

CHAPTER III

METHODOLOGY

In this third chapter (methodology) deals in selection of (subjects & variables), experimental design, reliability of data, training (schedule & program), collection of data and statistical technique were used in this chapter.

SELECTION OF SUBJECTS

Totally Forty five (45) (men with andropause) were selected randomly as subjects from various hospitals at Chennai. Totally sixteen weeks (16) training were given of (yogic training with and without diet) to the subjects.

All the subjects were assigned to totally three groups namely two experimental group I, II and control group (not undergone any training) each group consists of 15 subjects. Following Group – I - Experimental Group ‘I’ (YPWDM) and Group – II Experimental Group ‘II’ (YPWODM) control group (no training) was provided to group ‘III’

Group -I - Experimental Group - I - (Yogic training with diet - YPWDM)

Group – II - Experimental Group -II - (Yogic training not with diet modifications - YPWODM)

Group III - (Control group, No training was provided)

SELECTION OF VARIABLES – (Independent & Dependent)

SELECTION OF THE DEPENDENT VARIABLES

Physical & Physiological Variables	Psychological Variables
1. Flexibility	1. Stress
2. Systolic blood pressure	2. Anxiety
3 Body Mass index	3. Self confidence
4. Respiratory Rate	

INDEPENDENT VARIABLES

Experimental Group -I - (Sixteen weeks of yogic training with diet)

Experimental Group -II - (sixteen weeks of yogic training not with diet)

EXPERIMENTAL DESIGN

The random group design was used fifteen subjects in each group for this study was divided into group 1, 2 & 3 at randomly. The pre and final test random group design was used for analysis of the data and experimental Group 'I' (YPWDM) and experimental Group 'II' (YPWODM) control group (no training) was provided to group 'III'. The training program was scheduled at 6.30 to 7.30 a.m.

PILOT STUDY

The Pilot study was conducted to assess the initial capacity of the subjects in order to fix the intensity and fifteen men with andropause persons and their difficulties were noted and rectified. The calculated intra-class correlation of the pilot there was significant changes (increase & decrease) in health related (dependent variables such as physical physiological and psychological variables). This enabled the investigator to adopt suitable training schedule for the study.

CRITERION MEASURES

TABLE 1

CRITERIAN MEASURES

VARIABLES	CRITERIAN MEASURES	INSTRUMENT USED
Flexibility	centimeters	Sit and reach test
Body Mass Index	Standard Formula	Stadiometer, weighing machine.
Blood pressure (Systolic)	mm/hg	B.P monitor (Citizen make digital).
Respiratory rate	breaths per minute	Digital Stop Watch
Anxiety	Scores in Numbers	Anxiety Questionnaire developed by Spielberger
Self confidence	Scores in Numbers	(Rekha Agnihotry) questionnaire.
Stress	Scores in Numbers	Stress questionnaire constructed by Dr.Latha Satish (1997) consisting of 52 questions.

RELIABILITY OF DATA

It was confirmed that by using the very (standard instruments & equipments) and by establishing the tester's competency and subject reliability.

RELIABILITY OF INSTRUMENT

The swiss made stop watches calibrated were used in this study for recording the timings and this stop watch times were compared with other watches in different situations and they were considered reliable. Citizen equipments was used to assess the systolic blood pressure and stadiometer and weighing machine were used in the BMI to measure the tests. All the instruments used were standard and therefore their calibrations were accepted accurate enough for the purpose of the study.

TESTERS RELIABILITY & COMPETENCY

The Reliability & competency was established by the test-retest processes Three men from andropause from the both experimental and control groups were selected (dependent variables such as physical, physiological & psychological variables). The repeated measurement of individuals on the same test is done to determine reliability. It is univariate not a bivariate situation, it makes sense then to use a univariate statistics like the interclass correlation coefficient.

TABLE 2

**INTRA CLASS CORRELATION COEFFICIENT OF (TEST – RETEST
SCORES)**

Sl. No.	VARIABLES	COEFFICIENT OF CORRELATION
1.	Flexibility	98
2.	Body Mass Index	98*
3.	Systolic blood pressure	99*
4.	Respiratory rate	97*
5.	Anxiety	98*
6.	Self confidence	99*
7.	Stress	97*

* Significant at 0.05 level

As for psychological variables (dependent variables) -Stress, Anxiety & Self-confidence), the authors of the three psychological variables questionnaire have determined reliability and the same was adapted for this study and considered as reliable.

SUBJECT RELIABILITY

The interclass correlation value of the test retest also indicated subjects reliabilities as the same subjects (men with andropause) were used, and also under similar condition by same tester. The sample of subjects (men with andropause) were measured in all dependent variables. The coefficient of reliability was significant at 0.05 level. So it would be considered as reliable.

3.10. SUBJECTS ORIENTATION

Yogic training with and without diet were selected only with co-operation of the subjects (men with andropause). The varied yogic practices briefly explained and the value of it and demonstrate firstly by the research scholar and then confirmed so as to obtain the (reliable data) from the pre and post tests.

TRAINING PROGRAMME

The subjects were selected at random and were divided into three groups and the Experimental Group 'I' (yogic training with diet YPWDM) and Experimental Group 'II' yogic training mot with diet - (YPWODM) at 6.00 am to 7.30 am and the group III was control group (no training).

TABLE 3

TRAINING PROGRAMME FOR EXPERIMENTAL GROUPS

GROUPS	PROGRAMMES
Experimental Group - I	yogic training with diet.
Experimental Group - II	yogic training without diet.
Control Group	No training

**TRAINING SCHEDULE OF EXPERIMENTAL GROUP – I (Yogic
training with diet) Training Programme**

TABLE 4

**(TRAINING SCHEDULE) - EXPERIMENTAL GROUP I, II FOR I TO VI
WEEKS**

Sl. No.	Yogic Practices	Frequency	Repetition or round	Duration	Rest	Total Duration
1	Seated breathing	I four weeks	Two rounds	160 sec	20 sec	3 minutes
2	Standing breathing	-do-	Two rounds	160 sec	20 sec	3 minutes
3	Standing alternate Front arm raise	-do-	Six pairs	160 sec	20 sec	3 minutes
4	Standing alternate Side arm raise	-do-	Six pairs	160 sec	20 sec	3 minutes
5	Standing overhead finger lock	-do-	Six times	100 sec	20 sec	2 minutes
6	Standing side raise both arms	-do-	Six times	100 sec	20 sec	2 minutes
7	Stand & Squat	-do-	Six times	90 sec	30 sec	2 minutes
8	Tadasana	-do-	Six times	160 sec	30 sec	3 minutes
9	Uttanasana	-do-	Six times	230 sec	30 sec	4 minutes
10	Cakravakasana	-do-	Six times	110 sec	10 sec	2 minutes
11	Shavasana	-do-	REST			2 minutes
12	Jatara Parivrtti	-do-	Six pairs	110 sec	10 sec	2 minutes
14	Apanasana	-do-	Six times	110 sec	10 sec	2 minutes
15	Shavasana	-do-	REST			2 minutes
16	Lying breathing	-do-	Four rounds	280 sec	20 sec	5 minutes
17	Sitali / Sitkari	-do-	Four rounds	330 sec	30 sec	6 minutes
18	Chanting	-do-	Two rounds	180 sec	60 sec	4 minutes
19	Shavasana		Relaxation			5 minutes

TABLE 5

**TRAINING SCHEDULE OF EXPERIMENTAL GROUP I, II for VII TO XII
WEEK**

Sl.No.	Yogic Practices	Frequency	Repetition or round	Duration	Rest	Total duration
1	Seated breathing	4-8th week	Two rounds	160 sec	20 sec	3 minutes
2	Standing alternate Side arm raise	-do-	Six pairs	110 sec	10 sec	2 minutes
3	Standing overhead finger lock	-do-	Six times	50 sec	10 sec	1 minute
4	Standing side raise both arms	-do-	Six times	50 sec	10 sec	1 minute
5	Stand & Squat	-do-	Six times	50 sec	10 sec	1 minute
6	Tadasana	-do-	Six times	110 sec	10 sec	2 minutes
7	Virabhadrasana	-do-	Six times per leg	230 sec	10 sec	4 minutes
8	Uttanasana	-do-	Six times	170 sec	10 sec	3 minutes
9	Vajrasana to Cakravakasana	-do-	Six times	280 sec	20 sec	5 minutes
10	Shavasana	-do-	REST			1 minute
11	Jatara Parivrtti	-do-	Six pairs	110 sec	10 sec	2 minutes
12	Apanasana	-do-	Six times	110 sec	10 sec	2 minutes
13	Ekapadha Urdhva Prasrtapadhasana	-do-	Six times per leg	230 sec	10 sec	4 minutes
14	Shavasana	-do-	REST			2 minutes
15	Lying breathing	-do-	Four rounds	280 sec	20 sec	5 minutes
16	Sitali / Sitkari	-do-	Four rounds	170 sec	10 sec	3 minutes
17	Anuloma Pranayama	-do-	Four rounds	330 sec	30 sec	6 minutes
18	Chanting	-do-	Two rounds	120 sec	60 sec	3 minutes
19	Shavasana		Relaxation			5 minutes

TABLE 6

**TRAINING SCHEDULE OF EXPERIMENTAL GROUP I, II for XIII TO XVI
WEEK**

Sl. No.	Yogic Practices	Frequency	Repetition or round	Duration	Rest	Total duration
1	Seated breathing	9-12th week	Six times	50 sec	10 sec	1 minutes
2	Tadasana	-do-	Six times	110 sec	10 sec	2 minutes
3	Parsva Uttanasana	-do-	Six times per leg	230 sec	10 sec	4 minutes
4	Virabhadrasana	-do-	Six times per leg	170 sec	10 sec	3 minutes
5	Uttanasana	-do-	Six times	110 sec	10 sec	2 minutes
6	Trikonasana Parivrtti	-do-	Six pairs	170 sec	10 sec	3 minutes
7	Vajrasana Vinyasa	-do-	Three rounds	280 sec	20 sec	5 minutes
8	Shavasana	-do-	REST			2 minutes
9	Dvipada pitham	-do-	Six times	110 sec	10 sec	2 minutes
10	Urdhva Prasrtapadasana	-do-	Six times	110 sec	10 sec	2 minutes
11	Bhujangasana	-do-	Six times	110 sec	10 sec	2 minutes
12	Apanasana	-do-	Six times	110 sec	10 sec	2 minutes
13	Cakravakasana	-do-	Six times	110 sec	10 sec	2 minutes
14	Shavasana	-do-	REST			2 minutes
15	Lying breathing	-do-	Three rounds	230 sec	10 sec	4 minutes
16	Sitali / Sitkari	-do-	Two rounds	170 sec	10 sec	3 minutes
17	Nadisuddhi Pranayama	-do-	Twelve Cycles	330 sec	30 sec	6 minutes
18	Chanting	-do-	Two rounds	120 sec	60 sec	3 minutes
19	Shavasana		Relaxation			5 minutes

DIET SCHEDULE (ADVISABLE)

BREAKFAST - RECOMMENDED

- Half shell of coconut+jiggery+two banana
- 3 or 4 idlies with cocnut chutney
- 2 or 3 ragi adadi/dosai
- Dosa mixing of drumstick leaves and onion with coconut chutney
- Idiappam with cocnut milk +3 piece of dates.
- Any one of the above item recommended for break fast.

LUNCH - RECOMMENDED

- Normal Rice without any fried. And with some fruits.

DINNER (RECOMMENDED) before 8. pm.

- One cup of vegetable soup + 2 or 3 chapathi with any curry.
- One cup of vegetable salad + one cup of aval uppuma/aval puttu
- 2 or 3 kambu dosa + one cup of green chutney

TRAINING PROGRAMME

The two experimental group training was based on the practice module consisted of a course of starting prayer to ending prayer emphasis is on using components of breath appropriate to the activity. Further, primarily the functional aspect of yogic practices is insisted rather than striving to achieve the ideal physical form. The training group's subjects were impressed upon the need to take part in each session with involvement to derive the best benefits. The advantage of developing awareness of the state of one's body, breath and mind during practice was also reinforced.

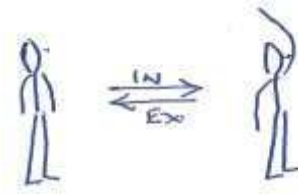
SITILIKARANA VYAYAMA

INSTRUCTIONS

- Keep all joints loose - wrist, elbow, shoulder
- Ensure that the body is relaxed at all times
- Avoid jerky and hasty movements
- Co-ordinate movement and breathing
- Pause between each component of breath
- Breathe slowly and deeply
- Keep eyes open

Standing alternate front arm raise

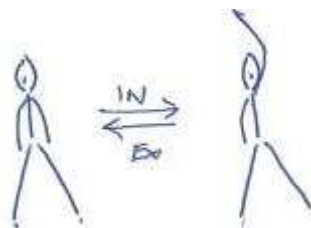
Figure 7



- Stand erect with feet together and arms by the sides
- On **INHALATION** raise left arm from front so that palm is above head facing front
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring left arm down by the side of the body
- **PAUSE** after completion of exhalation
- On **INHALATION** raise right arm from front so that palm is above head facing front
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring right arm down by the side of the body
- **PAUSE** after completion of exhalation
- Repeat left and right arm alternately in pairs

Standing alternate side arm raise

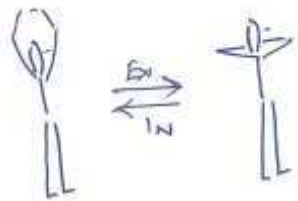
Figure 8



- Stand erect with feet wide apart and arms by the sides
- On **INHALATION** raise left arm from side so that arm is across ear
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring left arm down by the side of the body
- **PAUSE** after completion of exhalation
- On **INHALATION** raise right arm from side so that arm is across ear
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring right arm down by the side of the body
- **PAUSE** after completion of exhalation
- Repeat left and right arm alternately in pairs

Standing Overhead finger lock

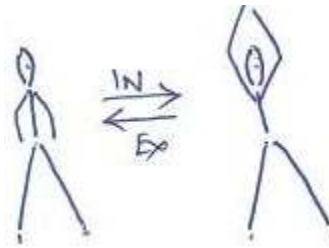
Figure 9



- Stand erect with feet wide apart and arms by the sides
- Raise both arms from sides and interlock fingers above head
- Rotate wrists and turn out both palms with elbows stretched out
- On **EXHALATION** bend elbows bringing back of palms over nape region
- **PAUSE** after exhalation
- On **INHALATION** stretch out elbows so that palms face roof above head
- **PAUSE** after inhalation
- Repeat few times

Standing side raise both arms

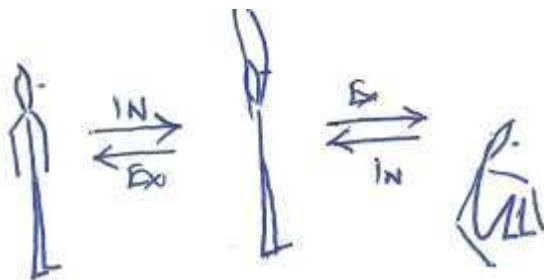
Figure 10



- Stand erect with feet wide apart and arms by the sides
- On **INHALATION** raise both arms from sides until arms are across ears
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring both arms down by the side of the body
- **PAUSE** after completion of exhalation
- Repeat a few times

Stand & Squat

Figure 11



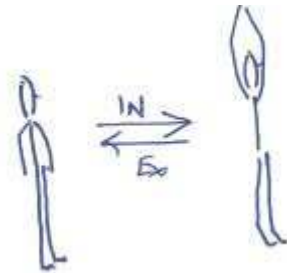
- Stand erect with both feet slightly apart and arms by the sides
- On **INHALATION** raise both arms up from front
- **PAUSE** after completion of inhalation
- On **EXHALATION** squat by bending knees while bringing both arms to the floor by the sides of the feet, now body weight is on both feet
- **PAUSE** after completion of exhalation

- On **INHALATION** come up to vertical position by raising both arms up from front
- **PAUSE** after completion of inhalation
- On **EXHALATION** bring both arms down by the sides of the body
- **PAUSE** after completion
- **REPEAT** few times

ASANAS

Tadasana

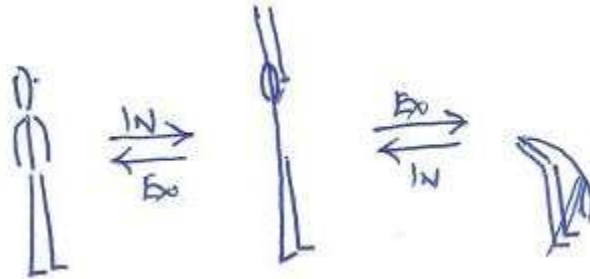
Figure 12



- Stand erect keeping legs together, Feet slightly apart
- Arms by the sides of body
- Look straight
- On **INHALATION** gradually raise arms from sides
- Palms should be joined facing each other
- Simultaneously raise heels and stand on toes
- On **EXHALATION** bring arms down from sides
- Simultaneously bring heels to the floor and return to the starting position.

Uttanasana

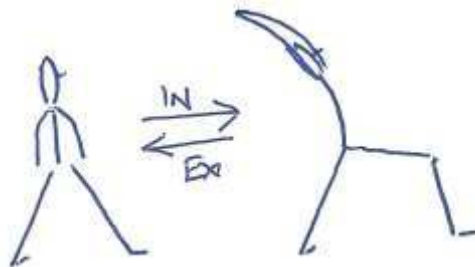
Figure 13



- Stand erect with legs together, arms by the sides and chin down
- On **INHALATION** slowly raise both arms from front
- At this point, arms are across ears with palms facing forward
- On **EXHALATION** bend forward from trunk
- Place palms on either sides of feet on the ground
- On **INHALATION** come up slowly with arms leading the movement
- Back to the vertical position with arms across ears
- On **EXHALATION** bring arms down from front
- Back to the normal position.

Virabhadra – asana

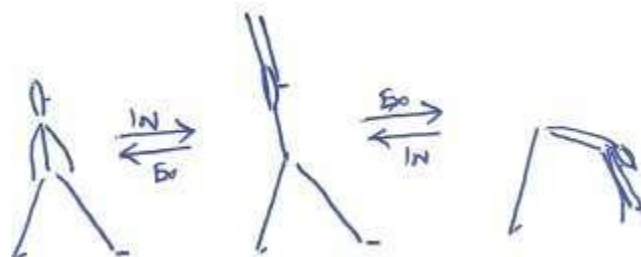
Figure 14



- Stiti tadaasana.
- Place left leg one stride forward. Now legs are apart with right leg behind.
- Turn the right foot outward for the sake of balance
- Align the body so that trunk is facing the front leg
- On **INHALATION** while raising arms from front slowly bend left knee arch the back and move arms until across ears then join palms
- On **EXHALATION** bring arms down from front while restoring left leg to starting position by making knee straight and trunk remains erect
- Bring left leg back so that both feet are together by turning right foot to normal position
- Repeat the asana with right leg forward the same no. of times

Parsva Uttanasana

Figure 15

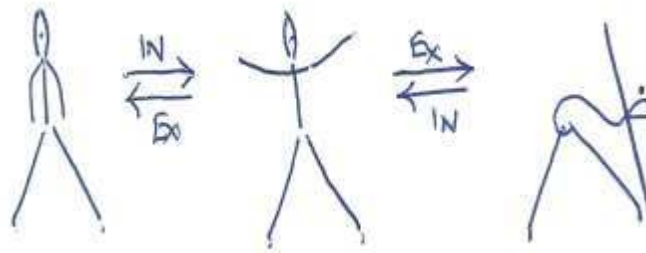


- Stand erect with feet together and arms by the sides
- Place left leg one stride forward. Now legs are apart with right leg behind.
- Turn the right foot outward for the sake of balance
- Align the body so that trunk is facing the front leg
- On **INHALATION** raise both arms from front so that arms are across ears with palms facing forward and the trunk remains erect

- On **EXHALATION** slowly bend forward from trunk placing palms on either side of front foot with head tucked towards front knee
- On **INHALATION** move up to erect position with arms leading the movement
- On **EXHALATION** slowly bring both arms down to the starting position
- Bring left leg back so that both feet are together with right foot in normal position
- Repeat the asana with right foot forward the same no. of times.

Trikonasana Parivrtti

Figure 16

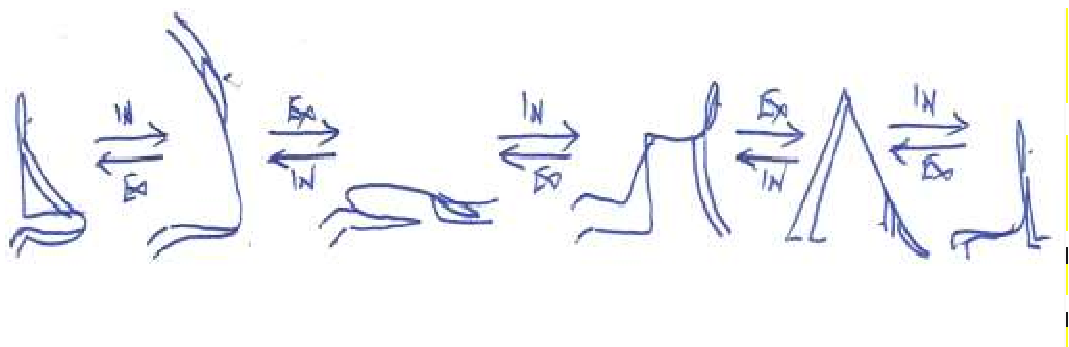


- Stand erect with feet together and arms by the sides
- With the left leg take one stride laterally to the left
- Now both feet are wide apart but in the same straight line
- On **INHALATION** raise both arms from sides upto shoulder level keeping elbows straight and palms facing the floor
- On **EXHALATION** twist the trunk to the left and bend towards the left leg, place right palm on the floor outside the left foot with fingers pointing forward, left arm is extended upward with fingers pointing to roof and palms facing forward, turn head to look over the left shoulder at the extended left palm

- On **INHALATION** untwist slowly and come back to the erect position with arms at shoulder level and palms facing floor
- On **EXHALATION** twist the trunk to the right and bend towards the right leg, place left palm on the floor outside the right foot with fingers pointing forward, right arm is extended upward with fingers pointing to roof and palms facing forward, turn head to look over the right shoulder at the extended right palm
- On **INHALATION** untwist slowly and come back to the erect position with arms at shoulder level and palms facing floor
- On **EXHALATION** bring arms down slowly so that arms are beside the body
- This asana is repeated to the left and right sides alternately in pairs
- After completing the specific no. of pairs bring left foot close to right foot to come back to normal standing position.

Vajrasana vinyasa

Figure 17

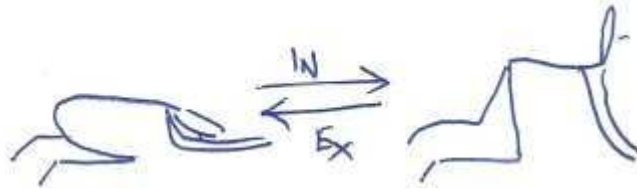


- Kneel down with knees apart, sit on heels with toes turned outward, keep back erect place palms over knees
- On **INHALATION** while rising on knees raise arms from front till arms are across ears with palms facing forward

- On **EXHALATION** bend forward from trunk keeping arms stretched out in line with shoulders and forehead close to floor
- On **INHALATION** raise hip, move forward until thighs are straight and look up while arching the back i.e., *Cakravakasana*
- On **EXHALATION** stand up with feet and palms firmly on the ground, raising the trunk and head tucked between arms i.e., *Adhomukhasvanasana*
- On **INHALATION** bring hip down close to floor so that legs are parallel to ground, upper body is upright and face looking up, body weight on base of toes and palms i.e., *Urdhvamukhasvanasana*
- On **EXHALATION** bend elbows bring trunk down with body parallel to floor, body weight continues to be on base of toes and palms i.e., *Caturangadandasana*
- On **INHALATION** return to *Urdhvamukhasvanasana*
- On **EXHALATION** return to *Adhomukhasvanasana*
- On **INHALATION** return to *Cakravakasana*
- On **EXHALATION** return to forwarding bending posture
- On **INHALATION** return to standing on knees with arms raised posture
- On **EXHALATION** return to *Vajrasana*.
- This completes one round of vinyasa. After completing a few rounds of practise take rest in lying position.

Cakravakasana

Figure 18



- Kneel down with knees apart, sit on heels with toes turned outward
- Bend forward from trunk keeping arms stretched out in line with shoulders and forehead close to floor
- On **INHALATION** raise hip, move forward until thighs are straight and look up while arching the back
- On **EXHALATION** slowly move hip towards heels and look down
- Repeat a few times

Shavasana - Resting posture

Figure 19

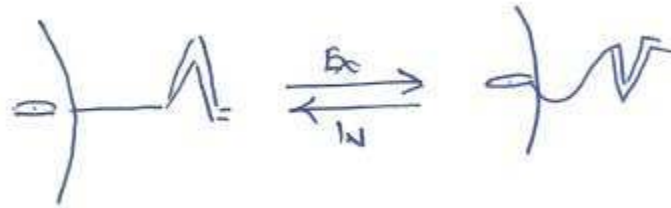


- Lie down on a mat in supine position (with back to floor)
- Legs stretched out keeping feet apart
- Arms on the sides slightly away from body with palms open resting on floor
- Eyes closed
- Breathe normally and relax

- Mentally do a count down from 60 to 1
- Sense the stillness of mind, lightness of body and overall relaxation

Jataraparivrtti

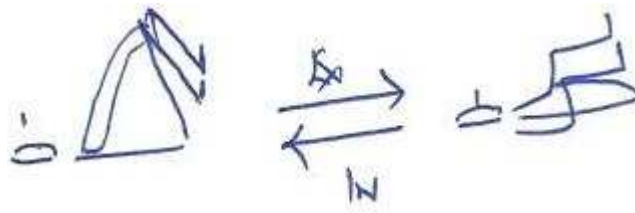
Figure 20



- Lie down on a mat in Shavasana
- Join legs so that both feet are together
- Keep both legs bent at knees with soles of feet firmly on floor
- Open out both arms up to shoulder level on either side with palms facing floor
- Keep head still looking at roof, gently close eyes
- On **EXHALATION** slowly slant both knees towards right side close to floor
- On **INHALATION** bring back knees to vertical position
- On **EXHALATION** slowly slant both knees towards left side close to floor
- On **INHALATION** bring back knees to vertical position
- This asana is repeated on the right & left side alternately, in pairs
- After few repeats resume Shavasana.

Apanasana

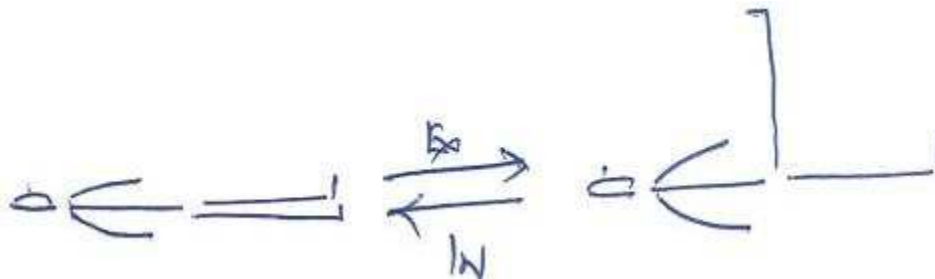
Figure 21



- Lie down on a mat in Shavasana
- Bend both legs at knees with soles of feet on ground
- Place palm over each knee
- Raise feet off the floor while holding the knees
- Hip is on the floor
- Keep arms stretched out at elbows
- On **EXHALATION** bring knees close to chest by bending both elbows
- On **INHALATION** move knees away so that elbow are straight
- Repeat few times
- Come back to Shavasana.

Ekapada Urdhva Prasrtapadasana

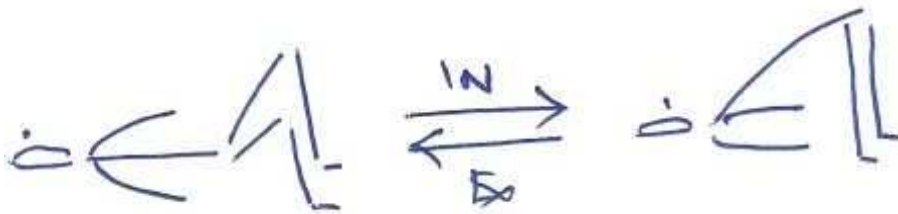
Figure 22



- Lie down on a mat in Shavasana
- Join legs so that feet are together
- Arms on floor by the side of body with palms facing down
- On **EXHALATION** raise the left leg up, perpendicular to the body
- Ensure that the right leg remains on the floor
- On **INHALATION** slowly place left leg on the floor
- On **EXHALATION** raise the right leg up, perpendicular to the body
- Ensure that the left leg remains on the floor
- On **INHALATION** slowly place right leg on the floor
- Repeat few times raising right and left leg alternately
- Resume Shavasana.

Dvipada Pitham

Figure 23

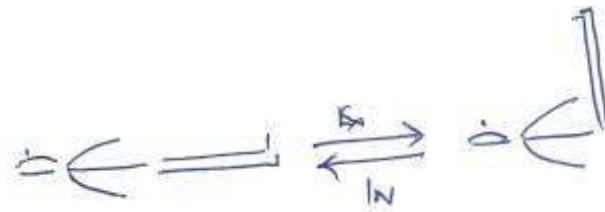


- Lie down on a mat in Shavasana
- Join legs so that both feet are together
- Bend both legs at knees with soles of feet firmly on floor
- Arms on floor by the side of body with palms facing down
- Place feet apart creating space between legs

- On **INHALATION** slowly raise hip with feet and arms remaining on floor
- On **EXHALATION** gradually bring hip down to the floor
- Repeat few times
- Resume Shavasana.

Urdhva Prasrtapadasana

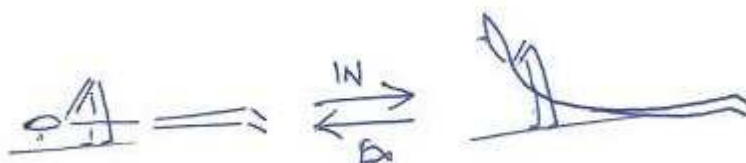
Figure 24



- Lie down on a mat in Shavasana
- Join legs so that feet are together
- Arms on floor by the side of body with palms facing down
- On **EXHALATION** raise both legs up, perpendicular to the body
- Ensure that both arms and trunk remain on the floor
- On **INHALATION** slowly bring both legs to the floor
- Repeat few times
- Resume Shavasana.

Bhujangasana

Figure 25

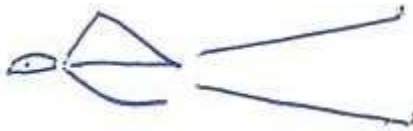


- Lie down on a mat in prone (on abdomen) position
- Bend both arms at elbows and place palms on floor on either side of chest
- On **INHALATION** raise the upper body without transferring weight to palms
- Arch the dorsal spine with neck go back side.
- And the full body keep the navel to touch towards the ground
- On **EXHALATION** come back to starting position
- Relax in Shavasana.

ABDOMINAL BREATHING PRACTICE

LYING ABDOMINAL BREATHING

Figure 26

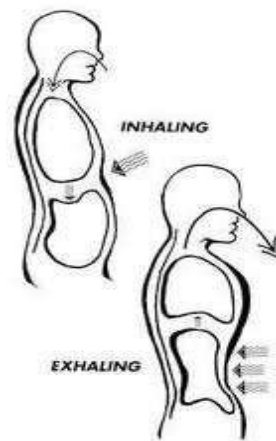


- Lie down in Shavasana
- Body is completely relaxed
- Place left palm over abdomen
- Right arm is gently placed over chest
- **INHALATION** is by expanding chest from upper region downwards which allows rib cage to expand, moves diaphragm down and abdomen bloats
- **EXHALATION** begins at lower abdomen that is gradually contracted in allowing the diaphragm to restore normal position and the chest relaxes

- During **INHALATION** be aware of rising movement of right palm as chest expands first, thereafter the left palm moving out as abdomen bloats
- During **EXHALATION** be aware of left palm moving inwards as abdomen contracts first, thereafter the right palm sinks in as chest relaxes
- Repeat 6 times and rest for a minute
- Continue until breathing technique becomes easy
- Then practice keeping duration of Inhalation & Exhalation equal.

SEATED ABDOMINAL BREATHING

Figure 27



- Sit down in a comfortable posture- Sukhasana/Padmasana/Vajrasana
- Keep the spine erect and body relaxed
- Place left palm over abdomen
- Right palm over chest
- **INHALATION** is by expanding chest from upper region downwards which allows rib cage to expand, spine straightens, moves diaphragm down and abdomen bloats
- **Pause** for a second, a period of interval between inhalation and exhalation

- **EXHALATION** begins at lower abdomen that is gradually contracted in allowing the diaphragm to restore normal position, spine curvature restores and the chest relaxes
- **Pause** for a second, a period of interval between exhalation and inhalation
- During **INHALATION** be aware of rising movement of right palm as chest expands first, thereafter the left palm moving out as abdomen bloats
- During **EXHALATION** be aware of left palm moving inwards as abdomen contracts first, thereafter the right palm sinks in as chest relaxes
- Repeat 6 times and rest for a minute
- Continue until breathing technique becomes easy
- Then practice keeping duration of Inhalation & Exhalation equal.

