CHAPTER - III

METHODOLOGY

In this chapter the methodology adopted in connection with the selection of subject, the methods in collection of data and tools used in getting the opinion on many relevant aspects about the subject and his leadership from various persons closely related to physical education, sports and sports administrators along with the process to which the collected data have been subjected for analysis.

3.1 SELECTION OF SUBJECT

The state of physical education and sports in India is far below that of the Western and European countries; we lag behind them by nearly three decades. Most of us are blaming it on the financial constraints and the socio-economic conditions existing in our country. But the real reason is far from it because countries abysmally backward economically and socially like Kenya and Jamaica have come into the list of Olympic medal winners. The main reason behind their achievements is the increase in their people's awareness towards physical education and sports besides the individual contribution in some events. Such a broad base of sports awareness and individual contributions towards the promotion of physical education and sports are very rare in India. Hence identifying personalities who are working hard to promote this important field becomes the most important duty of the researchers of this field.

One such eminent personality is Dr. B. Sivanthi Adityan. In India his contributions towards the promotion of physical education and sports are highly commendable one. Especially, in development of Volleyball and Shooting in India
and the infrastructure development in Tamilnadu, the credit goes to him only. Being a physical educationist himself, the investigator intends to honour him by highlighting the salient features of his contributions through this research work. Keeping these factors in mind the investigator has chosen Dr. B. Sivanthi Adityan as a subject for the present study.

3.2 TOOLS USED IN THE STUDY

The present study has focused mainly on two aspects; namely, the salient features of the contributions of Dr. B. Sivanthi Adityan towards the Promotion of Physical Education and Sports in Tamilnadu and his Leadership Competency. In collection of data relating to the Leadership of Dr. B. Sivanthi Adityan the investigator used the statements used in the standardised tool of Leadership Questionnaire (Bass, 1985) whereas in collecting the data relating to the Contributions of Dr. B. Sivanthi Adityan towards the Promotion of Physical Education and Sports in Tamilnadu the investigator used the Questionnaire form which was scientifically developed by the investigator.

3.3 DEVELOPMENT OF QUESTIONNAIRE - I

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

3.3.1 PRE - PILOT STUDY

In this phase, the preliminary work in connection with developing the questionnaire is described. The stages in the preliminary work are: identification of tentative statements, selection of field related statements, selection of
appropriate statements, and selection of most appropriate statements. Each of the stage is as follows.

3.3.2 IDENTIFICATION OF TENTATIVE STATEMENT

In general the tool to be used in collection of data is a major determinant of the quality of the study. Hence in order to ensure quality of the tool, great care was taken in collection of statements covering all aspects that are helpful in measuring the contributions of Dr. B. Sivanthi Adityan towards promotion of physical Education and sports in Tamilnadu. To identify the statements, the investigator used both macro and microstructure. By using macro process, a set of statements (N-600) was identified from all quarters of contributions. The concepts for these statements have been taken from the sources like personally acquainted people, the multifarious functions of Dr. B. Sivanthi Adityan from journals, books, newsletters and magazines and informal discussions with experts related to the field of Public Administration, Physical Education, sports Administration, Management, Sociology, Psychology and Informational Technology. During the initial preparation of statements, the investigator used the local language (Tamil) in order to have the reality of the questionnaire. There after these identified statements (N-600) were translated into English with the help of expert without changing the theme of the statements.

3.3.3 SELECTION OF FIELD RELATED STATEMENTS

The present study is mostly concerned with the contribution of Dr. B. Sivanthi Adityan towards promotion of physical education and sports in Tamilnadu. So, using the macro process the statements that are relevant to
physical education and sports were scanned from the Identified Tentative Statements (N-600) and were reduced to 488. Thus the field related statements were selected. Further the selected Field Related Statements (N-488) were treated with the micro process to select very appropriate statements in relation to the objectives of the present study. The selection of Appropriate Statements for the questionnaire form is as follows.

3.3.4 SELECTION OF APPROPRIATE STATEMENTS

In the selection of appropriate statements (micro process -1) the subject’s role in various fields such as administration, appointments, decision-making, service to sports and sports people, physical education and society, was considered. The selected field related statements (N-488) were analysed with aspects that are considered in the micro process- 1. From this analysis the statements that are highly relevant were selected as the appropriate statements (N-249). Thus the field related statements (N-488) were reduced to 249. All these statements are used to form the Most Appropriate Statements.

