Chapter – IV
CHAPTER – IV

METHOD AND PROCEDURE

4.1 DESIGN OF THE STUDY

Pre-test post-test control group design was employed to conduct the present study. The covariates, namely self-esteem, self-disclosure, emotional-intelligence and social-adjustment were measured prior to the experiment for all jail inmates included in the study.

The treatment, i.e. training in Yoga and Meditation exercises was given to the experimental group. The investigator gave this training. Control group was not exposed to any training in Yoga and Meditation exercises.

4.2 VARIABLES:

Independent Variable:
Training in Yoga and Meditation exercises was the treatment or independent variable.

Dependent Variables:
There were four dependent variables, namely Self-esteem, Self-disclosure, Emotional-intelligence and Social-adjustment.

4.3 SAMPLE:

All eighty adolescent jail inmates at the Burail jail in the months of June and July 2003 were taken for the present study. These eighty adolescents were already put in two barracks and study was conducted on these two intact groups out of which one group was taken as experimental group and the other as control group randomly.

As any criminal is sent to jail where crime is committed by him irrespective of his inhabitancy. Moreover, the environment and treatment given to criminals in
different jails of the region is almost similar. So, the results of the present study may be generalized for the jail inmates belonging to the states of Punjab, Haryana, and Union Territory of Chandigarh, Himachal Pradesh and Uttar Pradesh.

The statewise break-up of the sample is given in table 4.1

### TABLE 4.1:
**STATEWISE BREAK-UP OF THE JAIL INMATES IN TERMS OF THEIR INHABITANCY.**

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>State</th>
<th>No. of subjects in control group</th>
<th>No. of subjects in experimental group</th>
<th>No. of total subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Punjab</td>
<td>09</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>Haryana</td>
<td>10</td>
<td>06</td>
<td>16</td>
</tr>
<tr>
<td>3.</td>
<td>Union Territory of Chandigarh</td>
<td>13</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>4.</td>
<td>Himachal Pradesh</td>
<td>03, 05</td>
<td></td>
<td>08</td>
</tr>
<tr>
<td>5.</td>
<td>Uttar Pradesh</td>
<td>05</td>
<td>07</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>40</td>
<td>40</td>
<td>80</td>
</tr>
</tbody>
</table>

### 4.4 TOOLS USED:

1. Self Esteem Inventory (SEI) Adult form, by Stanley Coopersmith (1987) was used to measure the self-esteem of the criminals.
2. Self-Disclosure Inventory by Dr. Virendra Sinha (1982) (SSDI) was used to assess the self-disclosure of the criminals.
3. Self-prepared Emotional Intelligence Questionnaire was used to measure the emotional intelligence of the jail inmates.
4. Social Adjustment Scale (SAS) from the Global Adjustment Scale (1994) (Student form) by M/s PSY-COM SERVICES was used to assess the social- adjustment of the criminals.

4.5 DESCRIPTION OF THE TOOLS

SELF ESTEEM INVENTORY (SEI):

Self-Esteem Inventory (Adult Form) by Stanley Coopersmith was used to measure self-esteem of the sample. This form is for use with people aged sixteen and above. It consists of twenty-five items adapted from school short form. There is no time limit for the inventory but administration time rarely exceeds ten minutes. The inventory is in reusable test booklet form with separate answer sheets.

Kuder- Richardson reliability estimates (KR20s) were calculated. Obtained co-efficients were 0.81 for grade 5, 0.86 for grade 9 and 0.80 for grade 12. The co-efficients indicate adequate internal consistency for students in all three grades. Alternate form reliability was also found and co-efficient of correlation ranged from 0.71 to 0.80 in grades 3 through 6. The construct validity, predictive validity of the inventory has been established (vide manual for the SEI). This technical support is referred to the school form. The total score correlation of the School Form with Adult Form exceeds 0.80 for three samples of high school and College students.

The test was administered and scored strictly in accordance with instructions given in the manual. Scoring key meant for the Adult Form was used for scoring the answer sheets.

A copy of the test is given in appendix-I.

Scoring stencil is available in the manual.

SELF – DISCLOSURE INVENTORY (SSDI):

SINHA’s self – disclosure Inventory was used to measure the extent of self – disclosure of Indian adolescents (12-21 years) both sexes of urban and rural population. The inventory is capable of assessing the trend and magnitude of self – disclosure of adolescents in different areas of self and towards different target figures. Eight areas of self viz. Money, Personality, Study, Body, Interests, Feelings and Ideas, Vocation and Sex are included in the inventory, however, these areas are not marked specifically in the inventory as such. The entire inventory is divided into eight
parts, each containing items pertaining to one particular area of self in the sequence as stated above.

Target figures are the persons to whom the adolescents generally disclose themselves. In SSDI six such target figures namely, Mother, Father, Brother, Sister, Friend and Teacher are included.

