CHAPTER III

METHODOLOGY

3.1 RESEARCH DESIGN:

An integrated approach was used to gather valid and reliable information for the study. The investigator extensively used the literary sources and thoroughly investigated the related literatures and also adopted the questionnaire methods and interview technique as tools of gathering the data. To analyse the personality traits of Murugan, Cattell's 16 Personality Factor Analysis Questionnaire Form-A was used.

The techniques adopted for conducting interviews and the methods used to construct the valid and reliable questionnaires to assess Murugan's early life, behaviour and performance in school and college, his quality as a player, his administrative skills and his contribution to the game of volleyball in Tamil Nadu have been explained in this chapter. The population and samples used for obtaining the opinion for each questionnaire, and the statistical methods used to analyse the data also have been explained.

3.1.1 Interview Technique:

The interview, in a sense, is an oral questionnaire. Instead of writing the response, the subject gives the needed information verbally in a face to face relationship.

Major advantages of Interview Techniques:

1. people are usually more willing to talk than to write;
2. once the interviewer establishes a friendly and secure relationship, certain types of confidential information may be obtained;

3. there is a greater reliability in restructuring the questions to collect the appropriate data;

4. if the subject misinterprets the questions, the interviewer may follow it up with a clarification note;

5. it provides an opportunity to evaluate the sincerity of the subject directly and

6. it is also possible to seek the same information in several ways at various stages of the interview, thus providing a check to the truthfulness of the respondent.

3.1.2. The Interview Schedule:

The investigator prepared a structured set of questionnaire with proper planning and thinking and the questions are arranged in a proper sequence to get all the required information from the respondents. Prior to the day of his scheduled interview, the investigator visited the respondents on several occasions and gained support and established a friendly, secure relationship with the respondents. Both the investigator and respondent gave importance for choosing the place and time of the interview to provide conducive atmosphere to minimise the interruptions or distractions. The investigator maneuvered the conversation so that all the areas of the study were covered. The investigator conducted the interview in such a way to avoid the interruption of any aspect of bias, and the actual wordings of the respondent were retained.
3.1.3. Interview with Murugan's family members, physical education teachers and his team-mates:

The investigator conducted scheduled interview with Murugan's sisters, brother and physical education teachers in schools and college, and team-mates. The investigator recorded their interviews by using a tape recorder. The interview schedule collected the following information;

1. Murugan's family background;
2. his parent's interest in sports and games;
3. his parent's involvement in social activities;
4. his parent's character and behaviour;
5. the parental qualities Murugan inherited;
6. his birth and childhood days;
7. his performance in sports and games at school;
8. his college education and achievements in sports at Inter-Collegiate and Inter-University level, and
9. his behaviour at home, play-field and in general.

3.1.4. Reliability of the Interview:

The purpose of the study was clearly explained to Murugan's sisters namely Ms. Subbammal, Ms. Muthammal, Ms. Velammal and Ms. Dhanavathi who are living in Madras. They voluntarily accepted to give the information which was highly truthful and to the best of honesty. The investigator recorded their interview, on 4.4.1996 and 14.4.1996 all at their residences at Madras. Other
sisters Vadivu (Palayamkottai), Ramalaxmi (Valliyur) and brother Kulasekaran (Tuticorin) were contacted over phone by the investigator and their interviews were recorded on 12.3.1996 and 13.3.1996 at their residences at Palayamkottai, Valliyur and Tuticorin respectively. The investigator visited his physical education teacher in school, Alexander at Cheranmadevi on 14.3.1996 and recorded his responses in a tape recorder. Benedict, the Director of physical education gave his interview on 16.3.1996 at Palayamkottai. The investigator carefully evaluated the sincerity and insight of the respondents. The respondents were aware that a check of truthfulness was possible since the investigator had a plan to conduct similar interviews with other members of the family and close associates of Murugan. Hence the information collected through the interview is held true.

3.1.5. Interview with Murugan:

As the investigator has been closely associated with various sports associations of the state of Tamil Nadu in his career in Loyola College, Madras for 21 years as the Director of Physical Education. He has been enjoying a close contact with Murugan for nearly two decades. Murugan was accessible to the investigator on several occasions, and he readily agreed to give interview at his residence which was an ideal place for conducive communication without any sort of interruptions. The interview was conducted on four days 7.7.1996, 8.7.1996, 9.7.1996 and 10.7.1996 at his residence in Madras. The Investigator gathered the following data:

1. his family background;
2. his parent’s encouragement;
3. his school education;
4. different sports he participated in school and the achievement in volleyball at school;

5. his coaches and team-mates who moulded him;

6. his participation in various sports in College;

7. his achievement in volleyball in collegiate and inter-University level;

8. reason for specialising volleyball;

9. his marriage with Ramalaxmi;

10. his career as player in the State Bank of India at Madras;

11. his career as a coach;

12. his contribution to the State Bank of India volleyball team;

13. titles won for the State Bank of India;

14. his career as volleyball referee;

15. international career in volleyball officiating;

16. his entry into the volleyball administration in Tamil Nadu;

17. reason and motive for becoming a sports administrator;

18. his contribution for popularising volleyball in Tamil Nadu;

19. his contribution to competition and coaching of volleyball in Tamil Nadu;

20. his contribution to officiating and

21. his contribution to the development of coaching profession;
3.2. SURVEY BY OPINION QUESTIONNAIRE METHODS:

The investigator himself prepared the following types of questionnaires consisting of statements:

1. opinion rating questionnaire to evaluate Murugan’s attitude, philosophy and qualities as a player by his team-mates, teachers, contemporary players, coaches and office bearers of the Tamil Nadu State Volleyball Association;

2. opinion rating questionnaire to assess the administrative skills of Murugan by volleyball administrators, coaches, referees and players of Tamil Nadu and the Volleyball Federation of India;

3. opinion rating questionnaire to assess Murugan’s contribution to the development of volleyball in Tamil Nadu by the administrator of State Association, District Association, Member Clubs, players, coaches and referees, in Tamil Nadu.

3.2.1. Development of the Questionnaire:

The investigator carefully designed the various stages in constructing the questionnaires and the entire steps and procedures involved in them are given in the flow chart:
3.2.1.1. Pre-pilot study:

The pre-pilot study had two important aspects:

a) Pooling of Statements; and

b) Selection of Statements

a) Pooling of Statements:

1. The researcher gathered information on various dimensions related to the study through a scholarly review of related literatures, such as books, research journals, magazines, department files and records.

2. The researcher held discussions with experts in the field of physical education, psychology, sociology and business managements.

Based on the information gathered on various dimensions related to the study, the researcher prepared a large number of statements.

b) Selection of Statements:

A careful screening of all the statements was done to remove ambiguity, confusion, repetition and undesirable statements. The following criteria were applied for screening and inclusion of statements in the pilot study:

1. the language of the statement must be simple, clear, direct and to the levels of the respondent;

2. the statements that are relevant to the study only be included;

3. avoid the statements that deal with more than one dimension;
4. select the statements which would cover the entire range of data needed for the study; and
5. delete statements which are to bring no opinion on agreements and disagreements.

3.2.1.2. Pilot Study - Jury Opinion:

The researcher held discussion over the selected statements with his supervisor and experts in the field of Physical Education, Sociology and Business Administration. The experts carefully read all the statements and the researcher was able to clarify the idea of each and every statement of the questionnaire and what it wanted to measure. The experts assessed the relevancy, suitability and clarity of each statements and expressed their opinions and suggestions. On the basis of the suggestions and remarks of the experts, the statements were redefined and the exact number of the statements for all the opinion rating questionnaires were prepared. Finally the selected statements were edited and reworded.

3.2.1.3. Construction of scale:

1. 'Likert Scale' with only four options, removing the scale, 'undecided', was used to estimate the strength of feeling to assess Murugan's qualities as a player. The scale 'designers' used odd number of response options to provide an opportunity to the respondents to use 'Undecided' response option, but the respondents in spite of expressing their real choice, preferred 'Undecided' options, very often on all sensitive statements. But in an even number of response options, the respondents are 'forced' to choose between favourable and unfavourable response to the attitude objects. So the 'forced' choice method was used.
2. A ‘check list scale’ (‘agree’-’disagree’) was used to get the response of the samples for each statements given on the questionnaires to evaluate Murugan’s contribution to the development of volleyball in Tamil Nadu and his administrative skills.

3.2.1.4. Reliability of the Opinion Questionnaire:

A test is reliable to the extent that it measures accurately and consistently from one time to another. Reliable tests yield comparable scores upon repeated administration. The reliability of the questionnaire was established by internal consistency method. This method stresses the inter-correlation of statements in the test and correlation of statement with the test as a whole.