3.3.5 SELECTION OF MOST APPROPRIATE STATEMENTS

In this stage, the appropriate statements were critically analysed (micro process-2) with the experts on the factors that contribute to the quality of the questionnaire. For this, the critical analysis of expert’s was sought. On critical analysis the experts were asked to mainly focus on clarity, ambiguity, repetitiveness, relevance, inclusion of items like, personal affection, size and length of the appropriate statements. The opinion on critical analysis of identified statements was carefully studied. Based on the expert’s remarks and suggestions,
the observed shortcomings such as repetitiveness, irrelevance and inappropriate statements (N-61) were deleted and the number was reduced to 188. Thus the Most Appropriate Statements were selected and prepared in the questionnaire form.

3.3.6 CONSTRUCTION OF SCALE

In constructing the questionnaire for scaling Likert scale was used. Likert scale (Likert, 1932) is found helpful in estimating the strength of feelings. Likert scales contained five responses namely strongly agree, agree, undecided, disagree and strongly disagree with 5,4,3,2,1 scores respectively. In the case of negative statements full scores were reversed.

3.3.7 PILOT STUDY AND EXTRACTION OF FINAL STATEMENTS

To facilitate extraction of final statements a pilot study was conducted in order to select the samples, to get the response of the samples towards the questionnaire and to ascertain the right means and methods for the collection of data. The mode of collection of data in the present study was opinion-rating method. In the questionnaire, to maximise the reliability of data concerned both positive and negative statements were included.

So with the view of obtaining the response of the samples on the questionnaire, the Most Appropriate Statements was given to 50 samples in person. The selected samples were the persons related to the very specific field of the present study and they responded with opinion. From the response of the samples on questionnaire the investigator extracted 120 statements with the
guidance of the supervisor and the experts. Thus the collected response from the 50 samples were analysed by using the internal consistency method. In the analysis the statements reached above 0.80 were retained for the final statements. Thus the questionnaire was developed (Appendix A).

3.3.8 RELIABILITY

Reliability is the consistency with which a tool measures what it measures. The internal consistency method was used to establish the reliability of the questionnaire.

3.3.9 VALIDITY

The questionnaire was subjected to face validity by judgement process. According to Garret (1969) a test is said to have face validity when it appears to measure whatever the author had in mind namely what he taught he was measuring.

3.4 LEADERSHIP QUESTIONNAIRE -II

To measure the leadership competency of Dr. B. Sivanthi Adityan, the standardised tool of leadership questionnaire developed by B.M.Bass (1985) was used. The questionnaire consisting of five possible answers namely “frequently, fairly often, some times, once in while and not at all” was employed to collect the data. This questionnaire measured the transactional and transformational leadership of the subject. He has used internal consistency method to establish the reliability. Split-half reliabilities were .86 and .80 respectively.
3.5 COLLECTION OF DATA

The process used in collection of data is as follows. To achieve the objectives of the study, the persons related to physical education, sports associations, sports persons working in government, public and private sectors, sports academics, sports promoting agencies, media, public and sports spectators numbering 500 were chosen as samples. Both questionnaire were sent to the selected samples to obtain their response towards the contribution of Dr. B. Sivanthi Adityan to promote physical education and sports in Tamilnadu and his leadership. Out of 500 samples the investigator received 447 completed responses. The remaining 53 responses were not considered, as they were incomplete in response. The collected data were further used to identify the common dimensions in the variables related to the contributions of Dr. B. Sivanthi Adityan towards the promotion of physical education and sports in Tamilnadu and those which comprised the leadership competency of Dr. B. Sivanthi Adityan.

3.6 STATISTICAL TECHNIQUES

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 Contributions of Dr. B. Sivanthi Adityan towards the promotion of physical education and sports in Tamilnadu and his leadership competency. These two objectives can be fulfilled only through multivariate analysis namely Factor Analysis. Statistical Package for Social Sciences Version 9.0 was used for factor analysis.
3.7 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 (Henryson, 1960; Eysenck and Wilson, 1978). Based on the above
discussion, it is very clear that 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).
3.8 DEVELOPMENT OF QUESTIONNAIRE

**PRE - PILOT STUDY PHASE**

- Identification of Tentative Statements (N-600) Macro Process -1
- Selection of Field Related Statements (N-488) Macro Process -2
- Selection of Appropriate Statements (N-249) