CHAPTER – 3

DESIGN OF THE STUDY
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INTRODUCTION:

Having specified the problem listing the objectives, formulating the Hypotheses, and providing review of relevant literature in the previous chapters, the present chapter deals with method and procedure adopted in conducting the study. Therefore, the method used, sample, tools used, administration and scoring of tools are described in the following pages.

3.1. METHOD OF RESEARCH:

There are several methods of research. Choice of the method of research is determined by the nature of the problems. The present study attempts to study the personality characteristics and attribution style of high and low achieving sportsmen. It is obvious that the variable like personality characteristics and attribution style cannot be deliberately arranged and manipulated by the researcher in an artificial setting like a laboratory situation nor is it desirable to do so. It is an ex-post-facto type of study and, therefore, the descriptive method of research is found to be most appropriate as the variables can be selected and observed as they existed.

The descriptive method of research has been the most popular and widely used research method in education. Because of the ease and directness of this method, information can be gathered by a simple
questionnaire or interview. Although the method of descriptive research is relatively less sophisticated studies are more than mere collection of data. They involve measurement, classification, analyses, comparison and interpretation. Such research seeks to find answers to questions through the analysis of variable relationships. What factors seems to be associated with certain conditions, occurrences or behaviours? Because, it is often impracticable to arrange occurrences, an analysis of post events only may be feasible.

A study of personality and attribution style of high and low achieving sportsmen cannot be attempted to laboratory situation. So, Descriptive survey method(Sharma, R.A. 1990)[1] is adopted for the present study as it is the most appropriate method for such type of studies.

3.2. POPULATION OF THE STUDY:

The term ‘Population’ or universe conveys a different meaning than a traditional one. In census survey, the count of individuals (Men, Women and Children) is known as population. But in research methodology population means the characteristics of a specific group.

Population is any group of individuals that have one or more characteristics in common that are of the researcher. The population may be all the individuals of a particular type, or a mere restricted part of that group (Best, J.W., and Kahn, J.V., 1986)[2]. The population for the purpose of this study consists of all the sportsmen of North Indian universities and sportsmen participating in inter-university and North-eastern inter-university championships.
3.3. SAMPLE OF THE STUDY:

For the solution of any research problem, it is not only difficult but also impossible to study the whole universe; therefore, a representative sample is drawn from the population to ensure the valid generalization leading to the contribution to knowledge.

Thus, a sample is a small population of the population selected for study. The essential requirement of any sample is that it is as representative as possible of the population of the universe from which it has been drawn. The scope of generalization of the finding depends on the representative ness of the sample. However, a good sample is one which is unbiased and representative of the whole population. In this study **Purposive Stratified Sampling** (Bhatnagar, R.P., 2003) has been used. “In stratified sampling the population is first divided into homogeneous or administratively convenient subpopulation or the strata and from each stratum a separate sample of units is selected” (Srivastava, A.B.L., and Bhatkuliker, S.C., 1980).

A total of 300 sportsmen (150 from individual games and 150 from team games) served as sample for the present study. The sample was drawn from North Indian Universities and sportsmen participating in Inter-university and North Eastern Inter-University championships.

The age of the subjects ranged between 16 and 25 years. All the subjects were male, studying in undergraduate to postgraduate classes. The low achieving sportsmen were selected randomly where as all the
position holders from the North Indian Universities were taken as high
achievers.

3.4. PROCEDURE OF DRAWING A SAMPLE:

For drawing the good and unbiased sample I witnessed various
North Indian Universities, inter-university and North-eastern inter-
university championships. The results of everyday and final day were
followed personally and list of final result was collected from the officials.
The lists collected are of three individual games (Boxing, Weightlifting and
Athletics) and three team games (Football, Basketball and Volley ball).
The sample collected was of two categories high achievers and low
achievers. High achievers are first, second and third position holders and
low achievers are all other participating sportsmen.

It was primarily decided to take at least 300 hundred sportsmen for
final analysis of the study. Accordingly it was decided to called sufficiently
large number of players of various competitions, so that the target of
going of 300 hundred sportsmen of individual and team games could be
achieved. Total sample number of 300 sportsmen consist of 150
sportsmen of individual games and 150 sportsmen of team games and
150 sportsmen of individual games has 75 were High achievers and 75
were Low achievers. Similarly out of 150 sportsmen of team games and
out of 150 sportsmen of team games has 75 were High achievers and 75
were Low achievers. The structure of sample is presented as follows:
TABLE 3.1

STRUCTURE OF SAMPLE

TOTAL SAMPLE(300)

INDIVIDUAL GAMES(150)

HIGH ACHIEVERS(75)

LOW ACHIEVERS(75)

TEAM GAMES(150)

HIGH ACHIEVERS(75)

LOW ACHIEVERS(75)

TABLE 3.2

STRUCTURE OF SAMPLE FOR INDIVIDUAL GAMES

<table>
<thead>
<tr>
<th>Sports</th>
<th>Games</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>Boxing</td>
<td>Athletics</td>
<td>Weight</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lifting</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>N=25</td>
<td>N=25</td>
<td>N=25</td>
<td>N=75</td>
</tr>
<tr>
<td>Low</td>
<td>N=25</td>
<td>N=25</td>
<td>N=25</td>
<td>N=75</td>
</tr>
<tr>
<td>Total</td>
<td>N=50</td>
<td>N=50</td>
<td>N=50</td>
<td>N=150</td>
</tr>
</tbody>
</table>
**TABLE 3.3**

**STRUCTURE OF SAMPLE FOR TEAM GAMES**

<table>
<thead>
<tr>
<th>Sports</th>
<th>Games</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Football</td>
</tr>
<tr>
<td>Achievement</td>
<td>N=25</td>
</tr>
<tr>
<td>High</td>
<td>N=25</td>
</tr>
<tr>
<td>Low</td>
<td>N=25</td>
</tr>
<tr>
<td>Total</td>
<td>N=50</td>
</tr>
</tbody>
</table>

3.5. **VARIABLE INVOLVED:**

The present study involves two kinds of variables namely:-

- Independent variables
- Dependent variables

(a) **INDEPENDENT VARIABLES:**

The Independent variables is that factor which is measured, manipulated or selected by the experiment to determine the relationship to an observed phenomenon. In the presently study, the independent variables are **personality needs and attribution style**.

(b). **DEPENDENT VARIABLES:**

The dependent variable is the factor which is observed & measured to determine the effect of independent variable. In the present study, the dependent variable is **sports achievement**.

3.6. **TOOLS USED:**

As has been stated earlier, the variables under investigation in the present study are personality factors and attribution style. For the collection of data, the investigator selected the following tools:
The present personality inventory is prepared on the basis of personality theory of Henry Murray. Murray has conceptualized personality on the basis of psychological needs of the individual. He has postulated that due to the influence of environment, a special type of will, need or psychological need grows within an individual, which compels him to behave in a specific direction. This influence of outer environment on an individual is of different types; so, with the passage of time many specific demands are developed and become permanent in the personality of every person and take command of his entire behaviour. As for their nature he says, “A need is a construct . . . . . . . . . . . . Which stands for a force (The physico-chemic nature of which is unknown) in the brain region, a force which organizes perception, apperception, intellection, cognition and action in such a way as to transform in certain direction in existing unsatisfying situation.”

Murray has investigated such twenty main psychological needs on the basis of wide experiments. He calls them manifest needs, because these demands are manifested in the individuals’ behaviours and we
know them through these behaviours. Prof. Edwards of Washington University of America prepared a questionnaire in 1954, (4) which measures is main needs out of these twenty. (5) In 1996 Dr. A.P. Bhatnagar presented Hindi version of this test. Meenakshi Personality Inventory (MPI) is a further refinement of that version. This inventory has the same critical base and also measures the main psychological personality needs. Although, in this inventory also the psychological needs are defined in the same way, as by Murray and subsequently by Edwards and Bhatnagar in the construction of their tests, but no statement is taken in MPI from the latter’ test.

The Meenakshi Personality Inventory (MPI) test the following ten psychological needs-

1. Need Achievement.
2. Need Exhibition.
5. Need Succourance.
7. Need Abasement.
Every need, mentioned above is measured with a scale of twenty statements. Every statement aims to find out “what an individual prefers or what he likes.” In other words every statement is verbal behaviour which points to the force of the type of psychological need in an individual. This inventory tests the ten main needs of the personality.

**RELIABILITY & VALIDITY OF MPI:**

The reliability of MPI was found out by its author through split-half method. The reliability of the half test thus, obtained, was corrected by applying Spearman Brown prophecy formula, which is as under-

\[
\frac{2r}{1+r}
\]

The reliability was established through the above method for each separate scale. In this way ten co-efficient of reliability were obtained.

The reliability study of the scales was based on 100 answer sheets of a sample of 100 respondents, selected from a total of five hundred, the method of selection being random. Needless, to say that these reliability indices provide evidence of internal consistency of the scales.

The co-efficient of reliability are given in the following table.
### TABLE – 3.4

**RELIABILITY OF M.P.I.**

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Personality Needs</th>
<th>Reliability co-efficient (revised)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Need Achievement</td>
<td>0.70</td>
</tr>
<tr>
<td>2.</td>
<td>Need Exhibition.</td>
<td>0.62</td>
</tr>
<tr>
<td>3.</td>
<td>Need Autonomy</td>
<td>0.74</td>
</tr>
<tr>
<td>4.</td>
<td>Need Affiliation</td>
<td>0.76</td>
</tr>
<tr>
<td>5.</td>
<td>Need Succourance</td>
<td>0.72</td>
</tr>
<tr>
<td>6.</td>
<td>Need Dominance</td>
<td>0.85</td>
</tr>
<tr>
<td>7.</td>
<td>Need Abasement</td>
<td>0.80</td>
</tr>
<tr>
<td>8.</td>
<td>Need Nurturance</td>
<td>0.70</td>
</tr>
<tr>
<td>9.</td>
<td>Need Endurance</td>
<td>0.85</td>
</tr>
<tr>
<td>10.</td>
<td>Need Aggression</td>
<td>0.76</td>
</tr>
</tbody>
</table>

N= 100

The author further, claims that the above reliability co-efficient are very similar in size to those obtained by the author of the EPPS (Edwards) and also quite close to the EPPS (Hindi) developed and standardized by Bhatnagar.

In view of the fact that the characteristics of the sample of the present study and the characteristics of the sample used for establishing reliability of the M.P.I., are same, no need was felt to establish reliability of this tool afresh.
The validity of the inventory was established on three different sub-samples, comprising the students of intermediate, B.A./B.Sc. and M.A./M.Sc. classes. To set up the validity of the inventory, E.P.P.S. (Hindi) of Bhatnagar, which is a properly standardized and valid tool, was accepted as a criterion. By correlating obtained scores on ten sub-parts of the present inventory with those on the same ten sub-parts of EPPS (Hindi), the validity co-efficient were computed. They are given in the following table.

