CHAPTER 3

METHOD AND PROCEDURE
CHAPTER-III
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In this chapter, the method and procedure adopted to carry out the present study has been described. The study was a survey type in which softball players from two performance groups i.e. medalist and non-medalist and two gender groups i.e. male and female were investigated with regard to the three selected variable i.e. mental health, self-esteem and competitive anxiety. This chapter includes the design of the study; procedure and selection of sample, selection of the variables, selection of tests, administration of the tests and the statistical techniques used to analyze the data.

DESIGN OF THE STUDY

This is a survey type study focusing on softball players belonging to the two performance groups i.e. medalist and non-medalist and the two gender groups i.e. male and female were investigated. The dependant variables i.e. Mental health, Self-esteem and Competitive Anxiety in relation to independent variables of performance and gender have been studied. The purposive sampling technique was used for medalist and random sampling technique was used for non-medalist. The statistical measure applied in the study was Mean, S.D., 't' test and inter correlation.

SAMPLE

In the present study, the subjects for data collection were drawn from two levels of performance i.e. Panjab University Inter-College (medalist male and female softball players) and (non-medalist male and female softball players) and also from All India Inter-University (medalist male and female softball players) and (non-medalist male and female softball players) for the session 2008-2009. The subjects were purposively selected in case
of medalist and randomly in case of non-medalist. The sample consisted of 304 male and female players (medalist and non-medalist) in the age group of 17 to 25 years and was selected from two different levels i.e. Inter-College and Inter-University. One hundred fifty two (152) subjects were drawn from Inter-College and they were sub-divided into 76 medalists (38 male and 38 female) and 76 non-medalists (38 male and 38 female) and One hundred fifty two (152) subjects were drawn from Inter-University level and they were sub-divided into 76 medalists (38 male and 38 female) and 76 non-medalist (38 male and 38 female) softball players. The detailed break up of the sample has been shown in the figure below.
SELECTION OF THE VARIABLES

The following psychological variables were selected for the purpose of this study.

DEPENDENT VARIABLES
1. Mental Health and its six dimensions:
   (i) Emotional Stability
   (ii) Overall Adjustment
   (iii) Autonomy
   (iv) Security-insecurity
   (v) Self-Concept
   (vi) Intelligence

2. Self-Esteem and its sub-variables:
   (i) Personally Perceived Self-Esteem
   (ii) Socially Perceived Self-Esteem

3. Competitive Anxiety

INDEPENDENT VARIABLES
1. Performance
2. Gender

TOOLS USED

The following tests were administered to measure the selected variables:

1. To measure the level of Mental Health of the subjects, Mental Health battery constructed by Singh and Gupta (2000).

2. To measure the level of Self-Esteem among the subjects, Self-Esteem Inventory developed by Prasad and Thakur (1988).

3. To measure the level of Competitive Anxiety among the subjects, Sports Competition Anxiety Test developed by Marten’s (1977).
DESCRIPTION OF TEST

In order to measure the level of mental health, self-esteem and competitive anxiety of the subjects, three tools (i.e. mental health battery, self esteem inventory and sports competition anxiety test) have been used in this study. These tests have been described below:

MENTAL HEALTH BATTERY (MHB)

The investigator has used the Mental Health Battery constructed by Singh and Gupta (2000) for measuring all the dimensions of mental health of the subjects and their overall mental health. The six areas of mental health covered by this battery are: Emotional Stability, Overall Adjustment, Autonomy, Security–insecurity, Self-concept and intelligence. The battery consisted of 130 items covering all the areas of mental health.