3.2.1.5. Validity of the Questionnaires:

The questionnaires were subjected to face validity test. A test may also be tested for ‘face validity’ by judgement process. A test is said to have face validity when it measures whatever the author had in mind, namely, what he thinks, and what he measures. The statements forming the questionnaires were identified after an exhaustive review of the literature, followed by consultation with subject experts. After the factors and dimensions were identified, the gathering of statements for each dimensions of questionnaires were retained after editing, rewording, eliminating ambiguous terms and statements. On the basis of the suggestion made by the jury, some items were removed, some items were included and some items were modified. All the questionnaires that are used on this study can be confidently said that they have sufficient content validity. High degree of content validation is obtained as the researcher used the wide range of population
and the competent judgement and opinions are obtained from the samples which
governed the entire population.

3.3. **OPINION RATING QUESTIONNAIRE TO ASSESS MURUGAN’S QUALITY AS A PLAYER**:

The questionnaire consisted of 36 statements. The following 12 factors which were considered as basic qualities of a good volleyball player were used in the questionnaire. Three statements were used to assess each factor. They are:

- question no. 01 - 03 : Physical excellence
- question no. 04 - 06 : Technical excellence
- question no. 07 - 09 : Believer in hard work
- question no. 10 - 12 : Believer in team work
- question no. 13 - 15 : Financial soundness
- question no. 16 - 18 : Determination
- question no. 19 - 21 : Right attitude
- question no. 22 - 24 : Ideal philosophy
- question no. 25 - 27 : Obedience
- question no. 28 - 30 : Interest in team cohesion
- question no. 31 - 33 : Sociability
- question no. 34 - 36 : Leadership

3.3.1. **Population**

The following constituted the population for the study:

1. Murugan’s physical education teachers, team mates in school, college and the State Bank of India;
2. contemporary players;
3. contemporary referees;
4. contemporary volleyball administrators and
5. contemporary coaches.

3.3.2. Sample / Subjects:

The researcher gathered the addresses of all those who were involved in the game of volleyball in one form or other, when Murugan was actively playing volleyball, by interviewing Murugan, his team-mates, visiting his school, college, residence of Physical Education teachers and by referring to school, college magazines and Tamil Nadu State Volleyball Association files.

The intensive search for the above said population revealed that some of them were not alive and a few of them were not to be traced as they left the field of volleyball long back.

So the researcher used all the available subjects to assess Murugan’s qualities as player. The total number of samples available to the researcher was 30.

3.4 OPINION RATING QUESTIONNAIRE TO ASSESS THE CONTRIBUTION OF MURUGAN TO THE DEVELOPMENT OF VOLLEYBALL IN TAMIL NADU:

This questionnaire consisted of thirty two statements. Murugan’s contribution to the game of volleyball in Tamil Nadu was looked at through eight dimensions, and four statements were used for each dimension. The question numbers and dimensions are as follows:
question nos. 01 - 04 : Popularising the game;

question nos. 05 - 08 : Conduct of competition;

question nos. 09 - 12 : Development in administration;

question nos. 13 - 16 : Development in training and coaching;

question nos. 17 -20 : Achievement of Tamil Nadu volleyball teams;

question nos. 21 - 24 : Contribution to the field of officiating;

question nos. 25 - 28 : Contribution to the development of coaching profession; and

question nos. 29 - 32 : Contribution to the welfare of the volleyball fraternity.

3.4.1 Population :

The following constituted the population for this study :

1. administrators of the District Volleyball Associations and the Tamil Nadu State Association,

2. administrator of the member clubs in Tamil Nadu,

3. Tamil Nadu State volleyball players.

4. volleyball referees of Tamil Nadu and

5. volleyball coaches of Tamil Nadu.

3.4.2 Subjects / Samples :

Twenty four subjects under each category were selected randomly, using random numbers. As a whole one hundred and twenty subjects were used for this study. The researcher contacted most of the respondents at the General Body
Meeting of the Tamil Nadu State Volleyball Association held on 3rd July 1996 at Nehru Stadium at Madras and obtained their responses in the questionnaires. Questionnaires were mailed to others and all the respondents returned the filled in questionnaires by post.

3.5. **OPINION RATING QUESTIONNAIRE TO ASSESS MURUGAN’S ADMINISTRATIVE SKILLS**:

This questionnaire consisted of 53 statements. The entire questionnaire was classified into four major administrative functional units, namely:

a) planning ; b) organising; c) leading and d) evaluating

a) **Planning**:

Under ‘planning’ there were 12 statements under four factors which bring out the administrative skills in ‘planning’ namely:

question nos. 01 - 03 : Specification of goal

question nos. 04 - 06 : High creativity

question nos. 07 - 09 : Information

question nos. 10 - 12 : Budget and finance

b) **Organising**:

Four factors dealing with administrative skills in ‘organising’ were used. There were 12 statements in ‘organising’ comprising three statements in each factors.

question nos. 13 - 15 : Specification of job
c) **Leading:**

As 'leading' is considered as the major role of an administrator, 6 factors that are important for good administration were included. There were 20 statements in 'leading' comprising three each for a factor and five statements for leadership.

- **Leading:**
  - question nos. 16 - 18 : Span of control
  - question nos. 19 - 21 : Departmentation
  - question nos. 22 - 24 : Unit of command and rules

question nos. 25 - 27 : Self management ability

question nos. 28 - 30 : High supervisory skills

question nos. 31 - 35 : Leadership ability

question nos. 36 - 38 : High trainer ability

question nos. 39 - 41 : Motivation

question nos. 42 - 44 : Decision making

d) **Evaluating:**

There were 9 statements in 'evaluating' concerning with three factors, namely:

- question nos. 45 - 47 : Systematic evaluational plan
- question nos. 48 - 50 : Individual and group evaluation
- question nos. 51 - 53 : Reorganising
3.5.1. **Population:**

The following constituted the population for this study:

1. administrators of the Tamil Nadu State Volleyball Association and District Associations;

2. administrators of the Member Clubs in Tamil Nadu State Volleyball Association;

3. administrators of Volleyball Federation of India (office bearers, referees and coaches);

4. coaches of Tamil Nadu;

5. volleyball players of Tamil Nadu, University, State, National level; and

6. referees of Tamil Nadu.

Murugan has been holding administrative posts in the Volleyball Federation of India from 1973. At present he is the Secretary General of the Volleyball Federation of India. He has been closely associated with Indian Volleyball Federation administrators, referees, players and the coaches of other States in India. So the researcher rightly made use of them to assess the administrative skills of Murugan.

3.5.2. **Subjects / Samples:**

The researcher prepared a list of names for each category by obtaining list of administrators, referees, players and coaches (belonging to Tamil Nadu State and other States in India) from the Tamil Nadu State Volleyball Association, the
Tamil Nadu State Volleyball Referees Association and the Volleyball Federation of India.

The total number of subjects for this study was 120. As Murugan was involved in sports administration of the Volleyball Federation of India, a greater proportion; that is 1/4 of the total sample 120 was given to administrators, coaches and referees of the Volleyball Federation of India. Therefore the 30 samples were taken using random numbers from the office bearers of the Volleyball Federation of India and 18 samples were selected randomly using random numbers from the list prepared by the researcher in all the other five categories. Most of the subjects were contacted in person and their responses were obtained during the Tamil Nadu State Championship held at Madras in the month of January 1995, Departmental nationals organised by the Tamil Nadu State Electricity Board in the month of July 1996 at Madras, the General Body Meeting of the Tamil Nadu State Volleyball Association held in the month of June 1996 and at the time of World Volleyball Centennial celebration held at Madras in the month of September 1996. All the respondents gave their responses in the opinion rating scale and the researcher received the filled in questionnaire in person. The questionnaires were mailed to the others who were absent on the above said occasions. All the mailed questionnaires were received by the researcher.

3.6. ANALYSIS OF MURUGAN'S PERSONALITY TRAITS THROUGH R.B. CATTELL'S SIXTEEN PERSONALITY FACTOR ANALYSIS QUESTIONNAIRE:

The Investigator studied the sixteen personality traits and four second order traits of Murugan using Cattell's sixteen personality factor analysis
questionnaire. The investigator used the Form A intended for adult literate, consisting of 187 items. The investigator administrated the questionnaire on 25th June 1996 at Murugan's residence. The Investigator explained the objective of administrating the questionnaire, the rules of answering the questionnaire and requested Murugan to respond to all questions.

3.6.1 Method of Answering and Scoring:

Ten to thirteen items are provided for each factor in Form - A. The questions are arranged in roughly cyclic order determined by a plan to ensure variety and interest for the examine. Three alternative answers are provided for each of the questions as a), b) and c) having 2, 1, 0 points respectively.