The SSDI consists of bilingual (English and Hindi) reusable test booklet with separate answer sheets. The inventory contains eighty items (10 items in each area) and takes about sixty minutes to answer the whole inventory by an average testee. It is a 3-point self – rating scale (numerical type) and there is no right or wrong answer.

The split – half reliability of the inventory by applying Spearman – Brown formula was computed area wise for each stratum (Urban: Boys, girls, Rural : Boys, girls). The coefficient of correlation ranges from 0.30 to 0.89. The construct validity of the inventory was calculated by extreme group method (vide manual of the SSDI). Correlating inventory scores with ratings of parents also validated the inventory. The product moment co-efficient of correlation was obtained to be 0.69 significant at .01 level.

The inventory was administered and scored strictly in accordance with the directions given in the manual.

A copy of the test is given in the appendix- II.

Scoring pattern is given in the directions of the inventory.

**TOOL DEVELOPED BY THE INVESTIGATOR:**

The investigator developed emotional -Intelligence Questionnaire, herself. The details are given in chapter – III.

A copy of the test is given in the appendix- III.

A copy of the scoring key is given in the appendix- IV.

**SOCIAL ADJUSTMENT SCALE (SAS):**

Social Adjustment Scale from the Global Adjustment Scale (GAS) form (S) prepared by M/s PSY-COM SERVICES (1994) was used to gather data pertaining to
social adjustment of the sample. GAS is designed to measure the nature and extent of
adjustment of adolescents (Student) both school and college students ranging from
13-19 years. The Student Form tries to obtain reliable information from the student/
child concerning what he thinks and feels about his:

Family, Health, Social Environment, Emotions, School and Sex. It is in the
reusable test booklet form with separate answer sheets. The G.A.S. Form (S) has
Social Adjustment as its sixth dimension, which constitutes of twenty items numbered
6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114 and 120.
These items measure the attitudes towards other people. High scorers on social
adjustment present a real challenge to the society. In the present study only this, part
of the scale was used by taking out the items numbered for the social adjustment.
There was no time limit to complete the test.

The reliability of the scale was calculated by split- half and test- retest method
with one- week interval. The reliability co- efficient by split- half method came out to
be 0.83 and by test- retest method it was 0.75 for the dimension of social- adjustment
of the scale.

The reliability of the Social Adjustment Scale (dimension of the GAS) was
also established by the investigator by split- half method and by test- retest method
after an interval of one week and the results are 0.79 and 0.63 respectively.

Factorial validity in terms of factor loading for each dimension of the scale
was calculated and the value for social dimension came out to be 0.69, which is
considered as significant. So, Social Adjustment Scale (dimension of GAS) can be
used as a sub- test.

The scale was administered and scored strictly in accordance with the
directions given in the manual.
A copy of the test is given in the appendix- V.
A copy of the Scoring key is given in the appendix- VI.

4.6 RESEARCH DESIGN:

Pre- test post- test control group design was used in the present study.

The diagrammatic layout of the Research design is given in table 4.2.
TABLE 4.2:
DIAGRAMATIC LAYOUT OF THE DESIGN:

<table>
<thead>
<tr>
<th>Phase – I</th>
<th>Experimental group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Test on Self-disclosure.</td>
<td>2. Test on self-disclosure.</td>
</tr>
<tr>
<td></td>
<td>3. Test on Emotional-Intelligence.</td>
<td>3. Test on Emotional-Intelligence.</td>
</tr>
<tr>
<td></td>
<td>4. Test on social-adjustment.</td>
<td>4. Test on social-adjustment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase – II</th>
<th>Experimental group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>(TRAINING)</td>
<td>Training in Yoga and Mediation practices. This includes Motivation, Shatkarma, Asanas, Pranayama and Meditation.</td>
<td>No training in Yoga and mediation practices.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase – III</th>
<th>Experimental group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Test on Self-disclosure.</td>
<td>2. Test on self-disclosure.</td>
</tr>
<tr>
<td></td>
<td>3. Test on Emotional-Intelligence.</td>
<td>3. Test on Emotional-Intelligence.</td>
</tr>
<tr>
<td></td>
<td>4. Test on social-adjustment.</td>
<td>4. Test on social-adjustment.</td>
</tr>
</tbody>
</table>

4.7 PROCEDURE:

The following procedure was adopted for conducting the study.