**TABLE – 3.5**

**VALIDITY CO-EFFICIENT (Concurrent)**

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Need scale</th>
<th>Co-efficient</th>
<th>Co-efficient</th>
<th>Co-efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Need Achievement</td>
<td>0.70</td>
<td>0.65</td>
<td>0.62</td>
</tr>
<tr>
<td>2.</td>
<td>Need Exhibition</td>
<td>0.65</td>
<td>0.48</td>
<td>0.56</td>
</tr>
<tr>
<td>3.</td>
<td>Need Autonomy</td>
<td>0.53</td>
<td>0.59</td>
<td>0.50</td>
</tr>
<tr>
<td>4.</td>
<td>Need Affiliation</td>
<td>0.49</td>
<td>0.50</td>
<td>0.42</td>
</tr>
<tr>
<td>5.</td>
<td>Need Succourance</td>
<td>0.42</td>
<td>0.46</td>
<td>0.40</td>
</tr>
<tr>
<td>6.</td>
<td>Need Dominance</td>
<td>0.56</td>
<td>0.60</td>
<td>0.55</td>
</tr>
<tr>
<td>7.</td>
<td>Need Abasement</td>
<td>0.40</td>
<td>0.55</td>
<td>0.46</td>
</tr>
<tr>
<td>8.</td>
<td>Need Nurturance</td>
<td>0.61</td>
<td>0.58</td>
<td>0.50</td>
</tr>
<tr>
<td>9.</td>
<td>Need Endurance</td>
<td>0.45</td>
<td>0.62</td>
<td>0.48</td>
</tr>
<tr>
<td>10.</td>
<td>Need Aggression</td>
<td>0.67</td>
<td>0.48</td>
<td>0.45</td>
</tr>
<tr>
<td></td>
<td>N= 100</td>
<td>N= 100</td>
<td>N= 100</td>
<td></td>
</tr>
</tbody>
</table>
ADMINISTRATION OF MEENAKSHI PERSONALITY INVENTORY (MPI):

With the permission of author of this inventory and Prof. R.P. Bhatnagar, Researcher had used this inventory. Researcher asked the respondents to indicate to what extent each statement of the inventory characterizes their personality needs. The tool was administered in one sitting to each player of each game. Each respondent was requested to write his/her responses on a separate sheet attached with the inventory and also requested to answer and mark each item without fall. Under the instructions, it was also made clear that the respondents are to mark either A or B of each statement which depending on, which one they prefer more. The time given to mark the statements of the inventory was 40 minutes. The respondents were also asked not to write their names on the inventory or on response sheet, to ensure their anonymity and to provide them an opportunity to answer frankly according to their true feelings.

SCORING AND INTERPRETATION OF M.P.I.:

After collecting all the response sheets the scoring of each sheet was done in the manner given in the manual of the M.P.I. by its author. The method is stated as below:

1) An oblique line was drawn from item No. 1 AB to 100 AB on response sheet from upper left corner to lower right corner, crossing item Nos. 5, 9, 43, 48, 53, 58, 92, and 96.
(2) A second oblique line crossing item Nos. 71, 75 and 79, a third oblique line crossing items 22, 26 and 30 and a fourth one, crossing items 10, 14 and 18, were drawn.

(3) A horizontal line was drawn from item No. 18 to 21.

(4) Item Nos. 1-71, 5-75, 9-79, 10-43, 14-48, 18-53, 21-58, 22-92, 26-96 and 30-100 were compared to see whether the respondent had encircled the same type of the two items or whether he/she had encircled differently. For example whether she/he encircled 1A and 71A or 1B and 71B, or whether one A was encircled and in seventy one B was encircled. If in both, the same type of the response, (both A or both B) were encircled, the researcher put a right mark (v) under that column, and if it was found differing, then a cross mark (x) was put there. In this manner all the columns were evaluated and marked, and then the total right marks were counted. Only those response sheets were accepted as reliable which had more than seven right marks on each column.

(5) Next, in the first row, leaving only that paired item which falls on oblique line all encircled. As were counted and their total was written in column ‘R’ on the right side in the front of the row of the response sheet. These score will in cases exceed nine. In a like manner, in first column, leaving the paired item out by oblique line all encircled Bs were counted and their total was written in column C in the right side in the front of the first row of the response sheet.
The grand total of both columns (R & C) was written in the column ‘T’. This was the score of the first need.