Validity coefficient for various items was found to be significant at .01 levels. Both temporal stability reliability and internal consistency reliability of the questionnaire were computed. The details have been presented in the Table as under:

<table>
<thead>
<tr>
<th>Psychological Variables</th>
<th>Mean Age</th>
<th>N</th>
<th>Test-Retest Reliability</th>
<th>Odd-Even Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-1 : Emotional Stability</td>
<td></td>
<td>102</td>
<td>( r_{tt} = .876 )</td>
<td>( r_{tt} = .725 )</td>
</tr>
<tr>
<td>Part-2 : Overall adjustment</td>
<td>15.6 yrs</td>
<td></td>
<td>( r_{tt} = .821 )</td>
<td>( r_{tt} = .871 )</td>
</tr>
<tr>
<td>Part-3 : Autonomy</td>
<td></td>
<td></td>
<td>( r_{tt} = .767 )</td>
<td>( r_{tt} = .812 )</td>
</tr>
<tr>
<td>Part-4 : Security-insecurity</td>
<td></td>
<td></td>
<td>( r_{tt} = .826 )</td>
<td>( r_{tt} = .829 )</td>
</tr>
<tr>
<td>Part-5 : Self-Concept</td>
<td></td>
<td></td>
<td>( r_{tt} = .786 )</td>
<td>( r_{tt} = .861 )</td>
</tr>
<tr>
<td>Part-6 : Intelligence</td>
<td></td>
<td></td>
<td>( r_{tt} = .823 )</td>
<td>( r_{tt} = .762 )</td>
</tr>
</tbody>
</table>

Note: All correlation values were significant (\( p < .01 \))
Method of Scoring

The scoring of response sheet of each subject was done with the help of a key provided with the test. The correct answers were given a score of +1 and incorrect answers were given a score of zero. The overall scores of all the six areas of mental health helped in the assessment of overall mental health of the subjects. A five point qualitative criterion had also been developed and mentioned on the test manual (i.e. excellent, good, average, poor, very poor) for classifying sample with respect to their total mental health.

SELF-ESTEEM INVENTORY (SEI)

To measure the level of self-esteem of subjects for the present study, the Self-Esteem Inventory (SEI) developed by Prasad and Thakur (1988) was administered. The test is a self-evaluation questionnaire and comprises of two forms. In the first part of inventory the subjects were to respond to items regarding as to what they think of themselves and in the second part of inventory responded to items concerning as to what the people who know them think about them. The first part of the test consisted of 29 items which were relating to personally perceived self-esteem and there were 30 items in the second part which were related to socially perceived self-esteem. Against every item options were given in seven point scale which ranged from ‘totally correct’, to ‘totally wrong’. Athletes making responses were awarded in such a way that for socially desirable items they were given 7 to 1 scores from totally correct to totally wrong. For socially undesirable items, reverse pattern was followed.

Before administering the test, the investigator instructed them that there are some statements in Part-I about how a person thinks about himself and in Part-II the statements are related to your opinion as to how
the other persons think about you. Read each statement and decide your response in one of the following seven options totally correct, correct to a large extent, partially correct, uncertain, partially wrong, wrong to a large extent, totally wrong.

**Method of Scoring**

For each item one of seven responses are possible (a) totally correct (b) correct to a large extent (c) partially correct (d) uncertain (e) partially wrong (f) wrong to a large extent (g) totally wrong. The statement which was socially undesirable was scored according to following key:

1 = Totally correct.
2 = Correct to large extent.
3 = Partially Correct.
4 = Uncertain
5 = Partially Wrong
6 = Wrong to large extent.
7 = Totally wrong.

All other statements were scored according to the following key:

1 = Totally wrong
2 = Wrong to large extent
3 = Partially wrong
4 = Uncertain
5 = Partially correct
6 = Correct to large extent
7 = Totally correct
For Part-I, the scores ranged from 29 to 203 and for Part-II scores ranged from 30 to 210.

Reliability

The two sets of the inventory were administered to a sample of 400 students. Split-half reliability coefficients were calculated for both the sets of the inventory which came out to be .82 and .78 for personally-perceived self and socially-perceived self respectively. Of the 400 students, 150 students were administered the two sets of the inventory again after a gap of six weeks for evaluating re-test reliability coefficients. Re-test reliability coefficients were found for both the tests were .69 and .66 respectively for personally-perceived self and socially-perceived self.

