Chapter – III

PROCEDURE

In this chapter selection of subjects, selection of variables, criterion measures, selection and description of the tools/questionnaires, administration of questionnaires, collection of data and statistical technique employed for analyzing the data have been described.

Selection of Subjects

The present study was conducted on 300 rifle shooting players of India. Keeping in view the objectives, the players were categorized into three main groups: district (100), state (100), and national (100) rifle shooting players. The sample representing the district school players who participated in the district rifle shooting championship, 2011 held at Aurangabad from 2/9/2011 to 3/9/2011. The sample representing the state school players who participated in the state school rifle shooting championship, 2011 held at Pune, Maharashtra from 28/11/2011 to 30/11/2011. And national school rifle shooting championship, 2011 held at Pune, Maharashtra from 6/12/2011 to 9/12/2011.

Design of the Study

The present study is a status study, which did not require the investigator basically to manipulate any of the variables included in it. Rather the collection of data became instrumental in providing correct insight into the sports competition anxiety, which cannot otherwise be assessed. It was not intended to study the interaction among various variables. In all there were three samples and three variables to be investigated.
Selection of Variables

In the present study, care was taken to pin point the variables for Socio-psychological aspects which were not only relevant but also closely related to the purpose of this study. Therefore, based on literary evidence, correspondence with the experts and scholar’s own understanding as well as keeping the feasibility aspect in mind besides importance of socio-psychological aspects, the following variables were selected for the purpose of this study:

1. Personality (Extraversion / Neuroticism)
2. Aggression
3. Self esteem
4. Achievement motivation
5. Self confidence
6. Social adjustment
7. Locus of control
8. Self concept

Criterion Measures

The criterion measures adopted for the study were as follows:
To Assess Socio-Psychological Variables:

1. Personality (Extraversion / Neuroticism) was assessed by the total scores in Maudsley Personality Inventory (MPI) written by H. J. Eysenck.

2. Aggression was assessed by the total scores in Sports Aggression Inventory constructed and standardized by Prof. Anand Kumar Shrivastava & Prem Shankar Shukla.

3. Self-esteem was assessed by the total scores in Canadian Self Esteem Inventory (CSEI) developed by Dr. Ambika Prasad Pandey.

4. Achievement motivation was assessed by the total scores in Sports Achievement Motivation Test (SAMT) developed by Dr. M.L. Kamlesh.

5. Self-confidence was assessed by the total scores in Agnihotri’s Self Confidence Inventory (ASCI) developed by Dr. Rekha Agnihotry.

6. Social adjustment was assessed by the total scores in Deva’s Social Adjustment Inventory (SAI) constructed by Dr. R.C. Deva.

7. Locus of control was assessed by the total scores in Rotter’s Locus of Control Scale prepared by Dr. Anand Kumar and Dr. S. N. Srivastava.

8. Self concept was assessed by the total scores in Self Concept Scale developed by Dr. Mukta Rani Rastogi.
Selection and Description of the Tools/Questionnaires

The tools/questionnaires used in this study for the collection of the data were selected because they were found to be most reliable and have been widely used in the profession of physical education and sports throughout the world. The reliability and validity quotients as given in the manuals of the respective tests are as under:

**Table – 1**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Variables</th>
<th>Test</th>
<th>Reliability</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Personality</td>
<td>Maudsley Personality Inventory (MPI)</td>
<td>.83 and .81</td>
<td>Construct</td>
</tr>
<tr>
<td>2.</td>
<td>Sports Aggression</td>
<td>Sports Aggression Inventory</td>
<td>.87 to .90</td>
<td>Content, (Concurrent .84)</td>
</tr>
<tr>
<td>3.</td>
<td>Self-Esteem</td>
<td>Canadian Self Esteem Inventory (CSEI)</td>
<td>.78</td>
<td>Face &amp; Concurrent</td>
</tr>
<tr>
<td>4.</td>
<td>Achievement Motivation</td>
<td>Sports Achievement Motivation Test (SAMT)</td>
<td>.70</td>
<td>Face</td>
</tr>
<tr>
<td>5.</td>
<td>Self-Confidence</td>
<td>Agnihotri’s Self Confidence Inventory (ASCI)</td>
<td>.88</td>
<td>Obtained (.82)</td>
</tr>
<tr>
<td>6.</td>
<td>Social Adjustment</td>
<td>Deva’s Social Adjustment Inventory (SAI)</td>
<td>.91</td>
<td>Satisfactory (.81 and .79)</td>
</tr>
<tr>
<td>7.</td>
<td>Locus of Control</td>
<td>Rotter’s Locus of control Scale</td>
<td>.85</td>
<td>Good Discriminate</td>
</tr>
<tr>
<td>8.</td>
<td>Self Concept</td>
<td>Self Concept Scale</td>
<td>.87</td>
<td>Content</td>
</tr>
</tbody>
</table>

The descriptions of the tools /questionnaires are as follow:
Personality:

Personality (Extraversion / Neuroticism) was assessed by Maudsley Personality Inventory (MPI) written by H. J. Eysenck.

The Maudsley personality inventory (M.P.I.) was designed to give a rough and ready measure of two important personality dimensions: Neuroticism or emotionality, and Extroversion. Each of these two traits is measured by means of 24 questions, carefully selected after lengthy item analysis and factor analysis. It must suffice here to say that Neuroticism refers to the general emotional stability of a person, his emotional over responsiveness, and his stability to neurotic breakdown under stress. Extraversion, as opposed to introversion refers to the out-going, uninhibited, sociable proclivities of a person.

A review of literature by Eysenck (1960) has disclosed strong support for a view which recognizes the existence of two very clearly marked and outstanding important dimensions; these have been called, respectively Extraversion - Introversion and neuroticism emotional stability - instability. Eysenck (1956) claims further that this is the only inventory in existence which has included only questions, all of which formed part of one single factor analysis; there are reasons for beating with considerable cautions clam for inventories built up once more piece meal fashion.
There are 48 questions in all in the Form – A of the MPI, 24 questions pertains to E (Extraversion) factor and 24 to N (Neuroticism) factor. The responses given by the subjects were scored in accordance with the prescribed key to determine whether the E or N was present or absent. Scoring was done with prescribed key which clearly showed, after counting the total number of E or N separately, as to what quantitative level was a factor present. The total score, in each case, on E and N factors would not exceed 48, minimum being zero.

The manual of the inventory tells us that the mean score of the normal population on E factor is 28.08 and on N factor it is 23.29. If the mean score on E factor, of this population goes above this, the sample on average, may be considered to be more extrovert, similarly if the mean score on N factor goes above this, the sample may be considered to be more neurotic. Eysenck (1963) considers neuroticism to be significantly closer to introversion.

**Scoring:**

A translucent scoring key is available, for each of the two scales. The instructions to use this key are given on the key itself. Score page-1 first, then the second page, and add the scores. Make sure the key and the questionnaire which is being scored are properly aligned; the numbers in front of the questions on the inventory should correspond with the numbers of the key.
Aggression:

Aggression was assessed by Sports Aggression Inventory constructed and standardized by Prof. Anand Kumar Shrivastava & Prem Shankar Shukla.

Sports Aggression inventory consists of 25 questions, in which 13 items are keyed ‘yes” that are 1, 4, 5, 6, 9, 12, 14, 16, 18, 21, 22, 24, & 25 and the statements which are keyed “No” that are 2, 3, 7, 8, 10, 11, 13, 15, 17, 19, 20 & 23.

Score of 12-13 is considered as average on aggression and those scores higher than 12-13 will be considered as high on aggression and those scores lower than 12-13 will be considered as low on aggression.

Scoring:
For each item score was either “1” or zero. The maximum score may be 25 and minimum score may be “0’2.

Self Esteem:

To obtain the scores of Self-Esteem the research scholar used the Canadian Self Esteem Inventory (CSEI) developed by Dr. Ambika Prasad Pandey.

Canadian Self Esteem Inventory (CSEI) contains 40 items and the following four subscales:
(i) General Self-esteem

Items=2,3,6,8,11,13,18,20,23,25,26,28,30,32,37, and 39.
(ii) Social Self-esteem

Items= 1,5,7,10,16,21,31,35.

(iii) Personal Self-esteem

Items= 12, 15,17,22,27,34,36,40.

(iv) Lie Scales

Items= 4, 9,14,19,24,29,33,38.

The author has given the following classification criteria:

<table>
<thead>
<tr>
<th>Range of raw score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 - 16</td>
<td>Low level of Self-esteem</td>
</tr>
<tr>
<td>17 - 27</td>
<td>Average levels of Self-esteem</td>
</tr>
<tr>
<td>28-32</td>
<td>High level of Self-esteem</td>
</tr>
</tbody>
</table>

On the basis of above explanation suggested in the test, subjects scoring between 9-16 could be characterized ‘low level of self-esteem’, those scoring between17-27 as ‘average level of self-esteem’ and those scoring between 28-32 could be characterized ‘high level of self-esteem’.

**Scoring:**

Scores for the CSEI for adults (Hindi version) are derived by totaling the number of items checked excluding item which indicates the amount of self-esteem. Thus each item has a maximum score of “1” and minimum of “0” and the total possible score on the scale is 32 and the highest lie score is 8.
Achievement Motivation:

Achievement motivation was assessed by Sports Achievement Motivation Test (SAMT) developed by Dr. M.L. Kamlesh.

Achievement motivation is an athlete’s pre-disposition to approach or avoid a competitive situation. Achievement tests attempt to measure what an individual has learned – his or her present level of performance. Sports achievement tests are particularly helpful in determining individual or group status in sports settings. Achievement test scores are used in placing, advancing or retaining students at particular grade levels. They are used in diagnosing strength and as a basis for awarding prizes, scholarship or degrees.

The sports achievement motivation test is a self evaluation questionnaire of twenty statements responses value of which extend from 0-40 in total. Each statement carries a maximum score of two and minimum zero. When the subjects ticked the high pole part, he/she was given two points and when touched to low pole, he/she earned zero.

After constructing further studies by using SAMT the author has given the following classification criteria based on percent and points.

<table>
<thead>
<tr>
<th>Raw/ mean score</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 24</td>
<td>Low</td>
</tr>
<tr>
<td>24 -30</td>
<td>Moderate</td>
</tr>
<tr>
<td>Above-30</td>
<td>High</td>
</tr>
</tbody>
</table>
Scoring:

The SAMT carrying a test retest reliability as 0.70, in a test of twenty statements the response value of which range between 0 – 40. The validity SAMT with the actual performance of the athletes had been worked out to be 0.55 which is marked. On the basis of percentile point norms suggested in the said test, subjects scoring below 24 could be characterized ‘low in sports achievement motivation’, those scoring below 30 but above 24 as moderate and those scoring above 30 as highly motivated.

Self Confidence:

Self confidence was assessed by Agnihotri’s Self Confidence Inventory (ASCI) developed by Dr. Rekha Agnihotry.

Agnihotri’s Self Confidence Inventory (ASCI) consists of 56 questions which includes items for the assessment of self confidence.

The author has given the following classification criteria:

<table>
<thead>
<tr>
<th>Raw score</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 and below</td>
<td>Very high Self-confidence</td>
</tr>
<tr>
<td>8-19</td>
<td>High Self-confidence</td>
</tr>
<tr>
<td>20-32</td>
<td>Average Self-confidence</td>
</tr>
<tr>
<td>33-44</td>
<td>Low Self-confidence</td>
</tr>
<tr>
<td>45 and above</td>
<td>Very low Self-confidence</td>
</tr>
</tbody>
</table>
Scoring:

The inventory can be scored by hand. A score of one is awarded for a response indicative of lack of Self-Confidence, i.e. for making cross (X) to wrong’ response to item nos. 2,7,23,31,40,41,43,44,45,53,54,55 and for making cross (X) to right’ response to the rest of the items. Thus each item has a maximum score of “1” and minimum of “0” and response value of which extend from 0 – 56. Hence the lower the score, the higher would be the level of Self-Confidence and vice-versa.

Social Adjustment:

Social adjustment was assessed by Deva’s Social Adjustment Inventory (SAI) constructed by Dr. R.C. Deva.

Deva’s Social Adjustment Inventory (SAI) consists of 100 questions which includes items for the assessment of emotional as well as social adjustment.

There are also 15 filler items. These items have been designed to yield a ‘Test Dishonesty” score. If this score exceeds twenty, the responses to other items cannot be relied upon. It is recommended that response of such a person may be rejected.

Higher the score, the higher would be the level of social adjustment and vice-versa.
Scoring:

There are 3 scoring stencils. Each stencil has a pattern of holes which reveal the responses. Adjacent to each hole in the key is a number indicating the weight to be given to it, if a response appears through the hole. The following procedure may be adopted for scoring the responses.

1. The responses be examined for any item which has been marked both for ‘Yes’ and ‘No’ and a red line be drawn horizontally through such responses. Such double marked responses will not get any credit.

2. Stencil No. 1 be superimposed on the relevant pages of the booklet so that arrow head on scoring touches the corresponding arrow head on the test booklet. The stencil is adjusted so that the responses are clearly visible through its holes. The ‘Test Dishonesty’ score is obtained by adding the weights of the responses visible through stencil of the test booklet. If this score exceeds 20, the responses may be rejected.

3. Stencil No. 2 be superimposed as directed above. The ‘Emotional Adjustment’ score is obtained by adding the weights of the responses visible through this stencil. This score is also entered in the relevant space on title page of this test booklet.

4. Stencil No. 3 be superimposed as directed above. ‘Social Maturity’ score can be obtained by adding the weight of the responses visible through this stencil. This score also is entered in the relevant space.
5. The total ‘Social Adjustment ‘score is obtained by simply adding the ‘Emotional adjustment ‘and ‘Social maturity’ scores. This may also be entered in the space provided.

**Locus of Control:**

Locus of control was assessed by Rotter’s Locus of Control Scale prepared by Dr. Anand Kumar and Dr. Satyendar Nath Srivastav.

The scale had 29 items and each item had two parts, that is, A and B. The subject had to tick either A and B according to his or her choice. There were six filler items, namely, 1, 8, 14, 19, 24, and 27 which were not scored. For the item numbers 2, 6, 7, 9, 16, 17, 18, 20, 21, 23, 25, and 29 one point was given to those subjects who tick “A” part. For item numbers 3, 4, 5, 10, 11, 12, 13, 15, 22, 26, and 28 one point was given to those subjects who tick “B” part.

**Scoring:**

This scale is a forced choice instrument which consists of 29 pairs of statements, 23 of which are scored. There are 6 filler items, namely 1, 8, 14, 19, 24, 27 which are not scored.

High score indicates external locus of control on internal – external dimension of the scale. In scoring, only external alternatives are enclosed. The maximum possible score on Rotter’s Locus of Control Scale is 23 and minimum being 07.
**Self Concept:**

Self concept was assessed by Self Concept Scale developed by Dr. Mukta Rani Rastogi.

Self Concept Scale has fifty one statements. Below each statement are given five responses, (Strongly agree, Agree, Undecided, Disagree and Strongly Disagree). The subject has to read each statement carefully and respond to it by marking a tick on any of the five responses given.

Example: -- I feel shy before others.

(√)

Strongly agree Agree Undecided Disagree strongly disagree Here the individual agrees with the statement and therefore has marked responses agree. There is no right or wrong response.

High score indicates high level of self concept and low score indicates low level of self concept.

**Scoring:**

The respondent is provided with the five response alternatives to give his response and therefore a score of five to one for responses (strongly Agree, Agree, Undecided, Disagree and strongly disagree) and negative items are scored one to five for the same response alternatives.
 Administration of Questionnaires

As explained in the foregoing pages, the tests were administered to the three sample groups district school, state school, and national school rifle shooting players. The managers of all the teams were contacted personally and requested to permit their respective team members to serve as subjects for this study. Subjects were contacted personally when they were not busy and their sincere co-operation was solicited.

Necessary instructions were given to the subjects before the administration of each test. At the same time research scholar motivated the respondents by promising to send a separate abstract of the conclusions of her study to each of them. It was clearly explained to the subjects that overall purpose of the study was to allow each subject to acquire deeper insight into her psychological functioning. Confidentiality of responses was guaranteed so that the subjects would not camouflage their real feelings.

After making sure that subjects understood the general instructions, the questionnaires were distributed to the subjects. All the eight questionnaires were administered to all subjects under the direct supervision of the investigator. The questionnaires were administered in accordance with the instructions laid down in the manuals.

The subjects were asked to read each statement of the questionnaire carefully. In case of doubts, they were clarified by the investigator and
were asked to reply the question as per direction in the questionnaire. The approximate time taken to complete each questionnaire was about 30 minutes. However, no time limit was given for the various tests and the subjects were asked to response to each statement truthfully as soon as possible. The questionnaires were taken back after duly completed.

**STATISTICAL PROCEDURE**

Mean score and standard deviation of district (N=100), state (N=100), and national (N=100) and the sample (N=300) were calculated in all the eight variables i.e. Personality (Extroversion, Neuroticism), Sports Aggression, Self-Esteem, Sports Achievement Motivation, Self-Confidence, Social Adjustment, Locus of control and Self-Concept

One-way analysis of variance was applied to find out the significance of mean difference among National (N=100), State (N=100) and Districts (N=100) players in each of the variable. This was followed by Least Significance Difference Test (L.S.D.) of Post-hoc comparison to determine the significance of difference between ordered paired means at 0.05 level.