CHAPTER III

METHODOLOGY

In this chapter, the selection of subjects, selection of variables, orientation of subjects, reliability of instruments, competency of tester, reliability of data, test administration, collection of data and the statistical procedure used have been explained in a fine tooth – comb way and thought provoking ideas are discussed in micro and macro level.

3.1 SELECTION OF SUBJECTS

To facilitate the study 180 school players, 60 basketball, 60 football and 60 volleyball players who represented their schools in inter school competitions were selected from different topography of Puducherry, Karaikal, Mahe and Yanam as subjects at random and their age was between 15 to 18 years.
Table I shows the subjects selected from each region for the purposes of this study.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of Regions</th>
<th>Basketball</th>
<th>Football</th>
<th>Volleyball</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Puduchery</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>Karaikal</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>Mahe</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td>4</td>
<td>Yanam</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>180</td>
</tr>
</tbody>
</table>

The requirements for the collection of data through administration of questionnaires were explained to the subjects so as to avoid any ambiguity of the effort required on their part and prior to the administration of the questionnaire. All the subjects participated in this study voluntarily responded to the questionnaire without bias.

3.2 SELECTION OF VARIABLES

The research scholar reviewed the various scientific literatures pertaining to the selected psychological variables from books, journals, periodicals, magazines and research papers. Taking into consideration of the feasibility criteria, availability of instruments and the relevance of the variables of the present study, the following variables were selected.
3.2.1 DEPENDENT VARIABLES

3.2.1.1 Personality Dimension Variables

   a. Extroversion / Introversion
   b. Neuroticism / Stable

3.2.1.2 Temperament Traits

   a. Active
   b. Vigorous
   c. Impulsive
   d. Dominant
   e. Emotionally Stable
   f. Sociable
   g. Reflective

3.2.2 INDEPENDENT VARIABLES

Factor A – Three Groups

   a. Basketball Players
   b. Football Players
   c. Volleyball Players

Factor B – Different topography

   a. Puduchery Region
   b. Karaikal Region
   c. Mahe Region
   d. Yanam Region
3.3 RESEARCH DESIGN

The objective of undertaking this research was to assess the personality dimensions and temperament traits of school level basketball, football and volleyball players from different topography and to find out the differences among them.

Since the research is aimed at determining the differences between the variables of different players and zones, 3 x 4 Factorial design was followed for this study.

Standard questionnaire were administered to ascertain the groups’ personality dimensions and temperament traits. The collected filled in questionnaire were converted into scores as per procedures set out. The collected data were subjected to statistical treatment to find out any differences between the groups in the dependent variables selected using 3 x 4 Factorial Analysis..

3.4 CRITERION MEASURES

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

1. Eysenck personality Questionnaire - revised was used to measure the personality traits, extroversion / introversion and neuroticism / stable of the subjects.

2. The Thurstone Temperament Schedule (TTS) was used to measure the temperament traits of the subjects.
3.5 RELIABILITY OF DATA

The reliability of data was ensured by establishing the questionnaire reliability, tester’s competency and subject reliability.

3.5.1 Questionnaire Reliability

The questionnaires administered were used in assessing the selected psychological factors for years together by various psychologists. Apart from this, the authors developed the questionnaire, found the reliability and validity of the tests and the key for scoring the responses. These were taken as correct and thus the reliability of the questionnaire found by the authors were accepted for the purposes of this study.

3.5.2 Tester’s Competency

The investigator himself read out the questionnaire to the subjects and obtained the responses personally. The subjects were asked to respond to each and every questions asked in the inventory and responded within the time prescribed for this purpose. Since the investigator was qualified enough to administer the questionnaire, the repeated measurement of individuals on the same test was done and the testers competency was proved.

3.6 PILOT STUDY

A pilot study was conducted (i) to select suitable questionnaires for measuring selected psychological variables and (ii) to establish reliability and validity of these questionnaires.
3.7 MEASUREMENT OF PSYCHOLOGICAL VARIABLES

The psychological variables, personality dimensions were measured using Eysenck Personality Questionnaire (EPQR) and temperament traits were measured using Thurstone Temperament Schedule Questionnaire. The description of the questionnaires are explained.

3.7.1 EYSENCK PERSONALITY QUESTIONNAIRE REVISED (EPQR)

Eysenck personality Questionnaire (EPQ-R) was used to collect the data. Since the high school students were the subjects of the study, a Tamil translation version, after testing the reliability and validity of the questionnaire was used for this study. This inventory was believed to the apt for this study for the following reasons.

1. Eysenck personality questionnaire measure the dimensions of Extroversion Neurosim, and Lie Score.

2. This is objectivity scoreable test. This also gives the most complete coverage of personality possible in a brief time.

3. This has high validity, objectivity and reliability as its credit.

4. The Eysenck personality Questionnaire is carefully oriented and groomed to basic concepts in human personality structure research.

5. This is specially planned and carefully arranged according to the common interest and attitude of the players.

6. This is firmly based on personality sphere, concepts, a design to insure initial coverage for all the behaviour that commonly enters rating and the dictionary description of personality.
Principles And Mechanics of Scoring

Instructions

1. Check that each question has only one answer.
2. Place the key on the booklet so that the (*) marks on the booklet are visible through the circles on this key.
3. The questionnaire consists of 57 statements with ‘Yes’ or ‘No’ answers.
4. There are three scores (Extroversion -24, Neuroticism -24 and Lie Score-9) to be obtained. Each answer scores one point.
5. For example, to obtain the score for ‘psychoticism’ add 1 score for each answer visible through squares, and record the sum in the table on page 1. So, the same for page 2, 3 and 4. Transfer these score on the table at the back page.
6. Repeat this procedure to obtain extroversion, neuroticism and lie-score also.
7. The questionnaire was scored with the help of a scoring key. If the response given by subjects corresponds to the key for a particular statement a weight of one was given, otherwise, the statement received the weight zero. The summation of all obtained score was the indication of personality traits of the subjects.
8. Only the scores for extroversion/introversion and neuroticism/ stable of the subjects were considered for the purposes of this study.

3.7.2 Thurstone Temperament Schedule (TTS)

The Thurstone Temperament Schedule (TTS) questionnaire was used to test the temperaments of the selected subjects in this study. The questionnaire consists of 140 items covering seven areas (20 items per trait) which has been validated by pilot
study. The reliability and validity of the test has been measured and the questionnaire was found reliable.

The seven areas of the schedule area: Active (A); Vigorous (V), Impulsive (I), Dominant (D), Emotionally stable (E), Sociable (S) and Reflective (R). Each of the seven dimensions have been measured by means of 140 questions, to which the subject answers “Yes” or “No”. They are asked to put a ‘check mark’ (?) on the question mark, if they cannot decide. The question mark and decided responses were omitted since they are neutral.

**Scoring**

All the questionnaire were valued and scored. The correct responses were taken and entered in the scoring key in each area they concerned. The total scores for each area was counted and entered at the bottom of the scoring key. The test manual required to find whether the individual’s score is ‘high’, ‘low’ or ‘average’. As per the test manual the subject who scored above 75\textsuperscript{th} percentile was considered as high. Since the present study needs higher accuracy 85\textsuperscript{th} percentile has been used for very high and 16\textsuperscript{th} percentile for low. To plot the profile, the following steps were considered:

1. In the present study only male players’ profile was used.
2. In the space at the top of the profile chart copied for ‘A’ through ‘R’ from scoring key.
3. Under ‘A’, ‘V’ ….. ‘R’ found number which is the same as score at the top.
4. A line was drawn with a pencil through this number in the columns.
The percentile rank for each raw score was read from the scale at the sides of the profile. The transformation from raw scores to percentiles rank was made from the profile chart.

3.8 COLLECTION OF DATA

Before the questionnaire was administered the experimenter got permission from the Heads of the Schools in Puducherry, Karaikal, Mahe and Yanam. Having got permission, the students were met by the investigator in person. Time has been fixed to conduct the experiment. Since most of the students found it difficult to read and understand the Questionnaires in English, a Tamil version of the questionnaire was prepared through experts in Translation and the copies of the questionnaire of Tamil version is given in appendices. The translated Tamil version Questionnaire was tested under pilot study phase using twenty school level players and found valid and reliable.

In the beginning the students were instructed, about the purpose of the test and they were asked to give their personal data also. Having instructed the rules that were to be followed, the students were given the fist questionnaire, namely, the Eysenek Personality Inventory. No time limit was fixed to fill up the above set questionnaire. The filled questionnaire were collected from the students as soon as they finished.

No sooner did they complete the first questionnaire then the second questionnaire namely Thurstone Temperament Schedule has been administered. Like the previous one the students were given instructions about how to fillup the questionnaire. The students were asked to put a check mark which they think actually against the answers. “Yes” ? “No” at a time and not to put check mark more than one at a time. The filled up questionnaires were collected from the students. The collected questionnaires were scored and tabulated for statistical analysis.
3.9 STATISTICAL TECHNIQUE

In this study the following statistical techniques were used to analyze the rate among school basketball, football and volleyball players from different topography, namely, Puducherry, Karaikal, Mahe and Yanam regions.

1. 3 x 4 factorial design
2. Scheffe’s post hoc test for factor A and B
3. Simple test for interaction
4. Post hoc test for each cell.