Methodology is the most essential for the research work. It is also called as main body or part of the research format. In this chapter the researcher has been described the Research design the method adopted for the sources of data, Selections of subjects, Selection of the test items, Scoring of the question, Administration of the schedule and test items.

3.01 Research design

Richey says that (2007) a Research design handles with the matters such as selecting participants for the Research and making for data collection and the activities that compact the research process.

Research designs basically are of two types as shown in the following figure.

![Figure 1: types of research designs](image)

As the above figure research design are of Two Types i.e. of conclusive research design and exploratory design.
Exploratory research design

According Burns and Bush (2006) exploratory research design is referred as gathering information in an informal and unstructured manner. The exploratory research design is proper when the researchers knows small about the opportunity or issue. Exploratory research design is not limited to one specific paradigm but may use either qualitative or quantitative approaches.

Conclusive research design

Conclusive research design is defined by Malhatra, (1999) as a research designed to assist the decision maker in deciding, evaluating and choosing the better action course in a given situation. Conclusive research may be either descriptive or causal research design respectively.

Casual research is referred as the research design where the major emphasis is on deciding a cause and effect relationship. In fact the causal relationship could be due to other factors specifically when dealing with perceptions and attitudes of people. On the other hand Brannon(1992) described that descriptive research as the name suggests describes descriptive data about the population being studied and does not try to set up casual relationship between events. It is used to explain happening, an event or to offer accurate and factual description of the population being studied. In a descriptive study the things are measured as they are.

This study makes use of descriptive research design. Descriptive research design needs a clear specification of what, who, where, when, how and why the research is to be done formal design is needed to insure that description encloses all phases (Mohan, 2007)

The main deference between descriptive and exploratory research is that unlike, exploratory research, descriptive research formulates a hypothesis in advance. Kirsch G (1992) say that who, what, where, when and how questions are answered by descriptive research. Descriptive research deals with everything that can be measure or counted.

The present research study is descriptive in nature because it analysis in detail the variation of levels of Emotional Intelligence, Aggression, Burnout and Stress Vulnerability of cricket players at University level with respect to the role of the players.

3.02 Hypothesis
On the basis of the literature gone through, research findings and the scholar’s own understanding of the problem the following hypothesis are formulated.

1. It is hypothesized that there will be significant difference in the level of emotional intelligence among the three groups of cricketer viz. batsmen, fast bowlers and spin bowlers.
2. It is hypothesized that the fast bowlers will have more aggression level in compare to batsmen and spin bowlers.
3. It is hypothesized that Fast bowler will have more burnout level in compare to other two groups.
4. It is further hypothesized that the batsmen will be more prone to stress vulnerability.

3.03 Sampling Design/plan

Sampling plan or sampling design is a definite schedule for gaining a sample from a given population (Willam, 2009). There are two sampling techniques by names

i) Non-probability sampling or non-random sampling

ii) Probability sampling or random sampling.

Probability sampling or random sampling is choice according to mathematical guideline whereby the chance for choosing of every unit is known (Tayie, 2005). There are four types of probability sampling techniques by names (i) clustered sampling (ii) stratified sampling (iii) simple random sampling and (iv) systematic sampling.

On the other hand non-probability or non-random sampling technique is more useful than other and they all share 2 similar characteristics. First investigating sampling errors is impossible if non probability sampling is used. Second all non probability sampling technique reflects attempts to lower down the sampling cost similar to probability sampling techniques (Takona, 2002).The four types of non-probability techniques are (i) Quota sampling (ii) Judgmental sampling (iii) Convenience sampling and (iv) Snowball Sampling.

Sampling design adapted in this research
This research makes use of both probability sampling techniques since this research does both quantitative analysis. Of the four types of the probability sampling strategic for this quantitative analysis, this study make use of simple random sampling.

This study use Simple Random Sampling for quantitative analysis. Simple Random Sampling is procedure in which each possible sample for a specific size within a population has common and known probability of being selected as the study sample. If is the most basic kind of probability sampling (Parasuraman, et. al., 2009).

**Sampling unit**

The sampling units for this study are 300 West Zonal Intervarsity level male cricketers. For selecting the sampling unites, the scholar has considered last three year University players.

**Target population**

The target population in this research for quantitative study is 300 West Zonal Intervarsity level male cricketers. Out of which 100 are batsmen, 100 spin bowlers and 100 fast bowlers.

**3.04 Data Collection**

Research data are nothing but facts or observation on which test or argument is made. Data may be of two types by namely primary and secondary data. This research makes use of both of them.

**Primary data**

Myers (2008) says that primary data is the data which is collected for the research project. Primary data do not exist until and unless it is generated through the research process as part of the project. Primary data is closely related to and has implications for the method and techniques
of the data collection. Primary data includes data from interviews, fieldwork and unpublished
documents such as minutes of meeting and so forth.

In this study primary data are collected both in quantitative as well as qualitative forms.
Primary data have been planned to be collected form 300 west zonal intervarsity level male
cricketers using closed ended questionnaires.

Secondary data

According to Khurana(2009), secondary data is the data that were collected by someone else
for a different purpose. When gathering Secondary data every source of information used must
be indentified in the paper. Secondary data are cheaper and quicker to gather. In this research,
Secondary data has been collected with the help of books, journals and online magazines that
talk about the cricket and cricket players.

Reasons for using an opinionnaire questions or statements in the schedule

An opinionnaire is defined as a special form of inquiry used by the researcher to collect
the opinions of a sample of population on certain facts or factors regarding problem under
investigation. In physical education and sports, the use of opinionnaire is very beneficial
especially when it is necessary to know players or students attitude towards coaches, teacher,
physical activities, sports, system of training and towards officials etc. opinionnaire is a good
decide in research where it may be fruitful to spot out lacuna in the existing practices in physical
education, health education, recreation and spots. Attitude scales or opinionnaire can be easily
constructed by coaches or physical education themselves.

The opinionnaire makes use of the statements or questions on different aspects of the
problem under investigation. It solicits responses on either a three point scale or five point scale,
e.g. agree-undecided- disagree- uncertain –disagree- strongly disagree in case of five point scale.
It uses the favorable or unfavorable statements on different aspect of the problem in hand (Jain,
2011).

In this research the scholar has used five point scale and two point scale e. i. yes or no to
collect the opinions of the intervarsity level cricketers on the factor or sub factors on Emotional
Intelligence, Aggression, Burnout and Stress Vulnerability.
3.05 Selections of subjects

The number of samples selected for the study are 300 (n= 300). All the players are west zonal intervarsity level cricketers. Out of which 100 are batsmen, 100 spin bowlers and 100 fast bowlers. Their ages is ranging between 18 to 25 years.

3.06 Selection of the test items and scoring


2. Aggression questionnaire which contain 25 items devised by Anand Kumar Shukla and Prem Anand.

3. Athletic Burnout questionnaire which contain 15 items devised by Raedeke (1997; Raedeke & Smith, 2001). It consists of three sub-factors viz.
   1. RA = reduced sense of accomplishment
   2. E = emotional/physical exhaustion
   3. D = devaluation

4. Stress Vulnerability Scale which contain 20 items devised by L.H. Miller and A.D. Smith

Emotional intelligence

Objective of the questionnaire

To find out the level of the emotional intelligence is the main objective of the questionnaire.

Description of the test items

Emotional Intelligence Questionnaire which is developed by Phillip L. HunSaker. (2001) is used by the scholar which contain 25 items with five sub factors viz.

1. Self-awareness

2. Motivating oneself

3. Managing emotions
4. Empathy

5. Social skill

**Scoring of the questionnaire**

There are 25 questions to obtain the responses on Emotional Intelligence score. The questions 1, 6, 11, 16, 21 are related to the concept of “Self-Awareness” and the total score of these question is the score of self-awareness. The questions 2, 7, 12, 17, 22 are related to the concept of “Managing Emotions” and the total score of these question is the score of managing emotions. The question 3, 8, 13, 18, 23 are related to the concept of “Motivating Yourself” and the total score of these questions is the score of motivating yourself. The questions 4, 9, 14, 19, 24 are related to the concept of “Empathy” and the total score of this questions is the score of empathy. The questions 5, 10, 15, 20, 25 are related to the concept of “Social Skills” and the total score of this questions is the score of social skills.

The questionnaire shows the level of emotional intelligence. The player, who got a full score of 100 or more, is considered to be having high level of emotional intelligence. The player, who got score from 50 to 100, indicates that the player has platform from which he can develop the emotional intelligence. The player who got score below 50 indicates that the player have probability of below average in emotional intelligence.

The concept of emotional intelligence has five component i.e. self-awareness, motivating one’s self, managing emotions, empathy and social skills, have a total score more than 20 is indicates high but a total score less than 10 would be considered low.

**Aggression**

**Objective of the questionnaire**

To measure the level of Aggression

**Description of the test items**
The aggression questionnaire was given to the intervarsity cricket players. The directions were given by the researcher to enable them to the required. This questionnaire composed of 25 items and in these 25 items 13 items are “YES” and remaining 12 are keyed “NO.

**Questionnaire’s Scoring**

For each item score was “I” the maximum score may be 25 and minimum score may be 0. Scores obtained by each statement was added up which represent one’s total score on aggression. This questionnaire composed of 25 items and in these 25 items 13 items are “YES” and remaining 12 are keyed “NO” the statement.

**Burnout**

**Objective of the questionnaire**

To measure intervarsity cricket players level of burnout

**Description of the test items**

Athletic Burnout questionnaire contain 15 items devised fifteen items quantified the players burnout factors according to its key characteristics of reduced accomplishment, devaluation, and emotional/physical exhaustion (Eklund & Cresswell, 2007). The item is the item is in question form. A response is scored on a 5-point Likert scale with “almost never” (1), “rarely” (2), “sometimes” (3), “frequently” (4), “almost always” (5) representing all possible responses. Raedeke and Smith (2001) and Cresswell and Eklund (2006) have showed both reliability and validity for the ABQ as they have administered the questionnaire to athletes in and out of North America.

**Scoring of the questionnaire**

RA = reduced sense of accomplishment

E = emotional/physical exhaustion

D = devaluation
Note: items 1 and 14 are reverse scored

**Stress Vulnerability**

**Purpose of the questionnaire**

To measure the level of Stress Vulnerability

**Description of the test items**

University Medical Center, L.H. Miller and A.D. Smith developed the stress questionnaire at Boston. It is reproduced by the SCI Noble Counseling Center of Caldwell, Ohio

**Scoring of the questionnaire**

Scores was is from 20 to 100. If the score is less than 50, subject was not vulnerable to stress at present time. Any score over 50 shows vulnerability to stress. Evaluate the reasons for the stress and identify strategies for handling with it. Periodically main subject progresses toward reducing stress. A score between 70 and 95 shows a serious vulnerability to stress. A score over 95 shows highest degree vulnerability to stress. Intervention and assistance from outside sources as counselors might be necessary.

**3.07 Administration of Interview Scheduled**

The research scholar personally meets the coaches and the player and explained them clearly the purpose of the study along with how the questions filled or answered. After make sure that the subjects are clearly understood and the procedure of how to fill up the scheduled, they asked to score the answer. It was carefully observed that all the items of the scheduled i.e. emotional intelligence, Aggression questionnaire, Athletic Burnout questionnaire, Stress Vulnerability Scale should be answered by the respondents.

**3.08 Ethical considerations**

There has to be some basic ethics to be adopted in the research. Ethics in this study is maintained by the researcher by keeping the responses obtained strictly confidential. Besides, a prior permission was taken by the researcher from the target respondents before conducting the research.
Summary

A total of 300 intervarsity level male cricketers (100 batsman, 100 fast bowlers, 100 Spean bowlers) alone are surveyed for the study by using an interview schedule containing closed-ended questions. The research design adopted in this study is descriptive research and the sampling technique involve is Simple Random Sampling. In addition to this, the section explains the selection of the test items, purpose of the scheduled and questions, administration of the scheduled and ethical considerations.