CHAPTER III

METHODOLOGY
CHAPTER III

METHODOLOGY

For conducting research in physical education it is necessary to use sound methodology. A scientific approach has to be adopted for measuring physical aspects as well as psychological aspects of the study. In present study physical fitness of the Ss has to be measured, for this purpose the physical fitness test battery suggested by Fleishman (1964) was used. Both male and female Ss were incorporated in the study to examine the sex differences in self-concepts and personal values. Personal success orientation and group success orientation of the Ss was measured by a standardized scale developed by Blanchard. For assessing the self-concepts and personal values different standardized scales were used. Thus, a systematic and scientific approach was adopted in the study. In addition to these for analysing the data a factorial design was employed and appropriate statistical technique was used. While selecting the sample, scientific sampling technique was employed so that the probability of being selected as sample was same for each individual. Keeping in view the aim, objective and hypothesis of the study, the appropriate methodology was used.

Sample:

Sample selection is a very important task of research, because if the appropriate and representative sample is not selected, the study cannot be treated as valid and useful. For selecting representative sample, through the offices of physical education and non physical education colleges of Aurangabad, list of students enrolled were obtained. On the basis of these tests two separate lists were prepared one for the group of boys and another for the girls. After preparing these lists random number tables were used and a total of 457 Ss were selected from the various colleges. Details of number of boys and girls selected from each institute are given in Table 3.1.

Though 457 Ss were selected initially, data could be collected from 449 Ss only, of which 209 were girls and 240 were boys. While distributing the Ss in the
classified groups to meet the requirements of a $2 \times 2 \times 2$ factorial design three girls and eighteen boys were deleted; for different reasons, such as not meeting the criteria clearly, extreme scores on some scale or test etc. After the classification was done in the eight groups, it was observed that two groups had the smallest cell frequencies of 50 each. Hence, it was decided to keep the cell frequency of each group as 50. From the groups having more than 50 frequencies some of the Ss were deleted once again using the random number table. Finally, effective sample of the data was of 400 Ss, of which fifty percent were male and fifty percent were females. Their age range was 19 to 22 years.

Table 3.1: Showing the numbers of male and female Ss selected from different institutions of Aurangabad.

<table>
<thead>
<tr>
<th>Name of college</th>
<th>Initial stage</th>
<th>Final stage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>M.S. Mandal's college of Physical Education, Aurangabad.</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td>P.E.S. college of Physical Education, Aurangabad.</td>
<td>58</td>
<td>46</td>
</tr>
<tr>
<td>Milind college of Arts, Aurangabad.</td>
<td>69</td>
<td>44</td>
</tr>
<tr>
<td>Vivekananda college, Aurangabad.</td>
<td>54</td>
<td>62</td>
</tr>
</tbody>
</table>

Techniques Used For Data Collection:

There are three independent variables and sixteen dependent variables. The independent variables are sex, type of education and success orientation. Male and female Ss took part in the study. Of the total sample of 400, fifty percent were enrolled in physical education colleges and remaining from the arts colleges of Aurangabad. To classify the Ss on the basis of success orientation a standardized scale was used. Also, for measuring six kinds of self-concept and ten different values, standardized scales were used. They are described below.
Personal Preference Inventory:

This inventory was constructed and developed by Zander (1976). The inventory consists of 12 items only. It is a kind of projective technique. All the items are incomplete sentences. This inventory is useful for classifying the Ss as personal success oriented Vs, group success oriented.

Personal Values Questionnaire:

This is a good questionnaire constructed and standardized by Sherry and Singh. The format of PVQ is that of a forced choice type with multiple choice items. A question is consisted of two parts: (i) a stem and (ii) 3 items. In the stem of the question a criterion situation for seeking the values preferences was depicted. The items depicted the values for which the respondent had to express his comparative preferences under the stimulus of the criterion situation. For example, Q. What kind of job do you like (?) (stem) such a job in which you have:

i) opportunity to make a lot of money,
ii) control over men,
iii) physical comfort and rest.

The items selected, in the PVQ are such that, they assess the designated value as validly as possible; the three items under any stem should be relevant to the criterion situation depicted in the stem of the question; the three items should nearly be equally attractive; and each of the ten values should be matched with the remaining nine values evenly. Only after doing item analysis of each item, the item was included in the questionnaire. The final draft of the questionnaire contains 40 questions. Each value has an equal number of items and there are 12 items for each value.

The questionnaire can be administered individually as well as in a group. It should be filled out under the standard instructions. First the respondent has to fill up the personal data blank printed on the front page. Afterward the S has to read the
instructions carefully, understand them and only after that he has to start writing answers to each of the questions. There is no time limit for filling out the questionnaire. It is necessary to see that the S writes responses to each question. Several indices of reliability of PVQ are given by the authors. The reliability ranges from 0.47 to 0.85.

**Self Evaluation Scale:**

This scale was constructed and developed by Beena Awasthi. Bipolar adjectives depicting different behavioural characteristics were selected. For example, Honest-Dishonest; Dull-Bright etc. These objectives were classified into six categories by judges coming from different fields of life. After the classification some of the pairs of adjectives were deleted as they were classified into more than one categories. In the final form of the scale, only 52 bipolar adjectives were retained. The Self Evaluation Scale is useful in measuring six different kinds of self concept. There is no time limit to the scale, but the S has to write the responses quickly without wasting time in thinking for a long period. Each bipolar adjective is provided with a FIVE point scale and the job of the S is to rate himself or herself on the five point scale. A high reliability coefficient has been reported by the author. The test retest reliability is 0.84.

**Procedure of Data Collection:**

Once the sample was finalized and tools were selected for data collection, small groups of the Ss were formed. Their seating arrangement was made in a classroom. Sufficient distance between the two Ss was kept so that one cannot see the replies written by the other. When the Ss took their seats rapport was formed by telling them the importance of study and how their values and self concept are useful for their development and success. The moment it was realized that the Ss are eager to take the scale, first, copies of Personal Preference Inventory were distributed among them. Instructions were printed on the copy of inventory, however the E’ read the
instructions and the Ss were asked to read them along with the E. The instructions were,

"There are only twelve items in the inventory. Each item is an incomplete sentence describing an event. What you have to do, is, in the event described, What will you do you have to write and complete the sentence. There is no right or wrong answer, so without any hesitation, you have to write the first thought that comes to your mind after reading the incomplete sentence. There is no time limit for completing the inventory, but you have to work as fast as you can. Your responses will be used as strictly confidential."

An example was demonstrated on blackboard. When the Ss followed the instructions they were asked to write the responses. Those Ss who wrote the responses to each of the 12 items, their copies were collected, others were asked to write the responses quickly.

Immediately after completion of Personal Preference Inventory, copies of self Evaluation Scale by Beena Awasthi were distributed among the Ss. On this scale also the instructions were printed, still, the 'E' read the instructions loudly and asked the Ss to read them along with him. Following instructions were given to the Ss.

Below there is a list of bipolar adjectives depicting different behavioural characteristics. Read each pair of adjectives and decide the extent to which you have that characteristic and then put a '√' mark in one of the five squares provided with each of the pair of adjectives. While describing our or other persons' good or bad characteristics we make use of adjectives. For example, I am brave. He is honest. She is fat etc. People differ from each other on physical and psychological characteristics. Each individual has good as well as bad characteristics. In this scale there are several pairs of bipolar adjectives, such as honest-dishonest; good-bad etc. You have to take the decision, about the adjectives which describe you most and to what extent it describes you.
The pairs appear as follows.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Dishonest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

If you feel that you are neither honest nor dishonest, but preferably in between, then put a “√” mark in the third square.

If you feel that you are little more honest than normal man, then put a “√/”mark in the second square.

If you feel very much honest than a normal man, then put a “√” mark in first square.

If you feel that you are little more dishonest, then put a “√” mark in the fourth square.

If you feel that you are very much dishonest, then put a “√” mark in the fifth square.

A pair of adjectives was taken as an example, and the procedure was demonstrated on the blackboard. When the Ss followed the instructions they were told that there is no time limit to this scale, but you have to work as fast as you can. Do not waste time in thinking more on any one of these pairs. Take decisions quickly.

Filled copies of the scale were collected at the end of first half of the session.

An interval of 30 min. was given. After the interval when the Ss came back and took their seats, copies of Personal Values Questionnaire were distributed among them. They were told that by this questionnaire the values cherished by them will be measured. Hence, they have to respond honestly and frankly. First they were told to fill in the personal information on the front page. Afterwards, they were instructed as follows.

“The questionnaire is constructed to find out in certain circumstances what would you like to do. There are forty such questions each depicting a criterion situation. Each question is provided with three items. These three items depict the values for which you have to express your comparative preferences. Read each
question carefully, then concentrate on the items provided with each question. According to your choice decide the order of preference to be given to the three items.

Of the each question:
1. (a) Put a "√" mark in the bracket of the answer you prefer most.
   (b) Put a "x" mark in the bracket of the answer you prefer least.
   (c) Now only one answer is left, please leave it unmarked.
   (d) Only one answer should be marked with "√" mark and only one "x" mark.

Pay your attention to the following example. Read it carefully.
Q. According to your opinion, when the assets (money, property) are more than what is needed, what is the best use of the excess property/money?

   (x) It should be invested to earn more money.  x (√)
   (y) Should be given to poor and charity.         y (x)
   (z) Should be spent on luxury and comfort.      z ( )

In this example, the most preferred answer of the respondent is y and hence he has put a "√" mark in the bracket given in front of the answer. The least preferred answer is x and hence in the bracket the S put a cross mark. The S has left the Z answer. Your preference might be different from this.

2. It is possible that there might be different answers, than those given as alternatives, which you like most, but you have to select only one of the given three as the most preferred. Of the given three only one as least preferred.

3. It is not a test of your knowledge; hence, every answer given by you is a correct answer.

4. Your answer will be treated as strictly confidential.

5. The questions are based on social conditions. So, you can think that the answer to be preferred most should be the one, which the society approves. However, it will not be an appropriate choice, because you are not using your own thoughts. You are therefore suggested to express your own thoughts and not that of your society.

6. Answer each and every question. Do not leave any question unanswered.

7. There is no time limit, however, whatever, appears to you appropriate in the first thought, put a mark on it.
The procedure was demonstrated on board, questions, doubts, queries etc. were invited and replied to the satisfaction of the S. Then only the Ss were told to write answers. Sufficient time was given to the Ss to write the responses. Completed copies of the questionnaire were collected at the end.

The Ss were given thanks for extending cooperation in data collection; and the session was concluded.

There are many variables that are incorporated in the study. Since, a factorial design was used for statistical treatment the variables are classified as independent variables and dependent variables.

There were three independent variables, they are sex, type of education and success orientation. Dependent variables are sixteen in number. There are six kind of self concepts. They are social self concept, intellectual self concept, moral self concept, physical self concept, economic self concept and aesthetic self concept. Ten types of values were also treated as dependent variables, they are: religious values, social values, democratic value, power value, family prestige value and health value.

**Design of study**:

After studying the problem and variables carefully, a balanced factorial design was used. Three variables were treated as independent variables, and accordingly a $2 \times 2 \times 2$ factorial design was employed. Each of the three independent variables was varied at two levels.

**Statistical Treatment of Data**:

Descriptive statistical techniques mean and standard deviations were used at the initial stage of analysis.
Three way Analysis of Variance was employed for examining the influence of main as well as interaction effects.

Finally, for studying significance of intergroup mean differences the data were treated by Duncan's New Multiple Range Test.

Discussion:

Taking into account the statistical values obtained in the study, the results were discussed. Wherever necessary the possible explanations were presented.