PRANAYAMA

Sitali

Figure 28

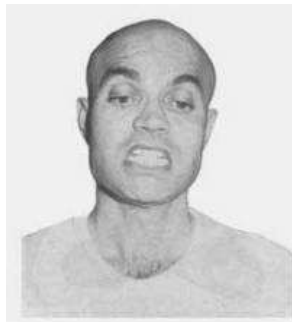


- Sit down in a comfortable posture- Sukhasana/Padmasana/Vajrasana
- Keep the spine erect, body relaxed and eyes closed
- Place palms over each knee
- Open mouth and roll tongue so that tongue is slightly protruding out
- Breathing technique used is abdominal breathing

- **INHALE** slowly through mouth with air passing through rolled tongue
- Check whether abdomen bloats up gradually with inhalation
- Close mouth after completing Inhalation
- **PAUSE** for a second as an intermission between inhalation and exhalation
- **EXHALE** slowly through both nostrils while continuing to keep mouth closed
- Ensure that abdomen contracts gradually with exhalation
- **PAUSE** for a second as an intermission between exhalation and inhalation
- Repeat few times until comfortable with technique
- Then practice keeping duration of inhalation and exhalation equal

Sitkari

Figure 29



- Sit down in a comfortable posture- Sukhasana/Padmasana/Vajrasana
- Keep the spine erect, body relaxed and eyes closed
- Place palms over each knee
- Open lips with teeth clenched and tongue slightly protruding out
- Breathing technique used is abdominal breathing

- **INHALE** slowly through mouth with air hitting surface of tongue
- Check whether abdomen bloats up gradually with inhalation
- Close mouth after completing Inhalation
- **PAUSE** for a second as an intermission between inhalation and exhalation
- **EXHALE** slowly through both nostrils while keeping mouth closed
- Ensure that abdomen contracts gradually with exhalation
- **PAUSE** for a second as an intermission between exhalation and inhalation
- Repeat few times until comfortable with technique
- Then practice keeping duration of inhalation and exhalation equal

Anuloma Pranayama

Figure 30



- Sit down in a comfortable posture- Sukhasana/Padmasana/Vajrasana
- Keep the spine erect, body relaxed and eyes closed
- Adopt 'Mrgi mudra' with right hand by folding index and middle fingers inwards towards palm while keeping thumb, ring and little fingers stretched out
- Thumb is used to control right nostril

- Ring and Little fingers are used to control left nostril
- Place left hand over left knee in 'Chin mudra', keep palm open with thumb touching tip of index finger
- Abdominal breathing technique to be used
- Prior to commencing pranayama exhale through the both nostrils
- **INHALE** keeping both nostrils open
- **PAUSE** for a second, close right nostril using thumb
- **EXHALE** through left nostril
- **PAUSE** for a second, release thumb
- **INHALE** keeping both nostrils open
- **PAUSE** for a second, close left nostril using ring and little fingers
- **EXHALE** through right nostril
- **PAUSE** for a second, release fingers over left nostril
- This completes one cycle of anuloma pranayama
- Inhalation is through both nostrils and Exhalation through alternate nostril
- Repeat desired no. of cycles. Relax with a few normal breaths.

Nadisuddhi Pranayama

Figure 31



- Sit down in a comfortable posture- Sukhasana/Padmasana/Vajrasana
- Keep the spine erect, body relaxed and eyes closed
- Adopt 'Mrgi mudra' with right hand by folding index and middle fingers inwards towards palm while keeping thumb, ring and little fingers stretched out
- Thumb is used to control right nostril
- Ring and Little fingers are used to control left nostril
- Place left hand over left knee in 'Chin mudra', keep palm open with thumb touching tip of index finger
- Abdominal breathing technique to be used
- Press thumb over the right nostril so that it is fully closed
- Prior to commencing pranayama exhale through the left nostril
- **INHALE** through left nostril while continuing to keep right nostril closed
- Now close left nostril using ring and little fingers
- **PAUSE** for a second, release thumb over right nostril
- **EXHALE** through right nostril while keeping left nostril closed
- **PAUSE** for a second
- **INHALE** through right nostril while keeping left nostril closed
- Now close right nostril
- **PAUSE** for a second, open left nostril
- **EXHALE** through left nostril while keeping right nostril closed
- **PAUSE** for a second
- This completes one cycle of Nadisuddhi pranayama

- Repeat few cycles. Bring right arm down and take a few normal breaths
- After practicing for a few days, repeat keeping inhalation & exhalation equal
- Establish comfort of practice with equal breath ratios
- Thereafter, advanced practices may be attempted progressively with unequal breath ratios
- Inhalation > Exhalation, Exhalation > Inhalation
- Holding breath after Inhalation or Exhalation
- Combination of above, as deemed appropriate.

CHANTING

Chanting can be an effective tool to :

- Improve attention
- Extend exhalation
- Maintain focus
- Sustain interest
- Relax the mind
- Produce calming effect

Methods of employing chants:

- Mono syllables like "Om", "maa"
- Activating chants like "hraam", "hreem"...
- Combination of chants like "Om namaha", "Om namo namaha"
- Appropriate to the belief system

- Instead of exhalation in asana or pranayama
- Conclusion of practice session

DEPENDENT VARIABLES - TEST ADMINISTRATION

PHYSICAL VARIABLE

3.13.2. FLEXIBILITY (SIT AND REACH TEST)

Purpose: To measure the (flexibility).

Equipments: (Yardstick) and (measuring steel tape).

Procedure: To keep the yardstick on floor and tape (18”) put an across the (15”) on (yard stick). The subject (men with andropause) sit near the (O) end of the (yardstick) between the right and left legs. The subject (men with andropause) the both legs heel almost touch the tape at the (15”) and be about (12” inch) apart with the both legs held straight. The subject (men with andropause) bends little forward very slowly and reaches with parallel of both hands as far as possible and to touches the (yardstick). The subject (men with andropause) to hold this reach long enough for the distance to be noted.

Scoring : To do three times trials and the best score recorded in inch.

3. PHYSIOLOGICAL VARIABLES

BLOOD PRESSURE

Purpose:- The purpose of this standardized test was to measure the blood pressure (systolic) at rest.

Equipment:- A Japan made instrument (Citizens) digital portable blood Pressure (systolic & diastolic) monitor.

Procedure:- This test for all the men with andropause were checked in the morning. While taking the blood pressure the subjects (men with andropause) right arm was completely made bare to make certain that the clothes did not compress the blood vessels, and the subject (men with andropause) in a sitting positions. And the instrument was fully automatic also value was recorded.

Scoring:- The systolic blood pressure was displayed on the citizen instrument digital monitor.

BODY MASS INDEX (BMI)

Purpose : (BMI) body mass index was measure of the selected subjects (men with andropause).

Equipment : The measurement instrument was Stadiometer, weighing machine.

Procedure

This is a body mass index calculation tools in our height and weight.

Measurement of height in meters of the subjects (men with andropause) and also

body weight in kilograms of the subject (men with andropause) was measured in kilograms also the body mass index formula was

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

Scoring

The BMI (body mass index) score was taken through this BMI (body mass index) formula.

PHYSIOLOGICAL VARIABLE - RESPIRATORY RATE

Purpose:- Respiratory rate to measure the subject (men with andropause) (n.o of breath / min).

Equipment:- (Standard stop watch).

Procedure:- The subjects (men with andropause) were sitting very relaxed and comfortably. After that researcher to counting the (n.o of breaths / min) and counting the many of the chest raises .

Scoring:- Exact readings were obtained by counting the (n.o of breaths / min).

PSYCHOLOGICAL VARIABLES - 3.14.3.1 (STRESS)

Purpose : Stress was measure to the subjects (men with andropause).

Equipment used : Questionnaire by Dr. Latha Sathish.

Procedure : The questionnaire was administered in group setting and the subjects were made to sit comfortably. The researches has read out and explained the meaning and

were made them tick appropriate sub heads of 1,2,3,or 4.

Scoring : The questionnaire contains 32 statements, each statement had to be rated on a 4 point scale. Items 3,6,7,8,10,20,21,22,25,27,28 and 29 have to be reversed for scoring proposes that is 1 as 4, 2 as 3, 3 as 2 and 4 as 1. and the remaining questions were to be scored as 1 as 1, 2 as 2, 3 as 3 and 4 as 4 marks. The total score for a subject ranges from 30 to 50.

Interpretation.

30 – 37 less stress.

38 – 43 Moderate stress.

44 – 50 Highly stress.

PSYCHOLOGICAL VARIABLE - ANXIETY

Purpose : Psychological variable anxiety was measured through the Spielberger questionnaire.

It was made by Spielberger. And given the Trait Anxiety questionnaire to all subjects (men with andropause). Totally 20 (twenty) items were adopted from (Spielbergers Trait Anxiety questionnaire) for this investigation. The keywords of the questionnaire as follows:

S.No	(Response)	(Positive statements score)	(Negative statements score)
1	Not at all	(1)	(4)
2	Some what	(2)	(3)
3	Moderately so	(3)	(2)
4	Very much	(4)	(1)

(Positive Statements score)	(1,2,5,8,10,11,15,16,19,20)
(Negative Statements score)	(3,4,6,7,9,12,13,14,17,18)

PSYCHOLOGICAL VARIABLE - SELF CONFIDENCE

Purpose :- Evaluate the self confidence level of the subjects (men with andropause).

Equipment :- Rekha Agnihortry (1987) consisting of 52 question.

Procedure :- The subjects (men with andropause) were asked to fill the self confidence questionnaire with two response alternatives viz., 'true' or 'false'.

Scoring :- The self confidence questionnaire contains 56 statements. For questions, a score of one is assigned for a response indicative of lack self confidence. Hence, lower the score, higher would be the level self confidence and vice versa. A score of one is awarded for a response indicative of lack of self confidence,

that is for making cross(X) to wrong response to item numbers, 2,7,23,31,40,41,43,45,53,54,55, and for making cross (X) to right response to the rest of the items. The lower of the score the higher would be the level of confidence and vice versa.

COLLECTION OF DATA

To achieve this purpose both experimental groups and control group consist of 45 subjects, each group have 15 subjects each were selected at random the first (experimental group I) were treated with (Yogic training with diet) and (experimental group II) were treated with (Yogic training not with diet) for about sixteen weeks (6 days a week). After the training period all subjects (men with andropause) were tested on selected dependent variables at different levels as initial and final training.

3.15 STATISTICAL TECHNIQUE

Collected data from the subjects were treated statistically to find out the significant differences among men with andropause. The statistical technique used to analyse was (Analysis of Co-variance (ANCOVA)) to find out the significant difference in values of the variables of Flexibility , Body mass index, Systolic blood pressure, respiratory rate , stress and self confidence between pre and post test. (Scheffe's post hoc test) for differences between the each groups.