Once all the questions are answered by Murugan, scoring was done in the following manner. Scoring was accomplished by hand scoring method using a Key in a standard manner. The answers appear as pencil marks in the boxes on the given answer sheet. Two card board of stencil scoring keys were used; one to cover factors A, C, F, H, L, N, Q1 and Q3 and the other factors B, E, G, I, M, O, Q2 and Q4.

Stencils were placed over the answer sheets and the marks visible through the holes for factor - A were counted, allowing either 2 or 1, as indicated by the number printed adjacent to the hole. Sum of these scores were entered in the space indicated by the arrow on the stencils for factor - A as raw scores.

3.6.2 Conversion of Raw Scores to Sten Scores:

The Handbook and the Tabular Supplement for the Sixteen Personality Factor Questionnaire written by Cattell, R.B., Eber Herbert, W and Tatsuoka,
Maurice, M. (1976) was used to convert the ‘raw score’ obtained by Murugan to ‘sten scores’. In order to get exact analyses the researcher allowed the scores for age correction.

3.6.3. Validity:

According to Cattell, (1976) “the items in this form are the survivors from several thousands of items originally tried, and constitute only those which continue to have significant validity against the factors after ten successive factor analysis, on different samples. The validity of the test itself is meant to be a construct validity because the test questions are chosen as being good measures of the personality factors as these measures are represented in research analysis”.

3.7 OPINION EXPRESSED BY EMINENT SPORTS ADMINISTRATORS AND JOURNALISTS:

The investigator selected twenty eminent persons in the field of Sports Administration in Tamil Nadu State and in India and Sports Journalists on the basis of random sampling. The investigator sent a letter of request to obtain their valued opinions and assessment on the following statements:

1. Murugan as a sports administrator;

2. Your assessment of his performance and contribution to the game of volleyball in Tamil Nadu;

3. The qualities and abilities of Murugan you like or dislike; and

4. Your free and frank views about Murugan.
3.8. **Respondents:**

1. Dilip Bhattacharyya - President, Volleyball Federation of India
2. K.P.S. Gill - President, Indian Hockey Federation
3. Suresh Kalmadi - President, IAAF
4. Viswanathan - President, Tamil Nadu Football Association
5. Jothikumaran - Secretary, Indian Hockey Federation
7. Eswar - Press Trust of India, Madras.
8. Theyagarajan - Sports Editor, The Hindu, Madras
9. Kodhandaraman - Treasurer, Tamil Nadu State Volleyball Association
10. T.R. Govindarajan - Hon. Secretary, Tamil Nadu Football Association
11. Commodore Amarjit Singh Bajwa - Hon. Secretary General, Yachting Association of India
12. R.K. Khanna - President, All India Tennis Association
13. W.I. Davaram, - President, Tamil Nadu Ameture Athletic Association
14. Kanti Choudhuri - President, Fencing Association of India
15. Partab Ramchand - Sports Editor, The Indian Express, Madras

3.9. **LITERARY SOURCE METHOD:**

The Investigator gathered information from articles, reports and statements published in books, journals, souvenirs and magazines to assess the contribution of
Murugan to the development of volley ball in Tamil Nadu and his administrative skills; The data were collected from the following primary and secondary sources. The following primary source of materials were constituted to obtain needed data for this study:

(a) published materials, (b) oral testimony, (c) personal letters, (d) pictural records, (e) printed materials and (f) official records and other documentary materials.

a. Published Materials:

Newspaper clippings, journal articles, interview by Murugan in dailies and journals were gathered from the following:


b. Oral Testimony:

Personal interview with Murugan, his family members, his physical education teachers, and team-mates were recorded as witness related to this study.

c. Personal Letters:

The investigator received personal letters from eminent sports administrators and journalists in Tamil Nadu State and in India on Murugan’s contribution to the game of volleyball in Tamil Nadu State and their opinion on Murugan’s administrative skills and abilities.
d. **Pictural Records:**

The investigator gathered photographs depicting Murugan supervising preparation works of major competitions, conducting seminars, clinics, meeting experts, inaugurating functions and distributing prizes.

e. **Printed Materials:**

The investigator made use of the hand bills, pamphlets, certificates, official circulars, college and school magazines, souvenirs of various volleyball clubs, District and State Association for collecting data for this study.

f. **Official Records and Other Documentary Materials:**

The following records and documentary materials were used for collecting valuable information for this study:

1. records and reports of the referees clinics held in Tamil Nadu;
2. records and reports of the coaches clinics held in Tamil Nadu;
3. reports and minutes of the World Volleyball Centennial celebration held at Madras in the year 1995;
4. minutes of the executive meetings of the Tamil Nadu State Volleyball Association;
5. minutes of the meeting of the Tamil Nadu State Volleyball Referees Association; and
6. minutes of the General Body meeting of the Tamil Nadu State Volleyball Association.
3.9.1. Secondary source of data:

Secondary sources are descriptions of the primary sources. They are written by persons who are not in direct contact with the events reported. More than one version comes between the original happening and the descriptions of its. The following secondary sources were made use for this study:

1. interview with veteran players, referees and coaches of the game of volleyball; and
2. interview with Sports administrators who left the field of volleyball administration in Tamil Nadu.

3.9.2. Evaluation of literary source materials:

To check up the authenticity and validity of the facts of the information collected from the various source materials, were subjected to a process of external and internal criticism. The external criticism deals with the genuineness of the document itself, whether it really purports, whether it means true to the original. The internal criticism deals with the meaning and trust worthiness of statements that remain within the document after any spurious and interpolated matter has been removed from the text.

3.9.3. External criticism:

The investigator established the authenticity and genuineness of the data by confirming the name of the authorship of the articles appeared in journals and the authority which release the minutes and reports of the meetings. The investigator also clearly verified and examined the documents and concluded that the collected sources
are authentic, genuine and there is no question of forgery or distortion of the facts as far as the sources are concerned.

3.9.4. Internal Criticism:

The investigator after establishing the authenticity of the sources, established its accuracy and trustworthiness by evaluating the seriousness of the writing and about which conditions and situations they were written. The investigator further carefully assessed the intention, honesty, competency and motive of the writings and opinions expressed in personal letters and interviews by comparing them with the facts. Hence the collected data are accurate and deserve inclusion and analysis in this study.

3.9.5. Statistical Techniques adopted in this study:

The responses of the samples expressed in the opinion questionnaire to evaluate the qualities exhibited by Murugan when he was actively playing volleyball were put to the following statistical analysis:

3.9.5.1. Chi-Square Test:

The opinion questionnaire has four scales namely; 'agree', 'strongly agree', 'disagree' and strongly disagree' to assess the qualities exhibited by Murugan when he was actively playing volleyball. The researcher had neither witnessed any top level competitions where Murugan had participated nor watched him in practice. So the researcher relied on the opinion expressed by the samples. The researcher assumed that the responses of the samples will be distributed evenly on the four scales. So the Chi-Square test was used to test the significance of the discrepancy between the assumed theoretical frequencies and experimentally
obtained frequencies. If the $\chi^2$ value is greater than the tabular value at 0.01 level, the assumption is rejected. The rejection of the assumption shows that there is significant difference in the responses expressed by the samples on the four scales.

3.9.5.2. Test of single proportion:

When the $\chi^2$ test shows that there is significant difference on the opinion expressed by the sample, the researcher proposed to use the ‘test of single proportion’ to find out whether the samples have given favourable or unfavourable opinion for each factor. The responses on the four scales were brought under two scales namely ‘agreement’ and ‘disagreement’. It was assumed by the researcher that 0.7 was the assigned population proportion favouring a factor.

The Z value for each factor was calculated. If the absolute value of Z is greater than the ‘Z’ tabular value 1.96 at two sides test, the assigned population proportion is rejected, otherwise accepted.

3.9.5.3. One-sided test for single proportion:

If the assigned population proportion is rejected, one sided test for single proportion is performed. This test will confirm whether the population proportion is either greater or less than the assigned population proportion for a factor. The Z tabular value for one sided test is 1.645 for greater and -1.645 for lesser.

If the rejection is due to the greater proportion of sample, the researcher confirms that the population proportion is greater than the assigned population proportion. Likewise if the rejection is due to the lower proportion of the samples, it is confirmed that the population proportion is lesser than the assigned population proportion.
The two sided test for single proportion and one sided test for single proportion were also used to assess the opinion questionnaires (1) to assess Murugan's administrative skills, and (2) His contribution to the development of volleyball in Tamil Nadu. The researcher has assumed various proportions ranging from 0.5 to 0.9 for different factors.