	One time	1Minutes
6.	Ardha shalabhasana	One time	1Minutes
7.	Shalabhasana	One time	1Minutes
8.	Dhanurasana	One time	1Minutes
9.	Vakrasana	One time	2Minutes
10.	Janu sirsasana	One time	2Minutes
11.	Yoga Mudra	One time	2Minutes

12.	Ardha Katichakrasana	One time	2Minutes
13.	Padahastasana	One time	1Minutes
14.	Shavasana (DRT)	One time	10Minutes
15.	Kapalabhati	One time (20 stroke)	
16.	Nadi suddhi	Two time(9 rounds)	
17.	Bhramari	One time(6 rounds)	
18.	Meditation	One time	

TABLE IV

YOGIC PRACTICES TRAINING SCHEDULE

FOR I, II, III AND IV WEEKS

Sl.No.	Name of Yogic Practices	Repetition	Duration
1.	Shavasana (QRT)	One time	4Minutes
2.	Pawanmuktasana	One time	2Minutes

3.	Ardha halasana	One time	1Minutes
4.	Makrasana	One time	2Minutes
5.	Bhujangasana	One time	1Minutes
6.	Ardha shalabhasana	One time	1Minutes
7.	Shavasana (DRT)	One time	10Minutes
8.	Bhramari	One time(6 rounds)	

TABLE V
YOGIC EXERCISES TRAINING SCHEDULE
FOR V, VI, VII AND VIII WEEKS

Sl.No.	Name of Yogic Practices	Repetition	Duration
1.	Shavasana (QRT)	One time	4Minutes
2.	Pawanmuktasana	One time	2Minutes
3.	Ardha halasana	One time	1Minutes
4.	Makrasana	One time	2Minutes

5.	Bhujangasana	One time	1Minutes
6.	Ardha shalabhasana	One time	1Minutes
7.	Shalabhasana	One time	1Minutes
8.	Janu sirsasana	One time	2Minutes
9.	Yoga Mudra	One time	2Minutes
10.	Shavasana (DRT)	One time	10Minutes
11.	Bhramari	One time(6 rounds)	
12.	Nadi suddhi	Two time(9 rounds)	
13.	Meditation	One time	

TABLE VI
 YOGIC EXERCISES TRAINING SCHEDULE
 FOR IX, X, XI AND XII WEEKS

Sl.No.	Name of Yogic Practices	Repetition	Duration
1.	Shavasana (QRT)	One time	4Minutes
2.	Pawanmuktasana	One time	2Minutes
3.	Ardha halasana	One time	1Minutes
4.	Makrasana	One time	2Minutes
5.	Bhujangasana	One time	1Minutes
6.	Shalabhasana	One time	1Minutes
7.	Dhanurasana	One time	1Minutes
8.	Vakrasana	One time	2Minutes
9.	Janu sirsasana	One time	2Minutes
10.	Yoga Mudra	One time	2Minutes
11.	Ardha Katichakrasana	One time	2Minutes

12.	Padahastasana	One time	1Minutes
13.	Shavasana (DRT)	One time	10Minutes
14.	Kapalabhati	One time (20 stroke)	
15.	Nadi suddhi	Two time(9 rounds)	
16.	Bhramari	One time(6 rounds)	
17.	Meditation	One time	

The yogic practices programme was imparted systematically from simple to complex manner; they were practiced as per the subject's individual need.

TABLE VII

NATUROPATHY PRACTICES TRAINING SCHEDULE

Sl.No.	Name of Yogic Practices	Repetition	Duration
1.	Enema	One time	
2.	Fasting	One time	One day
3.	Mudpack	One time	20Minutes

4.	Hip bath	One time	20Minutes
5.	Sun bath	One time	20Minutes

TABLE VIII
NATUROPATHY PRACTICES TRAINING SCHEDULE
FOR I, II, III AND IV WEEKS

Sl.No.	Name of Naturopathy Practices	Repetition	Duration
1.	Enema	Weekly two days	
2.	Mudpack	Weekly four days	20Minutes
3.	Hip bath	Daily	20Minutes
4.	Sun bath	Weekly three days	20Minutes

TABLE IX
NATUROPATHY PRACTICES TRAINING SCHEDULE
FOR V, VI, VII AND VIII WEEKS

Sl.No.	Name of Naturopathy Practices	Repetition	Duration

1.	Enema	Weekly two days	
2.	Mudpack	Weekly four days	20Minutes
3.	Hip bath	Daily	20Minutes
4.	Sun bath	Weekly three days	20Minutes
5.	Fasting	One day	

TABLE X
NATUROPATHY PRACTICES TRAINING SCHEDULE
FOR IX, X, XI AND XII WEEKS

Sl.No.	Name of Naturopathy Practices	Repetition	Duration
1.	Enema	Weekly two days	
2.	Mudpack	Weekly four days	20Minutes
3.	Hip bath	Daily	20Minutes
4.	Sun bath	Weekly three days	20Minutes

3.11. TRAINING PROCEDURE

YOGIC PRACTICES

3.11.1. QUICK RELAXATION TECHNIQUES (QRT)

Techniques

Phase I

Feel the abdominal movements. Observe the movements of abdominal muscles going up and down as breathe in and out normally. Observe 5 cycles.

Phase II

Synchronize the abdominal movements with deep breathing. The abdomen bulges up with inhalation and sinks down with exhalation. Observe 5 cycles.

Phase III

As inhale deeply and slowly, energize the body and feel the lightness. As exhale completely collapse all the muscles release the tension and enjoy the relaxation. Observe 5 cycles.

Chant 'A A A' in a low pitch while exhaling. Feel the vibrations in the lower parts of the body. Slowly come up from either the right or the left side of the body.

PAWANMUKTASANA

Technique

Lie flat on your back on a smooth surface, ensuring that your feet are together, and your arms are placed beside your body.

Take a deep breath. As you exhale, bring your knees towards your chest, and press your thighs on your abdomen. Clasp your hands around your legs as if you are hugging your knees.

Hold the asana while you breathe normally. Every time you exhale, make sure you tighten the grip of the hands on the knee, and increase the pressure on your chest. Every time you inhale, ensure that you loosen the grip.

Exhale and release the pose after you rock and roll from side to side about three to five times. Relax.

ARDHA HALASANA

Technique

Lie down in Shavasana (supine position).

Join the both legs and keep your hand with the thighs.

Slowly breathe in and raise the leg perpendicular to the ground keeping the knee straight.

Hold in the breathe and stay in this position as long as possible.

Breathe out and bring back your legs.

Come back to the normal position and relax for a while.

Repeat the same for 3 to 5 times.

MAKRASANA

Technique

Lie down straight on your stomach.

Now join your elbows, making a stand and place your palms under the chin.

Lift your chest up.

Makarasana crocodile pose steps

Keep your elbows and legs together.

During inhaling, first fold your one leg at a time and then both the legs together.

During folding, your ankles should touch the hips.

While exhaling, your feet should be straight and keep your head steady.

Repeat this for 20 to 25 times.

BHUJANGASANA

Technique

Tilt head slightly backward.

While inhaling slowly, raise head and chest upwards by pressing down on the hands but letting contraction of the back take most of the strain.

Body from toes to the navel should rest on the floor.

Then look into the sky as if a cobra is going to strike. Hold breath in this pose as long as possible without feeling uncomfortable (initially hold breath for 8 to 10 seconds at least).

Then while exhaling, slowly return to the face-down position.

Rest in Balasana pose.

ARDHA SALABHASANA

Ardha Salabhasana is also known as the half locust pose. This posture strengthens the muscles of the lower abdomen.

Techniques

Lie on stomach with chin on the floor and palms under the thighs.

Inhale and raise one leg as high as possible.

Hold the position for 10-30 seconds.

Exhale and slowly bring the leg down.

Repeat with the other leg.

SHALABHASANA

The meaning of Shalabha is locust in Sanskrit. In the final position of this Asana the shape of the body resembles a locust and hence it is called shalabhasana.

Technique

Take prone lying position, legs together, toes of the legs backward, sole towards the sky. Hands by the side, palms upward, fingers together the ground.

Folding both the hands at elbows bring them under the shoulder (as Bhujangasana) fingers together, pointing forward.

Now raise both the legs upward slowly without bending them at knees, and maintain.

Then bring the legs down slowly.

Shalabhasana (Second technique)

The only difference in Shalabhasana hands. In this technique the legs are raised keeping hands straight by the side, closing the fists and fingers towards sky.

The remaining technique is same.

DHANURASANA

Technique

Lie on the ground (on stomach) facing downwards.

Relax completely with 2-3 breaths.

Inhale slowly and starts bending your legs backwards and catch the ankles with the hands as shown in the above image.

You will see that your body is now in the shape of a bow.

In this position your whole weight will come on your abdomen. Only your stomach and pelvic area will touch the ground.

Hold this position for few 15-20 seconds and continue taking a deep breath. You can increase the time after practicing this.

Now after 15-20 seconds exhale slowly and come back to starting position.

Repeat this cycle for 4- 5 times daily.

VAKRASANA

Technique

Keep legs stretched in the sitting position. Raise the right leg by bending the knee and pull the foot until it rests by the side of left knee.

Place right hand behind the back without much twist of the trunk. Then bring the left arm over the right knee and hold the right ankle. Push right knee as far to the left as possible offering good resistance to the left arm.

Now exhale and try to twist the trunk to the right side as much as possible taking good support from the left arm, and look towards the right shoulder.

This is a complete twist to the right side.

Do this asana in the same manner and duration on the left side also.

JANU SIRSASANA

Technique

From Staff Pose - Dandasana, bend knee and bring the sole of the left foot to inner-right thigh.

Square torso over the extended right leg, and begin to forward bend over that leg.

Keeps the right foot flexed while pressing the back of the right thigh down toward the floor.

In order to not collapse back, keep the heart center lifted as long as possible as come forward.

When reach limit, bring the heart and head down toward the extended leg.

On each inhale, extend the spine long, and on each exhale, deepen the forward bend.

Hold on to the extended leg or place the hands on the floor wherever they reach.

Repeat the pose on the other side.

YOGA MUDRA

Technique

Sit in Padmasana, put your palms on the two heels and close the fingers. Sit straight and deeply inhale.

Bend to your front by slowly exhaling and your nose should touch the floor. Be ten to fifteen seconds in this state. Inhale and exhale as usual without any restriction.

No need for the breath control. Then slowly inhale and raise the body. Likewise you can do this asana from three to seven times.

ARDHA KATICHAKRASANA

Technique

Stand firmly along with legs together.

Press the heels and feet on the floor.

Slowly stretch and raise the right arm above the head and extend with inhalation.

Exhale slowly and move the trunk and right arm towards left side. The ear will touch the right upper arm. The left hand should be sided on left leg thigh.

Stay in this position for 15 to 30 seconds with normal breathing.

Inhale, slowly move the trunk and arm in order to come back to the normal position.

Repeat the same be bending on the other side.

Practice this exercise two times on both the sides.

PADAHASTASANA

'Pada' refers 'foot' and 'hasta' refers 'hand'. Here in this exercise the requirement is to stretch the back and legs down.

Technique

Stand straight. Ensure to keep the feet together.

Inhale slowly, stretch the hands up.

Exhale slowly, bend forward and place the palm; on the ground adjacent to feet, and now touch the knees with the head. Ensure to keep the legs straight.

Stay in this position for about 15 to 20 seconds and breathe evenly.

Slowly place the palms below the foot. Remain in this position and take 2 to 4 breaths.

Inhale slowly, raise the head and slowly resume to a normal position.

SHAVASANA (DRT)

Shava means dead body. Lying down on the floor like dead body is called shavasana.

Position and Breathing

Lying flat on your back, bring the feet at least 1 1/2 feet (50 centimetres) apart, and allow the toes to fall outward to the sides. Place the arms at an angle of approximately 45 degrees to the body. Relax the hands, allowing the fingers to curl gently. Make your breathing very gentle and regular.

Tense and Relax

Raise the different parts of the body and contract them very hard for 5 to 6 seconds, then release and relax. Starting with the legs, do the same for arms, hips, chest and shoulders. Finally contract the facial muscles as well.

Autosuggestion

Beginning with the toes, feel as though a wave of relaxation is slowly moving up through the entire body.

Mentally relax each toe, and then move on to the feet. Relax them completely.

Feel the relaxation moving up the legs, relaxing the calves, the knees, and the thighs.

Feel the relaxation coming up into the hips and the abdominal region.

Relax all the internal organs.

Relax the buttocks and feel the tension slowly releasing from each part of the back.

Allow the floor to hold you up and, as the body relaxes, feel as though you are sinking down into it.

Feel the relaxation coming into the chest, breathing very slowly and gently.

Bring your attention to the fingers, relaxing each one in turn.

Then relax the hands. Feel the relaxation moving up the arms, relaxing the wrists, forearms, and then the upper arms.

Allow the shoulders to relax.

Feel the wave of relaxation moving up the neck into the head.

Relax the face and head. Begin with the jaw and let the mouth hang open slightly.

Relax the tongue and the muscles at the back of the throat.

Relax the chin and the cheeks, then the eyes and eyebrows, the forehead, and the scalp.

Finally, relax the brain. All cares and worries are gone.

Allow the mind and body to remain in this state of relaxation for at least 5 minutes more.

KAPALABHATI

Technique

Sit comfortably with your spine erect. Place your hands on the knees, palms open to the sky.

Take a deep breath in.

As you exhale, pull your stomach. Pull your navel in back towards the spine. Do as much as you comfortably can. You may keep your right hand on the stomach to feel the abdominal muscles contract. Pull the navel in.

As you relax the navel and abdomen, the breath flows into your lungs automatically.

Take 20 such breaths to complete one round of Kapal Bhati pranayama.

After completing the round, relax with your eyes closed and observe the sensations in your body.

Do two more rounds of Skull Shining breathing technique (Kapal Bhati pranayama).

NADI SUDDHI

Technique

Sit in any comfortable meditation posture, preferably siddha/siddha yoni asana or padmassana. (Those who cannot sit in a meditation posture may sit against a wall with the legs outstretched or in a chair which has a straight back) Keep the head and spine upright.

Relax the whole body and close the eyes.

Practice yogic breathing for some time.

Adopt nasagra mudra with the right hand and place the left hand on the knees in chin or jnana mudra.

Close the right nostril with the thumb.

In hale and exhale through the left nostril 5 times.

Be aware of each breath.

After 5 breaths release the pressure of thumb on the right nostril and press the left nostril with the ring finger, blocking the flow of air.

Inhale and exhale through the right nostril 5 times, keeping the respiration rate normal.

Lower the hand and breathe 5 times through both nostrils together.

This is one round.

BHRAMARI

Technique

Sit comfortably in any meditative posture.

Inhale slowly and deeply through the nose. Let the inhalation caress the throat area.

Then gently plug the ears with the respective index fingers and closed eyes.

Exhale slowly producing a long and continuous humming sound.

Enjoy the sound and vibrations produced during these breathing techniques.

MEDITATION

Technique

Use a speed that is natural and comfortable: There are many rhythms in the body and mind, both gross and subtle. Imagine the sound of OM, rising and falling, at whatever speed is comfortable and natural. It may be very fast, several cycles per second. Or it may be slower, several seconds for each cycling of OM Mantra. Or it might become extremely slow, with the mmmmmm... sound continuing in the mind for much longer periods, but still pulsing at that slow rate.

Imagine it somewhat like one of these vibrations:

OMmmOMmmOMmm...

OMmmmmOMmmmmOMmmmm...

OMmmmmmmmOMmmmmmmmOMmmmmmmm...

3.12 NATUROPATHY PRACTICES

ENEMA

Enema is an injection of fluid into the rectum. This is also known as rectal irrigation.

Requisites: Enema can.

Water temperature: Only lukewarm water.

Technique

Fill the enema can with lukewarm water and smear nozzle with oil or Vaseline.

Lie on the right, extending the right leg and folding the left leg at a right angle.

Introduce nozzle in the rectum and raise the can to a height of 3 inches. The water enters the rectum.

Retain water for 5-10 minutes

MUDPACK

Mud therapy is very simple and effective treatment modality. The mud used for this should be clean and taken from 3 to 4 ft. depth from the surface of the ground. There should be no contamination of stone pieces or chemical manures etc. in the mud.

Technique

Place the cleaned, soaked mud on a muslin cloth and prepare a pack of 10" (length) x 6" (breadth) x 1" (thickness).

Place on the abdomen for 20 minutes.

HIP BATH

Requisites: Hip bath tub, a moderately coarse cloth (the size of a handkerchief).

Water Temperature: 32–36°C.

Duration: 15 minutes, unless otherwise indicated.

Technique

The tub should be filled with cold water enough to cover the hips and reaching up to the navel of the patient when he sits in it.

Generally four to six gallons of water are necessary. If the patient feels chill or when the climate is very cold or if the patient is very weak, a hot foot bath should be given along with the cold hip bath.

The patient should gently rub the abdomen around the navel in clockwise direction with a coarse cloth. This should be continued during the entire period of the bath. It is important that the legs, feet and the upper part of the body should be thoroughly dry and should not get wet during and after the bath.

Wear shoes before entering the bath. After the cold hip bath, the patient should undertake moderate exercise like brisk walking, yogasanas, suryanamaskaras etc. If he is very weak, he should lie down in bed covering a blanket.

SUN BATH

Sunlight therapy has been known to mankind for centuries. Benefits of Sunlight therapy were initially recognized in Ancient text (Vedas). Modern science later confirmed benefits of sunlight on human health and proved its disease fighting properties. One can easily obtain sunlight through any of the following techniques of Sunbath:

Technique

Cover your head with a wet towel, take off clothes and let sunlight on all your body parts by either lying down or sitting in the sun. It is advisable to expose your body to mild and not harsh sunlight as harsh sunlight could damage skin. Enjoy sunbath for fifteen to twenty minutes. Once u start sweating, bathe in cold water and thereafter take rest.

With no clothes on, cover your entire body with a dry towel and enjoy sunbath for 15-20 minutes.

With no clothes on, let sun rays fall on your body. During the sunbath, keep applying water on your body parts using a brush.

Enjoy oil massage while taking sunbath.

Lie down in sun and cover your entire body with banana leaves. This is the best method of sunbathing.

Wrap a wet towel on your naked body and lie down in the sun.

Cover your entire body with mud pack and lie down in the sun for 15-20 minutes.

FASTING

Fasting therapy is one of the most ancient customs. This is nature's oldest, most effective and yet least expensive method of treating diseases, recognised as the achievement of natural healing.

Rules and Regulations of fasting

Patients positive mental and emotional attitude is necessary.

Complete rest – physical, mental and sensory is essential. All activities should be reduced to minimum.

Sufficient amount of clean filtered water should be taken during fast.

Sunbath is advisable.

Patient is advised to take enema during fast.

Crisis like headache, weakness, nausea should be handled with care.

Long fasting should be done under expert's guidance.

Breaking the fast

The ideal moment to break the fast when 'true hunger' returns with symptoms like clear tongue, breath becomes sweet, clean taste in mouth, clear urine, glowing face with sparkling eyes, freshness with full energy. There are signs that body has completed its cleansing and ready to resume eating.

Fasting should be broken gradually. After water fast, start with fruits and vegetable juices, salads, sprouts and then one can switch on to normal cooked diet. Fasting in itself is not a cure but it enables the body organs and recuperative forces to turn their full energies upon the problem to be corrected. This is the great secret power within.

3.13. TEST ADMINISTRATION

3.13.1. PHYSIOLOGICAL VARIABLES

a). RESTING PULSE RATE

Purpose : To measure the Pulse rate.

Equipment : Digital pulse measuring apparatus.

Procedure : The subject will be seated on the chair and pulse is recorded from the brachial artery from arm through apparatus.

Scoring : Normal Score is 72 pulses per minute.

b). BLOOD PRESSURE

Purpose : To measure the Blood pressure.

Equipment : Digital Blood pressure measuring apparatus.

Procedure : Blood pressure will be measured by Digital Blood pressure measuring apparatus. It involves a pressure cuff. The cuff was placed around the subject's upper arm approximately at heart level. Systolic blood pressure was found by listening to the flow of blood just below the cuff. As the cuff pressure was gradually reduced, the pressure at which the sounds disappear or becomes muffled, was recorded as diastolic blood pressure. The difference between systolic and diastolic is referred to as the blood pressure.

Scoring : Normal score is 120/80 mmHg

3.13.2. BIOCHEMICAL VARIABLES

Collection of Blood Sample

Each subject's blood was collected in the morning (before food) in a chemically clean and sterile container. Containers were thoroughly rinsed and dried after washing. The container was labeled with code numbers corresponding to each of the subject.

EDTA (Disodium and dipotassium) salts acting as anticoagulants were used in each container prior to blood collection. The vein of arm was punctured by dry disposable syringes; the experts collected the total blood sample (3 ml.). The subject sat on a chair by extending his arm at the corner of a table. Both the subject and the operator were comfortable and there was a sufficient light in the room. Material for cleaning the arm, tourniquet, containers for placing blood and other equipments were conveniently made ready. The subject rolled up both sleeves in order that the best vein was selected. The operator made sure that there were no armbands or that the sleeves were not so tight that they act as tourniquets. Since the selection of larger veins palpated in the antecubital region was more satisfactory, the puncture of

superficial veins (which are loosely fixed and tend to roll away from the needle) and cord-like veins (which are usually thromboses) was avoided.

Devices to increase the amount of blood in the arm and to distend the veins were:

Placing of a tourniquet around the arm above the elbow.

Having open and close fist; Massaging arm

Slapping or thumping the arm at the site of puncture; Immersed the arm in warm water for 5 or more minutes previous to puncture.

The skin was then cleaned with 70% alcohol. (For the collection of blood for culture, the alcohol should be preceded by iodine). Since it was a routine analysis, iodine was not used. After cleaning the site, the tourniquet was tightened and the subject closed the fist. The needle was attached tightly with the syringe, air was expelled from it and the syringe was held between the thumb and forefinger. Holding the level of the needle up for large veins and down for small veins the skin below the site of puncture was fixed with the thumb of the other hand. Holding the needle at an angle 45° (approximately) it was entered about one cm below the site of the intended vein entry. After going through the skin, the syringe was lowered and advanced more nearly parallel to the vein until the lumen was entered. On entering; the vein aspirated with the pulling of the plunger back with the left hand. After sufficient blood had been removed the tourniquet was loosened and the subject opened the fist. By placing a pledget of dry cotton over the site of puncture the needle was withdrawn. The subject was asked to hold the pledget on firmly for several minutes. The needle was removed from the syringe and the blood ejected carefully into the receptacle, allowing the blood to run down the inside of the container to avoid foaming which could cause hemolysis.

3.13.3. PSYCHOLOGICAL VARIABLES

a). STRESS

Purpose : To assess the stress level of the subjects

Equipment : Latha Sathis` s stress questionnaire

Procedure : Questionnaire describing 52 events which causes mental stress was given to the subjects and they were asked to fill yes or no along with the level of control exercised by them over event. Level of control of is assessed in three groups complete control, Partial control and no control.

Scoring : If 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 is stress is rived taking into account of the score obtained by the subject. Lower the score is considered as less stress and vice versa.

b). JOB SATISFACTION

Purpose : To measure the Job Satisfaction.

Equipment : Job Satisfaction Scale – Bubey, B.L., Uppal.K.K and Verma S.K. (1989)

Procedure : This questionnaire consists of 25 items and can be administered in an individual setting or group setting. The subject is seated comfortably. Read each statement carefully and understand the meaning of each statement. Find the statement suitable for you; put a tick mark in the corresponding column adjacent to each statement.

The experimenter should take care to see that the subject completes the questionnaire in 20 to 25 minutes.

Scoring : The items are scored on a 5 point scale from 0 to 4 as given below

RESPONSE	SCORE
Strongly agree	0
Agree	1
Undecided	2
Disagree	3
Strongly disagree	4

The scores can be summed up for all the 25 statements in order to arrive at a single total score for an individual. Low scores indicate satisfaction and high scores indicate dissatisfaction.

3.14. COLLECTION OF DATA

To achieve this purpose, three groups consisting 30 subjects were selected. Group 'A' treated with Yogic Practices, Group 'B' treated with Naturopathy Practices and Group 'C' with no practices for twelve weeks. After the treatment period all patients were tested on selected criterion variables at different stages such as pre and post test.

3.15. STATISTICAL TECHNIQUE

The Analysis of covariance (ANCOVA) was used to find out the pre test and post test significance difference among three groups and to find out the paired mean differences, Scheffe's post hoc test was used.