

CHAPTER- III

METHODOLOGY

The purpose of this study is to turn on the search light on the contribution of Karuppudayar Vaithianathan towards physical education and sports in relation to career and personality traits. The investigator is interested in finding out the facts that made Vaithianathan reach the classic level of Vice Chancellor of a University. The researcher has made efforts to understand more about Vaithianathan's career personality traits and contribution towards physical education and sports. This study might be an inspiring work to physical educationists, sportspersons, educational administrators, sports scientists and others in future.

His exemplary qualities have helped him to achieve many accomplishments in the world of sports and games. The investigator has collected reliable and authentic information about Vaithianathan through interview method, questionnaire and published materials for a good analytical study.

3.1 THE CASE STUDY

The case study is a way of organizing social data for the purpose of viewing societal reality. It examines a social unit as a whole. The subject may be a person, a family, a social group, a social institution, or a community. The purpose is to understand the life cycle and its importance. The case study probes deeply and analyses interaction between

the factors that explain present status or it influences change or growth. It is a longitudinal approach, showing development over a period of time.

The element of typical nature, rather than uniqueness, is the focus of attention and emphasis upon uniqueness. This includes scientific abstraction and generalization of findings and various methods which are deployed to gather the data. They are as follows:

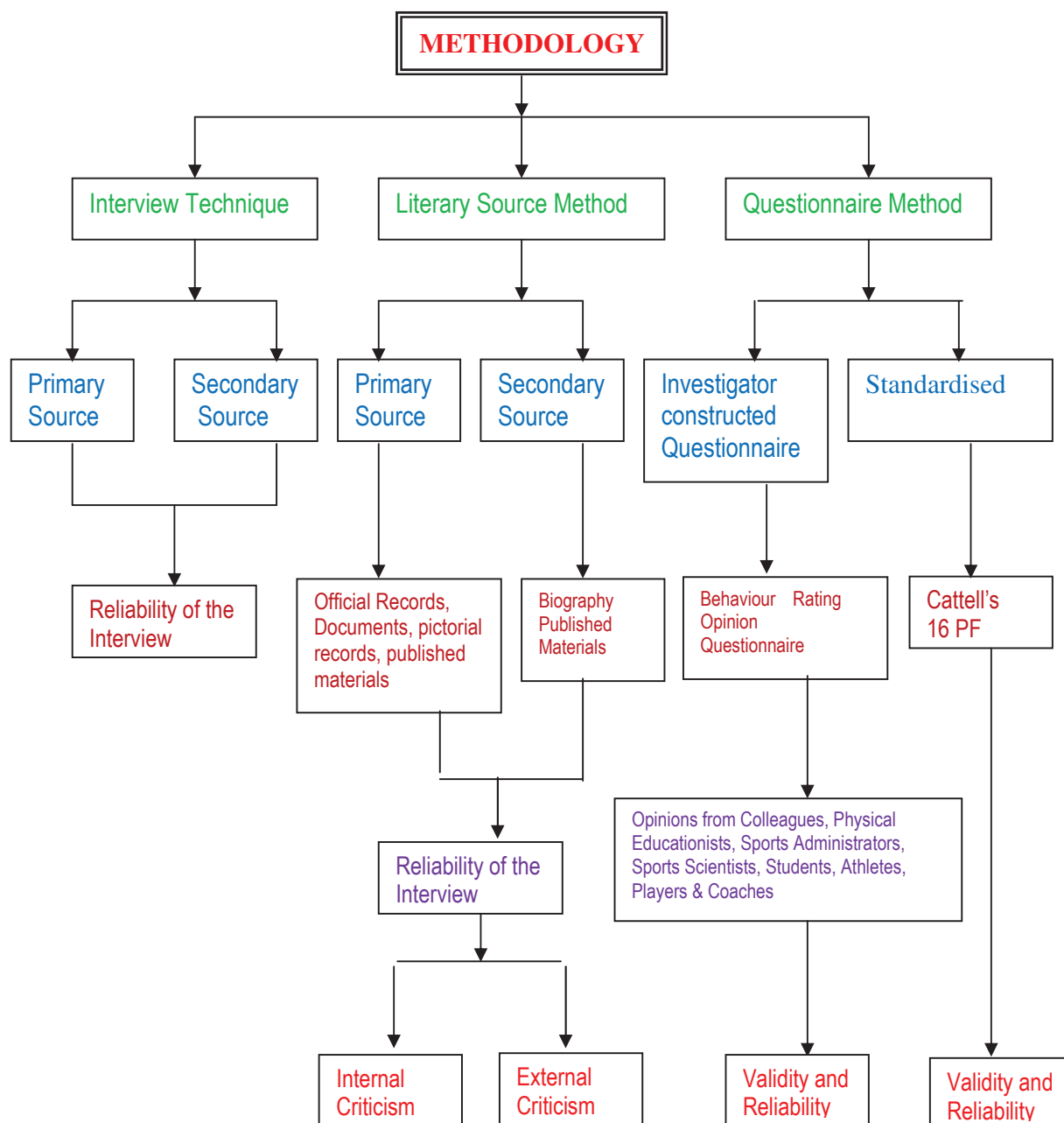
1. Observation by the researcher or his or her informants of physical characteristics, social qualities, or behavior of the case chosen for the study
2. Interviews with the people, relatives, friends, teachers, counselors, and others
3. Questionnaires, opinionnaires, psychological tests -and inventories
4. Recorded data from newspapers, schools, courts, clinics, government agencies, or other sources.

A single case study emphasizes the analysis in depth. Though it may be fruitful in developing hypotheses that are to be tested, it is not directed toward broad generalizations. Someone has observed that one cannot generalize from an N of 1. To the extent that a single case may represent a typical situation, the observation is sound. But the objective analysis of an adequate sample of cases leads researchers to consistent observations of significant variable relationships, whereby hypotheses may be confirmed.

The individual case study has been a time-honored procedure in the field of physical education and sports research. Sigmund Freud was a pioneer in using the case study methods in the field of psychiatry.

The flow chart, explaining the integrated approach in methodology adopted by Sivaramakrishnan for his doctoral study on Sunil Gavaskar, which was used in this research study, is presented on the next page:

**FLOW CHART SHOWING THE INTEGRATED METHODOLOGY
ADOPTED FOR THIS STUDY**



3.2 INTERVIEW TECHNIQUE

The interview is a better method of obtaining survey information than using a mailed questionnaire. Rather than relying on the impersonal approach inherent in the latter technique, the interviewer gathers data directly from face to face contacts. The interview has been likened to an oral questionnaire. It has the obvious advantage of ensuring greater returns.

The following are the characteristics of the interview:

1. The interview obtains confidential information.
2. The personal contact has the advantage of drawing out the informant by on - the - spot follow- up questions.
3. The interview permits the interaction in the meaning of the questions.
4. The interview survey affords an opportunity for the interviewer to give information and to develop a rapport with the respondent.

Very few physical educationists have served in different physical and sports positions, such as Physical Director, Assistant Professor, Coach, Professor, Head of the Department of Physical Education, Dean, Department of Physical Education and Sports Sciences and Vice Chancellor for a Physical Education and Sports University. Some would have participated and achieved in any particular sport or game during their school

and college days. But once they enter their career other than physical education and sports, their contribution towards the promotion of sports and games becomes almost nothing.

Whereas K. Vaithianathan's leadership qualities in the promotion of sports and games made him serve as the Vice Chancellor of Tamil Nadu Physical Education and Sports University, apart from his association with different physical education and sports institutions and universities.

Further, this study would pave way to emulate K.Vaithanathan's personality and leadership qualities by other administrators, educationists, physical educationists and coaches who may come forward for the promotion of sports and games.

3.3 INTERVIEW SCHEDULE

The purpose of the investigation was explained clearly to the respondents with the details of information needed from them. The investigator had a clear concept of what information he needed. He clearly outlined the best sequence of questions and stimulating comments which would systematically bring out the desired responses. A written schedule prepared for the study provided a set plan for interview, for seeing the possibility that would fail to get the important and required data. Prior to the day of the scheduled interview, the investigator visited the respondents on several occasions which was necessary. This provided good communication in the interview which, in turn, helped the investigator to enhance a rapport with the interviewers. The investigator maneuvered the conversation so that all areas were covered. The respondents were told

approximately how long the interview would be expected to last. The questioning was performed in such a manner as not to be biased. The actual wordings of the responses were retained.

3.3.1 Interview with Karuppudayar Vaithianathan

The investigator met Karuppudayar Vaithianathan on 10th April 2011, in his residence at Chidambaram. K.Vaithianathan consented for the interview at his residence and sometimes in his office chamber. The interview was conducted according to his convenience.

The valid information was collected from the following data:

- a) Parents' encouragement
- b) His family background
- c) His childhood and education
- d) His Marriage
- e) His entry in the Alagappa College of Physical Education
- f) His career as a Physical Director
- g) His career as Assistant Professor at Alagappa College of Physical Education
- h) His career as Coach at Alagappa College of Physical Education and Annamalai University.
- i) His career as Professor in the Department of Physical Education, Annamalai University.
- j) His career as Head, Department of Physical Education, Annamalai University.

- k) His career as Dean, Department of Physical Education and Sports Sciences, Annamalai University.
- l) His career as Dean, Department of Physical Education and Sports Sciences, Directorate of Distance Education, Annamalai University
- m) His career as Examiner, Member of Board of Studies, Academic Council, Member of Expert Committees in different Universities, Physical Education Colleges in India with particular reference to Tamil Nadu.
- n) His career as Vice Chancellor, Tamil Nadu Physical Education and Sports University.
- o) His contribution as a Physical educationist, coach, educational administrator and sports scientist.
- p) His contribution to popularity of sports, games and research interests.
- q) The honorary awards

INVESTIGATOR INTERVIEWING THE SUBJECT

3.3.2 Reliability of the Interview

The purpose of the study was explained to the respondent well in advance, that it is in no way meant for commercial but only for research study. Vaithianathan willingly accepted to give information, which is highly truthful to the best of his knowledge. The information furnished in the form of questions and answers were true.

3.4 LITERARY SOURCE METHOD

For gathering information regarding Vaithianathan's career, personality traits, his style of administration, his interest in sports and games, reports and published statements were also taken into account, besides oral testimony and printed materials.

3.4.1 Published Materials

This emphasizes to the best that sources are eyewitness accounts. They are reported by an actual observer or participant in an event.

Clarke and Clarke (1972) opine that primary sources are original materials in which only one mind comes between the event and the users of the sources. The following primary source materials were consulted to obtain needed data for the study.

Newspaper clippings, journals, articles and interview responses by Vaithianathan in Dailies, Weeklies and Fortnight magazines were obtained. Records of performance in hockey were also referred.

- a. The Hindu
- b. Indian Express
- c. Dina Thanthi
- d. Dina Malar
- e. Dinamani
- f. The Sports Star
- g. The Illustrated Weekly of India
- h. Sport & Pastime – The Sports Week
- i. Magazines of Sports Authority of India and Sports Council of Tamil Nadu.

3.4.2 Oral Testimony

Personal interview was conducted with Vaithianathan, the members of his family, colleagues, Principals of different physical education colleges, athletes, players, students, teammates, sports journalists and friends.

3.4.3 Pictorial Record

The investigator has gathered photographs of Vaithianathan, a recipient of several awards on different occasions for his valuable contributions to the field of physical education and sports.

3.4.4 Printed Materials

The investigator has made use of the informative pamphlets, worthwhile certificates, relevant magazines and so on, for collecting data for this study.

3.4.5 Secondary Source of Data

The secondary sources are informative descriptions of the primary sources. Persons who are not in direct contact with the reported events write them.

3.4.6 Personalities Interviewed

1. Dr. Ravindran, Head of the Department of Physical Education and Sports Sciences, Annamalai University, and Professors, Assistant Professors, Athletes and players.
2. Dr. Bevinson, Professor, Allagappa College of Physical Education, Karaikudi. and other professors and Assistant Professors.
3. Dr. David Manuel Raj, Principal (Rtd), YMCA College of Physical Education
4. Dr. Mrs. Esther Ranjini, Principal (Rtd), YMCA College of Physical Education.
5. Dr. Mrs. Shiela Stephen, Principal, YMCA College of Physical Education and other Professors and Assistant Professors.
6. Principals of Physical Education Colleges in Tamil Nadu

7. Head of Department of Physical Education in different Universities in Tamil Nadu.
8. Dr. Mrs. Grace Helina, Professor and Head, Department of Exercise Therapy and Nutrition, Dr. Sukumar, Registrar, and other Heads, Professors and Assistant Professors in Tamil Nadu Physical Education and Sports University.

3.5 EVALUATION OF LITERARY SOURCE MATERIALS

To check up the authenticity or validity of the facts of information collected, and the source materials which are subjected to a process of criticism are of two types-external and internal.

Internal criticism deals with the meaning and trustworthiness of statements that remain within the document after any spurious and interpolated matter has been removed from the text.

External criticism of the document itself deals with the genuineness where it really is. What its purpose or seems to be and whether it means true to the original.

3.5.1 Internal Criticism

Internal criticism is concerned with the meaning and accuracy of the statements. Evaluation is transferred from authenticity of the document to the trustworthiness of its content.

The following points would serve to clarify this form of criticism.

1. The time of the events occurred and the gap after which they were recorded. The researcher had already documented the events that took place when he started his career in physical education, sports, examiner ship, membership in different professional bodies, which were later published in the form of autobiographies and articles.
2. The documents are not issued under pressure from fear or mainly to distort or omit facts.
3. The intent of the document is to give a time picture about K.Vaithianathan's contribution to physical and sports and his contribution as physical education teacher, coach, leadership in department of physical education and sports sciences and Vice Chancellor of Tamil Nadu Physical Education and Sports University.
4. Facts, in the documents, are faithfully recorded by the experts in the field.
5. Hence, it is argued that the obtained data are accurate and worthy for inclusion and analysis of the study.

3.5.2 External Criticism

Under external criticism, the following were determined.

1. Establishing the Authorship of Source Materials

The authorship of books used to collect literary sources were readily determined. The books referred, carried the names of the author. The articles recorded and other statements, which appeared in journals and dailies, possessed writers and names of statisticians. The sports correspondents or editors gave their contributions for various sports organization and administration reports in the dailies. They did not furnish the details of K.Vaithianathan's functioning as Head, Dean and Vice Chancellor. It was clearly verified that no writer had used a pseudonym.

2. To Check whether the Document was Written by a Ghost Writer or By Other Person

The authors of autobiographies, biographies, articles, news paper accounts and other statements utilized in this study do not have ghost writers.

It was noted that most of the sources are primary in nature. Having examined the documents by taking into account all the considerations, that were outlined above, the investigator concluded that the collected sources are authentic or genuine and there is no question of forgery or distortion of facts as far as the sources are concerned.

3.6 QUESTIONNAIRE METHOD

The present study has mainly focused on (i) development of K.Vaithianathan into a physical educationist and sportsperson (ii) his achievements and contribution towards

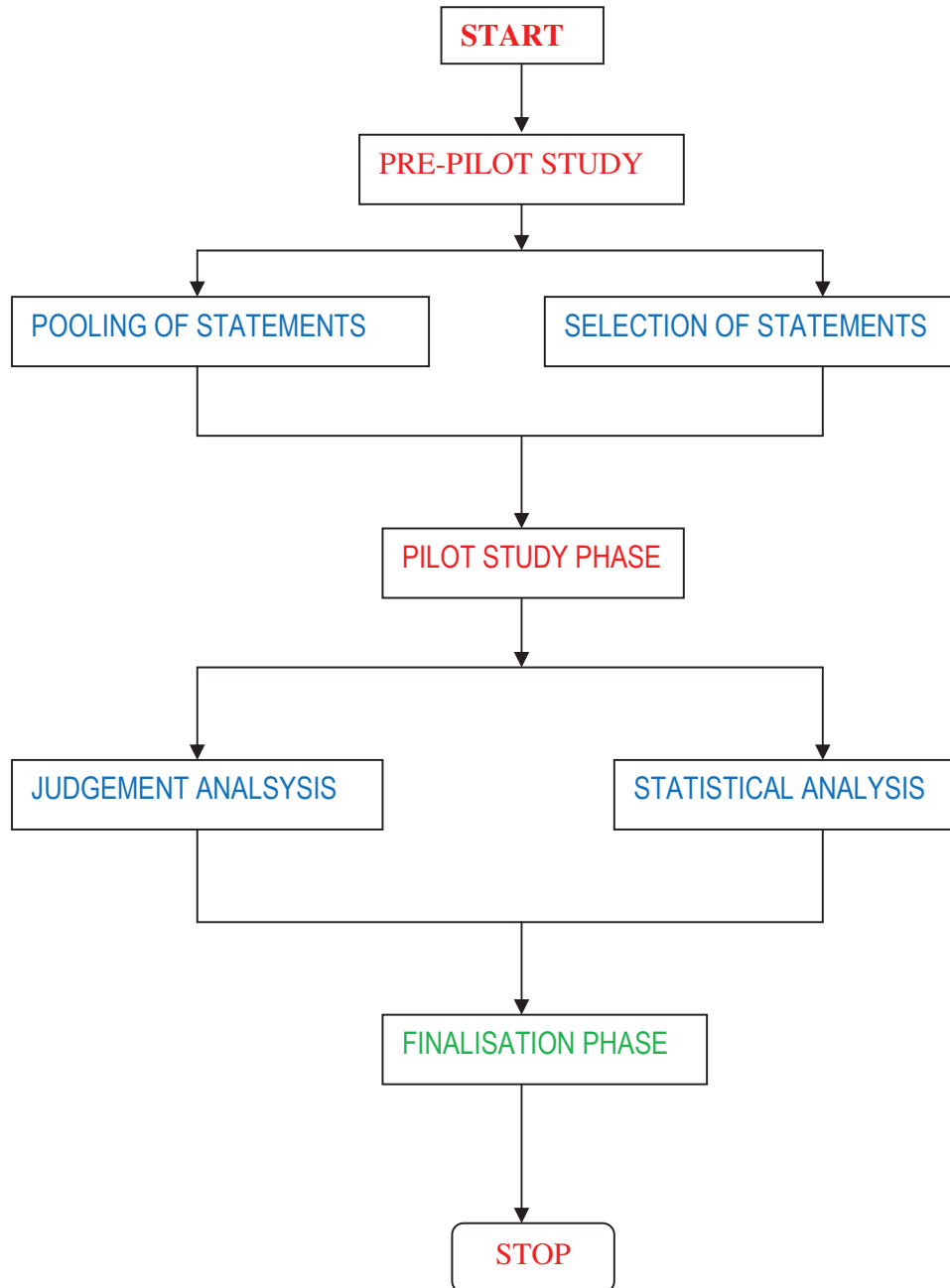
physical education and sports and games (iii) elevation as Vice Chancellor of Tamil Nadu Physical Education and Sports University in his career (iv) assessment of his personality traits and how far the same contributed to the promotion of physical education and sports (v) his leadership qualities both as a physical educationist and sports scientist and head of the department of Physical Education and Sports. The investigator has used the questionnaire, which is specifically developed by him for the collection of data relating to characteristics of K.Vaithianathan. The investigator used the standardized tool of the Cattell's sixteen-personality factors questionnaire.

3.7 DEVELOPMENT OF QUESTIONNAIRE

The methodology adopted in the development of questionnaire is explained in the pre-pilot study and pilot study.

The following chart explains the various stages in the construction of opinion questionnaire:

Figure II: **Flow Chart showing the stages in the construction of Questionnaire**



3.7.1 Pre-Pilot Study

In this phase, the Preliminary work, in connection with the developing of the questionnaire is described. The stages in the preliminary work are the identification of statements, selection of statement and selection of most appropriate statements. They are as follows:

3.7.2 Identification of Statements

In general, the tool to be used in the collection of data is a major function of the quality. Hence, in order to ensure the quality of the tools, great care was taken in the collection of statements that are helpful in assessing the developing factors of K.Vaithianathan as a physical educationist and as a sports scientist. To identify the statements, the investigator has used the sources of personally acquainted people, the sources from journals, newsletters, magazines and informal discussions with experts relating to the field of sports and sports journalists.

3.7.3 Selection of Statements

In the selection of statement, K.Vaithianathan's role in various capacities such as Physical Director, Assistant Professor, Coach, Head, Dean, Department of Physical Education and Sports, Member of Board of Examiners, Chairman of Board of Examiners, Chairman for different National and International level Seminars, Workshops, Science

Clubs, Member of Academic Councils, Syndicate Member for different universities were examined.

The identified statements were analyzed with the above said aspects. From this analysis, the identified statements that are highly relevant were selected for scrutiny.

3.7.4 Selection of most appropriate Statements

In this stage, the selected statements were critically analyzed with the experts on the factors that are contributed to the quality of the questionnaire. Based on the experts' remarks and suggestions, the short comings such as irrelevance and inappropriate statements were deleted.

3.7.5 Construction of Scale

Likert Scale was used with only four options, removing the scale, tentatively. Likert Scale was found helpful in estimating the strength of feelings. Likert Scale contained five responses - strongly agree, agree, undecided, disagree and strongly disagree with 5,4,3,2,1 scores respectively.

3.7.6 Pilot Study and Extraction of Final Statements

To facilitate extraction of final statements, a pilot study was conducted. This was done in order to select samples towards the questionnaire and to ascertain the right means and methods for the collection of data on the developing factors of K.Vaithianathan as a physical educationist and sports scientist. In the questionnaire, to maximize the reliability

of the data, both positive and negative statements were included. The person related to very specific field of the present study and then persons responded with their opinion.

3.8 SIXTEEN PERSONALITY FACTOR QUESTIONNAIRE

Garret says that personality traits are distinctive ways of behaving more or less permanently for a given individual depending on both native and environmental factors. Traits are regarded as fundamental units of personality. Personality traits are neat and succinct describing multifold aspects of behavior in many respects. They offer the most useful approach to personality study.

Hence, the investigator ventured to study the sixteen primary personality traits of K.Vaithianathan, using Cattell's Sixteen Personality Factor Analysis Questionnaire.

For this purpose, a personal interview by the investigator with K.Vaithianathan was conducted. Explaining the rules of answering the Sixteen Personality factor questionnaire as given in the first page of the questionnaire booklet, the investigator requested K.Vaithianathan to respond to all the questions of the booklet. Only Form 'A' intended for adult literate, consisting 187 items was used to assess the source of personality traits of K.Vaithianathan.

CHART – The Primary Source traits covered 16 Personality Factor Test

Factor	Low sten score description (1- 3)	High sten score description (8 -10)
A.	Reserved, formal, impersonal distant	Outgoing, warm, Caring, Self hearted, generous
B.	Dull, Low intelligence	Bright High intelligence
C.	Affected by feelings, emotionally less stable easily upset, changeable Lower ego strength.	Emotionally stable, mature faces reality, calm, higher ego strength.
E.	Humble, Mild easily led, docile accommodating, submissive, modest.	Assertive, forceful, competitive, stubborn, dominance.
F.	Serious, quiet, reflective, cautious.	Carefree, enthusiastic, Spontaneous, energetic.
G.	Expedient, Non-conforming, obligations.	Rule-conscious, dutiful, Scrupulous, high inflexible, self righteous.
H.	Shy, Socially timid, threat – sensitive, easily embarrassed.	Socially bold, outgoing, gregarious, adventure some.
I.	Tough, Realistic, Logical, Unsentimental.	Emotionally sensitive, intuitive, cultured, sentimental.
L.	Trusting, unsuspecting, forgiving, accepting	Vigilant, suspicious, distrustful wary.
M..	Grounded, Practical, Concrete.	Abstracted, imaginative, Idea oriented, contemplative
N.	Forthright, Self – Revealing, Transparent.	Private, discreet, Non-disclosing.
O.	Self – assured, Unworried, Complacent.	Apprehensive, Self-doubting guilt prone.
Q1.	Traditional, attached to familiar, resistant to change.	Open to change, experimenting, freethinking.
Q2.	Group-oriented, afflictive	Self-reliant, Solitary individualistic.
Q3.	Tolerates disorder, unexacting casual, lax	Perfectionist, self-disciplined goal oriented.
Q4.	Relaxed Placid, tranquil, patient.	Tense, driven, high energy impatient.

3.8.1 Method of Answering and Scoring

Ten to thirteen items were provided for each factor from – A. The questions were arranged roughly in a cyclic order, determined by a plan to ensure variety and interest for the examination. Three alternative answers were provided for each question as a, b and c having 2,1, 0 points respectively. Once all the questions were answered by Mr.K.Vaithianathan, scoring was done in the following manner: Scoring was done by hand, scoring using a key method in a standard manner. The answers appeared in pencil marks in the boxes on the given answer sheet. Two card boards of stencil scoring keys were also 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 which were placed over the answer sheets and the marks were visible, through the holes for factor – A, counted, allowing either 2 or 1, as indicated by the number, printed adjacent to the hole. Some of these scores were entered in the space indicated by an arrow on the stencils for factor-A as raw scores.

3.8.2 Conversion of Raw Scores to the Sten Scores

The hand book and the tabular supplement for the Sixteen Personality Factor Questionnaire written by Cattell, R.B. Eber Herbert, W and Tataswuoka Maurice, M (1976) was used to get the exact analysis.

3.8.3 Age Correction for Sten Scores

Personality factor scores, have a slight age trends. The norms given to the general adult population are centered upon and corrected to thirty years of age. The raw scores

obtained in each factor by K.Vaithianathan, 64 years old at the time when the sixteen personality factor analysis questionnaire was responded by him, needed age correction. The following formula was used :

$$.y_{adj} = y - b(x - x_s) - b_2(x^2 - x_s^2)$$

3.9 VALIDITY AND RELIABILITY OF QUESTIONNAIRES

Questionnaire designers and administrators are not frequently dealt consciously with the extent of validity or reliability of their instrument. Perhaps this is one reason why so many questionnaires are lacking in these qualities. It must be recognized, however, the questionnaires, unlike psychological tests and inventories, have a very limited purpose. They are often one-shot data-gathering devices with a very short life, administered to a limited population. However, there are ways to improve both validity and reliability of questionnaires that deserve careful consideration.

The right questions phrased in a clear way are a basis to the validity of a questionnaire. The question of content validity is: Do the items sample a significant aspect of the purpose of the investigation?

The meaning of all terms must be clearly defined so that they have the same meaning to all respondents. The researchers need all the help that they can get; suggestions from colleagues and experts in the field of inquiry may reveal some ambiguities which can be removed and some items that do not contribute to its purpose can be deleted. The panel

of experts may rate the instrument, in terms of how effective the samples are, the significant aspects of its purpose, provision of estimates and of content validity.

It is possible to estimate the predictive validity of a questionnaire by a follow-up observation of respondent behavior in the present or in future.

There are some situations in which overt behavior can be observed without the invasion of privacy of the respondents. A correlation of questionnaire responses with a voting data on a campus or community election or issue may provide a basis for the computation of a coefficient predictive validity.

Reliability of questionnaires may be inferred by a second administration of the instrument, comparing the responses with those of the first. Reliability may also be estimated by comparing responses of an alternate form with the original form.

Table I

Number of Individuals in Various Categories to which the Questionnaire was Mailed and Responded

Category of Respondents	Number Mailed	Number Respondent	Percent-age	Dis-carded	Final Selection
Athletes	10	8	80		8
Coaches	10	7	70		7
Students	10	8	80		8
Sportsmen (different games)	10	9	90	1	8
Physical Educationists (Physical Directors)	10	8	80		8
Principals of Physical Education Colleges	5	4	20		4
Physical Educationists (Asst. Professors, Professors)	10	9	90		9
Heads of Department of Physical Education in Universities	5	4	20		4
Friends	10	8	80		8
Sports Journalists	10	8	80		8
Annamalai and Tamil Nadu Physical Education Universities Officials	10	9	90	1	8
Total	100	82	780	2	80

3.10 COLLECTION OF DATA

The investigator prepared a list of names by obtaining a list of athletes, players, students benefitted by this research, physical education colleges, departments of physical education of different universities, friends, coaches and sports journalists, physical educationists, sports administrators. To achieve the purpose of the study, a hundred samples were taken from the population. All the responses were in the opinion rating scale and the researcher received the filled-out questionnaire, in person. Among them eighty two persons responded to the request. Out of these, only eighty were taken for analysis and the remaining were not considered because of incomplete responses.

3.11 STATISTICAL TECHNIQUE

The present study involving several variables (statements) has the major objectives of grouping the variables as a dimension based on the classification of individual characteristics relating to the contribution of K.Vaithianathan towards physical education and sports in relation to career and personality traits and his leadership competency. These objectives can be fulfilled only through multivariate analysis namely, Factor Analysis. Statistical package for social sciences version 11.0 was used for factor analysis.

3.12 FACTOR ANALYSIS

The history of Factor analysis clearly indicates that it can be used to discover patterns of variations or relationships between several variables. This can be achieved through the generations of artificial dimensions (factor) that correlate highly with several

of the real variables that are independent of one another. Further, in factor analysis, it is likely that an artificial dimension created would be highly correlated with each of the items (variables). The basic idea in these methods is to take back the relation between suitably chosen variables to a factor Eysenck and Wilson, (1978). Based on the above discussion, it is very clear that the Factor analysis is employed to condense, simplify and describe a large number of observed variables and also to see relationships between them. In the present study, this technique is used in order to find out the real and easier solution to generate the new independent dimensions (factors).