In the same manner total score of As and Bs on second row and second column were written in front of 2nd row. This was the score of 2nd need, with this procedure, scores of all the ten needs of personality were computed.

After finding the scores on each personality need of each respondent of a college, the scores on each one need of all the respondents of a college were summed up and divided by the number of respondents of that college. In this way the mean score on each need was struck for each college.

**3.6(b) ATTRIBUTIONAL STYLE QUESTIONNAIRE:**

**PETERSON ET AL 6:**

The attributional style questionnaire (ASQ: Peterson, Semmel, Von Baeyer Abramson, Metalsky and Seligman, 1982) is self report measure of patterns of “explanatory style” (Peterson and Seligman, 1984), which is the tendency to select certain causal explanations for good and bad events. The development of the ASQ has generated a spate of sophisticated investigations on the costs and benefits of certain attributional styles, particularly in the area of depression. The attribution scale consisted of 12 hypothetical situations, 6 describing good outcomes and 6 bad outcomes of the 12 situations, 6 had an affiliation orientation
and 6 had an achievement orientation. Thus the scale consisted of four subscales:

(a) Achievement situations with a good outcomes (e.g. you apply for position that you want badly, such as an important job etc.)

(b) Achievement situations with a bad outcomes (e.g. you have been looking for a job unsuccessfully for some time).

(c) Affiliation situations with a good outcome (e.g. you meet a friend who compliments you on your appearance).

(d) Affiliation situations with a bad outcome (e.g. you go out on a date, and it goes badly).

**TECHNICAL ASPECTS:**

Internal Consistency: Several studies have explored the ASQ’s internal consistency Peterson et al. (1982) report the internal consistencies of the locus, stability, and globality. Scale in a sample of 100 undergraduates. They found that these scales had but modest reliabilities, with Cronbach’s (1985) alpha ranging from .44 to .69.

Peterson and Seligman (1984) report that a revised version of the ASQ with 18 bad events produced coefficient alphas ranging from .66 to .88.

**RELIABILITY:**

Peterson and Seligman (1984, p.355) note that according to the reformulation, “Individuals have a characteristic way of explaining events”. The theory does not explicitly state that when depressed individuals recover, they maintain a “depressogenic” attribution style (i.e.
a style that leads one to make internal, stable, and global attributions for
bad events). The available literature indicates that in non-clinical
samples, ASQ scores are temporally consistent. Even then the reliability
for the present version of the scale is as follows:
Coefficient alphas for sub scales:
Good event internality = .39, bad events internality= .44
Good outcome stability = .54, bad outcomes stability = .63
Good outcomes globility = .58, bad outcomes globility =.64

VALIDITY:

There is now a large literature supporting the criterion and
construct validity of ASQ. Three recent studies by Seligman and his
associates further support the construct validity of the ASQ. Zullow and
Seligman (1985) hypothesized that ruminating about bad events and
attributing those events to internal, stable, global factors (as measured by
ASQ) predicts later depression. In their study people who were
dispositionally inclined to ruminate and who were manifested a
depressive attributional style were at high risk for later depression.
The test has been used on Indian population also, and results of studies
(Bijender Singh, 1984; Ram Singh, 1983; Aggarwal And Dhar, 1983; Jain
and Suran Mal, 1984) indicate that this test is a useful instrument in
studying the attributional style of Indian subjects.

ADMINISTRATION AND SCORING OF TESTS (ASQ):

The subjects were contacted for psychological tests just after the
Inter-University and North-Eastern Inter-University Championships in
their respective hostels or stay places. The subjects were tested in either individually or small group setting according to their availability. In general, the testing conditions were satisfactory, the atmosphere was uniform although. Efforts were made to get the maximum cooperation of the subjects by establishing proper rapport. They were told that the results would be kept strictly confidential. Both the tests were administered in accordance with the procedure described in respective test manuals.

In case of ASQ following instructions were given to the subjects:

Please try to imagine yourself in the situation described. While events may have causes, we want you to pick only one – the major cause if this event happened to you. And you write the cause in the space provided. And we want you to answer some questions about the cause and a final question about the situation. To summarize, we want to –

1. Read each situation and vividly imagine it happening to you.
2. Decide what you feel would be the major cause of the situation if it happened to you.
3. Write one cause in the blank provided.
4. Answer three questions about the cause.
5. Answer one question about the situation.
6. Go on to the next situation.

For each situation subjects were asked to name the one major cause of the outcome described. The subjects then rated each cause on a 6 point scale for the degree of internality, stability, and globability. In addition,
subjects rated on a 6-point scale how important each situation would be if it happened to them. The following is an example situation with attributional questions (with the end points of the scale identified for each question).

One situation of the scale coded below-

You have been looking for a job unsuccessfully for some time:

1. Write down one major cause.
2. In the cause of your unsuccessful job search due to something about you or something about other people or circumstances? Put circle on only one number.

<table>
<thead>
<tr>
<th>Totally due to other people or circumstances</th>
<th>Totally due to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1   2   3   4   5   6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-----------------------------------------------

3. In the future when looking for a job, will this cause be present? (Put circle on one number)

<table>
<thead>
<tr>
<th>Will never again be present</th>
<th>Will always be present</th>
</tr>
</thead>
<tbody>
<tr>
<td>1   2   3   4   5   6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

-----------------------------------------------

4. Is the cause something that just influences looking for a job, or does it also influences other areas of your life? (Put circle on one number)
5. Influences just
this particular situation

Influences
all situations of my life

1 2 3 4 5 6

----------------------------------------------

Subjects required indicating on six point scale (1 to 6 category numbers for each question excluding question number 1 in each situation) the category number of each question most applicable to them. Question number 2, 3 and 4 in each situation represents Internal/External, Stable/Unstable, Global/Specific dimension scores, respectively. Scores are derived by simply averaging within dimension and across dimensions and across events for composite scores. Each individual dimension ranges from 1 to 6. Composite scores, therefore, range from 3 to 21 for copos and CoNeg and from -18 to +18 for cPcN for individual scoring. Styles are calculated separately for good events and bad events. For example:

**Composite positive (Copos)** = the sum of 2, 3, 4, 10, 11, 12, 22, 23, 24, 34, 35, 36, 38, 39, 40, 46, 47 and 48 divided by 6.

**Composite Negative (CoNeg)** = the sum of 6, 7, 8, 14, 15, 16, 18, 19, 20, 26, 27, 28, 30, 31, 32, 42, 43 and 44 divided by 6.

Following is a list of all the measures which can be obtained from ASQ:

Composite Positive Attributional Style (**CP**) - Internal positive, stable positive and global positive
Composite Negative Attributional Style (CN) - Internal negative, stable negative and global negative

Composite Positive Minus Composite Negative (CPCN)

In the present study the most dependable measure of attribution style i.e., composite positive minus composite negative (CPCN) was used. Other measures were not obtained.

3.7 ADMINISTRATION OF TOOL, COLLECTION AND ORGANIZATION OF DATA:

Hence, the present study was designed to compare high and low achieving sportsmen of different games on Meenakshi personality inventory and Attribution style Peterson et. Al. initially M.P.I and ASQ were administrated on 30 sportsmen of high and 30 sportsmen of low achieving in each individual team games (Boxing, Athletics and Weight-lifting) and team game (volleyball, basketball and football). Finally we took 25 sportsmen of high and 25 sportsmen of low achieving in each game as some had give incompletely filled tools, some did not written them and some were rejected. Data were collected on the basis of these tools and collected data were organized variable and hypothesis- wise.

3.8 STATISTICAL TECHNIQUES USED:

M.S.D. F-test & t-test are used to analyse data,(Gerrate,H.E.,1981)7.
REFERENCES:


