CHAPTER-III

METHODOLOGY

1.1 Introduction:

Research in psychology is a challenging task. Because each factor, which is being studied, influences the development of dependent variable, hence, it is necessary to take care from the beginning while carrying out a psychological study. At first the topic was selected and framed considering the results of earlier studies. Once the topic was finalized, the relevant independent and depended variables were specified. The next problem was that of selecting appropriate sample. Since, the factor of caste was incorporated in the study; the sample selection was a little tedious job. But after collecting the information from the college record, the task became easy. Relevant tests or scales were selected considering their reliability and validity values. Those tests or scales were selected which appear to be more appropriate to the sample of the study. Data were collected following the instructions and guidelines given by the author of the scales. Thus, at every step proper care was taken while carrying out the study. As far as possible the appropriate statistical techniques were used for analyzing the data and conclusions were drawn only on the basis of the results which the inferential statistical techniques brought out in sum, in present study care was taken to make it as scientific as it can be.

The hypotheses formulated for the purpose of this study were to be tested by collecting relevant data. Steps taken in this direction are described in the present chapter.
Sport psychology is an interdisciplinary science that draws on knowledge from many related fields including biomechanics, physiology, kinesiology, and psychology. It involves the study of how psychological factors affect performance and how participation in sport and exercise affect psychological and physical factors. In addition to instruction and training of psychological skills of performance improvement, applied sport psychology may include work with athletes, coaches, and parents regarding injury, rehabilitation, communication, team building, and career transitions.

1.2 Objectives of the Study:
Considering the variables measured the study, the single factor design used for analyzing the data.

Following objectives were formed.

1. To determine whether personality characteristics are influenced by age of the Inter University and State level volleyball players.
2. To determine whether personality characteristics are influenced by the sex of the Inter University and State level volleyball players.
3. To find out whether there is personality differences in Extraversion of age of the Inter University and State level volleyball players.
4. To find out whether there is personality differences in Neuroticism of sex of the Inter University and State level volleyball players.
5. To explore whether age affects personality characteristics of the Inter University and State level volleyball players.
6. To explore whether sex of the personality affects environment of the Inter University and State level volleyball players.
Total 200 Male and 200 Female Inter University and State Level volleyball players were randomly selected as a subject for the present study.

Interuniversity and state level male and female volleyball players, their age ranged from 22 to 25 years (Inter University Level) 18 to 21 (State Level) years Male and Female Volleyball Players.

1.3 Hypotheses tested in the Study:

In the light of the objectives of the study and the general direction of the findings of earlier research following hypotheses were formulated. Neuroticism in Inter University and State level volleyball players will be greater than age and sex.

Extraversion of Inter University and State level volleyball players will be higher than age and sex.

Lie Scale of Inter University and State level volleyball players will be higher than age and sex.

1.4 Sample:

The sample consists of students of senior colleges. Interuniversity and state level male and female players. It was chosen from the student belonging to Arts, Commerce and Science faculties, studying in U.G. and P.G. Two main kinds of reliability (a) test-retest and (b) internal consistency were found out on 156 males and 119 females of Hindi speaking area. For test re-test reliability the correlation between the First and the second testing was carried out with eight weeks of time interval intervening between the two testing’s. Students were selected from
various colleges, similarly internal consistency reliability was found out for 200 males and 200 females were finally selected for study. The results are reported in Tables 1 and 2.

Used Psychological Test for this study-

**EYSENCK PERSONALITY INVENTORY**
(EPI)
**HINDI ADAPTATION**

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**TABLE-1**
Tests retest reliability with eight weeks intervening between the two occasions.

<table>
<thead>
<tr>
<th>EPI</th>
<th>Sex</th>
<th>N</th>
<th>E</th>
<th>N</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Male</td>
<td>156</td>
<td>89</td>
<td>90</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>119</td>
<td>87</td>
<td>88</td>
<td>76</td>
</tr>
<tr>
<td>B</td>
<td>Males</td>
<td>156</td>
<td>88</td>
<td>91</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>119</td>
<td>87</td>
<td>86</td>
<td>82</td>
</tr>
</tbody>
</table>
Test retest reliability (Table 1) for extraversion scale ranged from 87 to 89 for neuroticism scale it ranged from 86 to 91 and for lie scale varied from 76 to 82 for males and females on both the forms of EPI.

These coefficients were reasonably high. Hence, trustworthy, Internal consistency reliability or alpha coefficients (Table 2) ranged from 82 to 86 for extraversion scale 84 to 89 for neuroticism scale and 69 to 73 for lie scale for males and females on, forms A and B of the EPI.

These reliability coefficients were almost similar of the English versions of the EPI (Eysenck and Eysenck, 1964) It may however, be noticed that internal consistency coefficients were some what lower than the test retest coefficients.

This was expected as the inventory covered comparatively heterogeneous measures of personality. Such reliabilities therefore need
not be too low in this type of measurement tool and at the same time it need not be too high. The Internal consistency coefficients from this point of view as well were quite satisfactory.

Extraverts, introverts, neurotic and stables or normal may be selected on the basis of various principles. This Hindi adaptation of the EPI is reliable and valid instrument for the assessment of personality on Indian population.

Validity:

Hindi version of the from A and B of the EPI were administered on a sample of 10 normal adults along with the English EPI and correlations between the two sets of scores were found out. The results are reported in table-3

<table>
<thead>
<tr>
<th>TABLE-3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Correlations between Hindi and English versions of the EPI:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EPI</th>
<th>N</th>
<th>E</th>
<th>N</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>From A of the English and Hindi versions</td>
<td>100</td>
<td>95</td>
<td>98</td>
<td>91</td>
</tr>
<tr>
<td>From B of the English and Hindi versions</td>
<td>100</td>
<td>96</td>
<td>97</td>
<td>94</td>
</tr>
</tbody>
</table>

It is Cesar from the Table that both the versions (English and Hindi) of the EPI from A and B correlated significantly.

This indicated the extent of the Hindi version of the EPI, therefore, was found to be a valid instrument for the measurement of personality.
1.5 Standardization data:
Both the form of the EPI was administered on a sample of 600 males and 400 females of the age group 16 to 54 years with a mean age of 34 to 70 year. The sample consists of students of senior colleges. Interuniversity and state level male and female players.

Interuniversity and state level male and female volleyball players, their age ranged from 22 to 25 years (Inter University Level) 18 to 21 (State Level) years Male and Female Volleyball Players. This sample represented different social strata and majority of them were from urban population.

The sample was not strictly random one but it approached randomization to great extent sex norms are reported in Table-4

<table>
<thead>
<tr>
<th>TABLE-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex norms:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EPI Forms</th>
<th>Sex</th>
<th>N</th>
<th>E</th>
<th></th>
<th>N</th>
<th></th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>A</td>
<td>Males</td>
<td>600</td>
<td>13.9</td>
<td>4.15</td>
<td>12.10</td>
<td>4.75</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>400</td>
<td>12.40</td>
<td>1.00</td>
<td>10.20</td>
<td>4.90</td>
<td>3.00</td>
</tr>
<tr>
<td>B</td>
<td>Males</td>
<td>600</td>
<td>13.71</td>
<td>3.95</td>
<td>12.15</td>
<td>4.12</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>400</td>
<td>12.34</td>
<td>4.12</td>
<td>10.94</td>
<td>4.71</td>
<td>2.91</td>
</tr>
</tbody>
</table>

Table 4 reveals means and SD values for extraversion, neuroticism and lie scales of males and females on Forms A and B of the EPI.
This table would help in understanding mean trend of Indian subjects on the EPI.

Administration:

The Eysenck Personality Inventory (EPI) has two forms-From A and B these are alternative forms hence, personality measurement is normally done using any one of the two forms. Both the forms are used at a time when repeated testing is required of the same population.

The EPI form A or from B may be administered individually or in group (preferably below 10 persons) following instructions strictly printed on top of the inventory.

The inventory need not be administered unless rapport formation is evident and the subject is eager enough to take the rest. During the administration period the test administrator should remain vigilant so that genuine data are obtained on the inventory.

Scoring:

Scoring of the inventory is done with the help of perforated keys (one each for extraversion, neuroticism and lie scales) available for the purpose perforated keys marked ‘E’ ‘N’ and may be placed, one by one, on pages 2 and 3 together of the inventory in such a way that left hand side top hole is put over serial I of the inventory and right hand side bottom hole is put on serial 57 of page 3 of the inventory. Their after, answers visible in the holes i.e. crossed answers, be counted for each dimension and put in the appropriate box provided on the top of the page 2 of the inventory.

This way one person would have three scores on the inventory—one for extraversion, another for neuroticism and third for lie scales.
The same procedure would be applicable for both the form of the EPI and the same set of perforated keys would be used for both. Maximum possible score on extraversion and neuroticism scales would be 24 each and minimum a zero Maximum possible lie score would be 9 and minimum a zero.

For the present study Eysenck personality inventory (1985) was utilized. It includes 100 questions of two personality variables.

1.6 Administration of the test:

E. P.I. were distributed to Inter University and State Level Male and Female volleyball players instruction were given to the volleyball players before filling these inventory by the research.

1.7 Statistical technique:

To analyze the data mean scores, standard deviation and t-test were used to comprise the Study of Personality with respect to Neuroticism, and Extraversion and Lie scale between Inter University and State Level Male and Female volleyball players.

Statically no significant differences for Inter University and State Level Male and Female Volleyball Players

1.8 Tools Used for Data Collection:

For collection data of standardized scales were selected.

Data was collected individually through an Eysenck personality inventory from 100 Male and 100 Female Inter University and State Level volleyball players by contacting volleyball place from Nagpur for State Level Volleyball Competition and Inter University Level Competition in Nasik both are for Maharashtra.

Each of the three instruments could be administered individuals as well as a state (18-21.years) and interuniversity (22-25.years) male and
female group. While collecting the data for the study the later approaches was adopted. Subject and there seating arrangements was made in a classroom. Prior to administration of test or scale, though informal talk appropriate rapport form.

Following the instruction and procedure suggested by the author of the scale and tests. The test was collected. Following the same procedure, the whole data were collected.

1.9 Variables:

Independent variable
1. Age
2. Sex

Dependent variable
1. Extraversion
2. Neuroticism
3. Lie Scale

E.P.I. - EYSENCK PERSONALITY INVENTORY (EPI) - Revised:

In the present research work, the E.P.I. developed by Hans Jürgen Eysenck was used. It provides separate dimensions of personality Extraversion, Neuroticism, and Lie Scale. The operational definitions of personality factors measured by this inventory are:

**Extraversion:** Quantity and intensity of energy directed outwards into the social world.

a) Warmth: - Interest in and friendliness towards others.

b) Gregariousness: - Preference for the company of others.

c) Assertiveness: - Social ascendancy and fearfulness of expression.

d) Activity: - Pace of living.
e) Excitement seeking: - Need for environment stimulation.

f) Position Emotion: - Tendency to experience positive emotions.

**Neuroticism:**

Identifies individuals who are prone to psychological distress.

a) Anxiety: - Level of free-floating anxiety.

b) Angry Hostility: - Tendency to experience anger and related states such as frustration and bitterness.

c) Depression: - Tendency to experience feelings of guilt, sadness, despondency and loneliness.

d) Self consciousness: - Shyness or social anxiety.

**Scoring Method:**

The respondent was provided with alternatives to give his responses ranging from most acceptable description of his personality. Extraversion, Neuroticism, and Lie scale. The summated score of all the items provide the total personality factors score of an individual. A high score on this inventory indicates higher personality traits, while a low score shows low personality traits.

**Hypothesis:**

The following hypotheses formulated in this study:

1. It had been hypothesized that there would be no significant differences of personality characteristics with respect to neuroticism between inter university and state level male players.

2. It had been hypothesized that there would be no significant differences of personality characteristics with respect to extraversion between inter university and state level male players.
3. It had been hypothesized that there would be no significant differences of personality characteristics with respect to lie-scale between inter university and state level male players.

4. It had been hypothesized that there would be no significant differences of personality characteristics with respect to neuroticism between inter university and state level female players.

5. It had been hypothesized that there would be no significant differences of personality characteristics with respect to extraversion between inter university and state level female players.

6. It had been hypothesized that there would be no significant differences of personality characteristics with respect to lie-scale between inter university and state level female players.

7. Interuniversity Male Volleyball Players have significantly not more Neuroticism than the State Level Male Volleyball Players.

8. Interuniversity Female Volleyball Players have significantly not more Neuroticism than the State Level Female Volleyball Players.

9. Interuniversity 22-25 year Volleyball Players have significantly not more than the State Level 18-21 year Volleyball Players.

10. Interuniversity 22-25 years Volleyball Players has significantly not more Neuroticism than the State Level 22-25 years Volleyball Players.

11. Interuniversity Male Volleyball Players have significantly not more Intelligence than the State Level Male Volleyball Players.

12. Interuniversity Female Volleyball Players have significantly not more Intelligence than the State Level Female Volleyball Players.
13. Interuniversity 18-21 years Volleyball Players has significantly not more Intelligence than the State Level 18-21 years Volleyball Players.
14. Interuniversity 22-25 years Volleyball Players has significantly not more Intelligence than the State Level 22-25 years Volleyball Players.
15. State Level Male Volleyball Players have significantly not more Extraversion than the Interuniversity Male Volleyball Players.
16. State Level Female Volleyball Players have significantly not more Extraversion than the Interuniversity Female Volleyball Players.
17. State Level 18-21 years Volleyball Players has significantly not more Extraversion than the Interuniversity 18-21 years Volleyball Players.
18. State Level 22-25 years Volleyball Players has significantly not more Extraversion than the Interuniversity 22-25 years Volleyball Players.