SPORTS COMPETITION ANXIETY TEST (SCAT)

Sports Competition Anxiety Inventory, the tool used was adult form of Sports Competition Anxiety Test (SCAT) developed by Martens (1977) to measure an athlete’s level of competitive anxiety. The test consists of 15 statements related to competitive situation, which the athlete answers by making a tick mark (✓) corresponding the ‘hardly ever’, ‘sometimes’ or ‘often’ for each item. Five items are spurious. Therefore, only ten items were scored to yield a competitive anxiety measures. Before giving them the test, the investigator instructed them as follows; below are some statements about how persons feel when they compete in sports and games. Read each statement and decide if you ‘hardly ever’ or ‘sometimes’ or ‘often’ feel this way when you compete in sports, games or in athletics. According to your choice tick mark (✓) the statement. There is no right or wrong answers. Do not spend too much time on any one statement. Remember to choose the word that describes how you usually feel when competing in sports and
games or in athletic events. The levels of anxiety recommended for Adult athletes are as follows:

**Sports Competition Anxiety Test**

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Range of Scores</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1—10</td>
<td>Low Anxiety level</td>
</tr>
<tr>
<td>2</td>
<td>11 — 20</td>
<td>Optimum Anxiety Level</td>
</tr>
<tr>
<td>3</td>
<td>21 —25</td>
<td>Above average anxiety level</td>
</tr>
<tr>
<td>4</td>
<td>Above 25</td>
<td>Extreme Anxiety level</td>
</tr>
</tbody>
</table>

**Reliability and Validity**

Marten, (1977) reported that test-retest reliability was .77 across age, sex, and time. The internal consistency for the form A (Adult) was found to be .96.

**Method of Scoring**

The procedure for scoring SCAT was as follows:

For each item one of three responses are possible: (a) Hardly ever, (b) sometimes, and (c) often. The 10 test items awarded scores were 2, 3, 5, 6, 8, 9, 11, 12, 14, and 15. The spurious items 1, 4, 7, 10 and 13, were not scored. Items 2, 3, 5, 8, 9, 12, 14 and 15 are worded so that they were scored according to the following key:

1 = Hardly ever  
2 = Sometimes  
3 = Often

Items 6 and 11 were scored according to the following key:

1 = Often  
2 = Sometimes  
3 = Hardly ever
If a person deleted 1 of the 10 items, his prorated full scale score was obtained by computing the mean score for the 9 items answered, multiplying this value by 10. If two or more items were omitted, the respondent’s questionnaire was invalidated. The range of scores on SCAT is from 10 (Low competitive A-trait) to 30 (high competitive A-trait).

**ADMINISTRATION OF THE TESTS**

For obtaining the data and fact based information for the present study, the researcher had sought permission and cooperation from many quarters. Researcher had approached team managers and coaches of various college's and university's softball teams participating in Panjab University Inter-college softball men and women championship held at Chandigarh and for All India Inter-University softball championship (men and women) held at Osmania University, Hyderabad (A.P.) for the session 2008-2009 for enabling him to administer the test to the softball players. With their consent and cooperation, the investigator decided the time and venue for the purpose so that their daily schedule was not disturbed. The tests were administered one after the other. The test instructions were clearly read out and explained to them and they were permitted to ask queries and their doubts were cleared before administering the tests. The subjects were asked to record their first response and hand over their test response sheets as soon as they filled up. The researcher tried his level best that there was no distraction or minimum distraction to the subjects who were attempting the test.
STATISTICAL DESIGN

The data obtained from the subjects was scored after scoring the respective questionnaires. The data was then computed and analyzed by applying statistical values such as Mean, S. D. and ‘t’ test to compare the male and female as well as medalist and non-medalist softball players. Inter co-relation was obtained to find out significant relationship among three variables i.e. Mental health, Self-esteem and Competitive anxiety. To test the hypotheses, the level of significance was set at .05 levels.