The investigator had to take prior permission by applying in the office of the Deputy Commissioner of Union Territory of Chandigarh who asked the Jail Superintendent Mr. Rana to allow after properly investigating into the matter. The jail authorities then sent the request to investigate the whereabouts, causes and other required details to the Superintendent of Police (Operations) U.T. Chandigarh and to
the Superintendent of Police (Panchkula). Both the offices sent their teams to the place of residence of the investigator who found out the required information from the investigator and the people around directly and indirectly. Then these reports were sent to the Jail Superintendent who after being satisfied by the reports informed the investigator about completion of the process and sent a letter of permission to visit the jail inmates daily from 4 p.m. to 6 p.m. to conduct the yoga and meditation session with the jail inmates. The investigator had to go through a thorough checking being carried out by the jail staff and had to enter her arrival in the entry register daily. Then the staff used to take her to the prescribed barrack for the regular training programme. This schedule lasted for sixty days.

**Phase – I (Pre-Testing)**

A sample of eighty jail inmates from Model Jail, Burail, Chandigarh was taken. These eighty jail inmates were already put in two barracks by the jail authorities. There were forty adolescents in each barrack. So, two groups were already existing in the jail. One of the two groups was randomly assigned as experimental-group and other as control-group.

In this phase the initial scores were obtained pertaining to self-esteem, self-disclosure, emotional-intelligence and social-adjustment by administering Stanley Coopersmith Inventory, Virendra Sinha’s self-disclosure Inventory, Self prepared Emotional-Intelligence Questionnaire and Social-Adjustment Scale from Global Adjustment Scale (form S) by M/s PSY-COM Services on both the groups.

**Phase II (Experimental Phase-The treatment)**

Experimental group was given training in Yoga and Meditation practices by the investigator herself for two months and the control group was not given any training in Yoga and Mediation practices. The investigator herself gave the demonstrations for the first time and even as and when required.
Out of the eight limbs of the Ashtanga Yoga of Maharshi Patanjali, Yamas, and Niyamas as motivation, Shatkarmas, Asanas, Pranayama and Dhyana were used as a treatment to give training in Yoga and Meditation practices. The treatment included following steps and practices:

A) Motivation (for Yamas and Niyamas).
B) Cleansing processes (Shatkarmas)
C) Physical Postures (Asanas)
D) Breathing Exercises (Pranayamas)
E) Meditation (Dhyana)

These have been discussed in detail in the first chapter. Here we shall discuss the steps taken to proceed with the Yoga Training to the experimental group.

A) MOTIVATION (FOR YAMAS AND NIYAMAS).

Initially the boys were reluctant to do any kind of exercise (Physically). Although all of them did not refuse except 5-6 of them. The investigator developed a rapport with all of them with the help of informal friendly talks.

These talks included sharing their problems and listening to their ideas with affection and making them feel at home. These talks affected so much that they started discussing their personal family lives on one hand and intellectual discussions about yoga on the other. These talks and intellectual discussions lead to the birth of zeal and fervor to learn to the maximum on each progressing day. Only after they showed their zeal to learn and perform Yoga exercises that the investigator started with formal training on fifth day.

Every day training started with brief informal talk about their problems. The relatives of the jail inmates, who came to meet them as mulakatis (visitors) often gave them emotional feelings and the investigator daily asked about their visitors to make them talk out their suppressed emotions. These talks also included as to how they felt after doing Yoga and Meditation practices. The training was given for two months for two hours every day. It was during the motivation talks that the idea of yamas and niyamas was given to them. The jail inmates were given a thought to think upon and masticate on this point that the belief of man that he can do anything to protect his
interests is a wrong belief and that a man should only try to be virtuous in his deeds and must rely upon the law of nature that it never harms the righteous. The yogi does oppose the evil in the wrongdoer but not the wrong-doer as such.

They were imbued with the idea that a man firmly established in truth gets the fruit of his actions without apparently doing anything. Nature and Godhead, the source of all truth, supply his needs and look after his welfare.

The criminals were taught the most behavioral aspect of truthfulness i.e. according to Manu:

\[ \text{Satyam bruyaat priyam bruyaat na bruyaat satyamapriyam.} \]

Speak truth, speak sweet, do not speak that truth which is not sweet i.e. sweeten the words while speaking or in other words do not be harsh while being truthful.

The lesson was given to the jail inmates to try to reduce their physical needs to the minimum, believing that if they gather things, which they do not really need, they are thieves. Try to use personal assets for the benefit and well being of the whole creation. The selfishness must be shunned to really become a non-stealer.

The jail inmates were told to translate the higher aspects of Brahmcharya in their daily living. Marriage and Parenthood has no bar to the knowledge of Divine love, happiness and union with the Supreme bliss. Channelization of sexual energy with full mental awareness is the one that should be practiced, untouched by virtue or vice.

It was a great thought for the criminals in this study that one should not take anything without working for it or as a favor from another, for this indicates poverty of spirit.

The Niyamas too were incorporated into the minds of the subjects of the experimental group of this study in form of ideas and thoughts upon which they were to think calmly while being in the secluded places for the whole day. Each day one of these tenets (five each yamas and niyamas) was taught so that they could give enough time and ask any queries if they had. It was experienced that all of them (irrespective of their religion, caste, color or creed) accepted these ideas with fervor and kept thinking about them positively as their calm and serene faces could show it clearly.
B. CLEANSING PROCESSES (SHATKARMAS):

The four out of the six processes of purification, which were used to cleanse the internal, body organs.

1. Neti: For cleaning of nasal passage with lukewarm saline water with the help of neti pots and glasses.

3. Dhauti: For cleaning of the food pipe and stomach by drinking 5 to 6 liters of lukewarm saline water and vomiting it out in gushes which helped to expel the unnecessary acids and stinking remnants of food along with the phlegm or mucus out of the body.

3. Kapalbhati: For forcing out all the impurities of nasal passage and the skull with the help of saline lukewarm water or with the help of inhaled air.

4. Tratak: For cleaning of eyes and for attaining a concentrated sight and mind, a ghee lamp was used to concentrate on its flame.

These have been explained in the first chapter.

C. PHYSICAL POSTURES (ASANAS):
The Asanas can be classified into three broad categories as:

1. Relaxative Asanas: For deep relaxation of the body and mind:
   a) Shavasana: The position of a lying corpse, which is done after every strenuous asana to relax the body and mind while lying on the back asanas are performed.
   b) Makarasana: The lying crocodile posture, done after every strenuous asana to relax the body and mind while lying on the stomach asanas are performed.

2. Exercisive Asanas: For giving contraction and relaxation to various body parts, muscles, glands etc. the following asanas were taught to the jail inmates:

   1. Tadasana
   2. Vrikshasana
   3. Trikonasana
4. Garudasana  
5. Padangushthasana  
6. Vajrasana  
7. Ushtrasana  
8. Gomukhasana  
9. Ardhmatsyendrasana  
10. Simhasana  
11. Paschimottanasana  
12. Pakshi asana  
13. Supta Vajrasana  
14. Shashankasana  
15. Jathar parivartanasana  
16. Pawanmuktasana  
17. Matsyasana  
18. Sarvangasana  
19. Halasana  
20. Chakrasana  
21. Shirshasana  
22. Bhunjagasana  
23. Ardha Shalabhasana  
24. Purna Shalabhasana  
25. Naukasana  
26. Dhanurasana  
27. Mayurasana  
28. Bakasana  
29. Tolasana  
30. Kukkutasana

After asanas 1-5 they were made to stand-at-ease for relaxation.
Shavasana was used for relaxation after asanas numbered 15,16,17,18,19,20 and 21.
Makarasana was used for relaxation after asanas numbered 22,23,24,25,26 and 27.
After asanas 6-14, 28, 29 and 30 they were made to sit calmly for relaxation.
3. Meditative Asanas: For enhancing the self-control over the senses, mind and intellect, following meditative asanas were taught to the jail inmates:
   a) Siddhasana
   b) Padmasana.

The techniques of these asanas have been dealt with in details in the first chapter.

D. BREATHING EXERCISES (PRANAYAMAS):

   This included control of breath including:
   1. Inhalation or Puraka
   2. Retention or Kumbhaka
   3. Exhalation or Rechaka

   The following five types of pranayamas were taught to the jail inmates:
   1. Surya bhedana.
   2. Nadi shodhana
   3. Bhastrika
   4. Ujjai
   5. Bhramari

   The techniques of these pranayamas have been explained in the first chapter.

E. MEDITATION (DHYANA):

   This included the continuous channeling of the mind to think upon the positive aspects of one’s own circumstances and practicing to overcome the negative thoughts by making the mind introvert. For this they were made to sit in any one of the meditative asanas (Sidhasana and Padmasana) and to become introvert. In the beginning they had some difficulty in concentrating their minds but by gradual practice they started to have the feelings of peace of mind through meditation.
PHASE III (POST TESTING)

In this phase the final scores were obtained pertaining to self esteem, self disclosure, emotional intelligence and social adjustment by administering Stanley Coopersmith Inventory, Virendra Sinha’s self – disclosure Inventory, self – prepared emotional intelligence questionnaire and social adjustment scale of Global Adjustment Scale student form by M/s PSY-COM Services, on both the groups.

4.8 COLLECTION OF THE DATA:

The data were collected following strictly the design and the procedure of the experiment. The data consisted of:

1. Pre- test and post- test scores on Self- esteem.
2. Pre- test and post- test scores on Self- disclosure.
4. Pre- test and post- test scores on Social- adjustment.

Gain scores pertaining to Self- esteem, Self- disclosure and Emotional-intelligence and reduced scores pertaining to Social- adjustment of both the groups were taken for analysis.

4.9 STATISTICAL TECHNIQUES USED:

1. Descriptive statistics such as mean, median, skewness and kurtosis were used to ascertain the nature of distribution of scores on all the variables.

2. The t-test was used to test the significance of difference between means of experimental and control group.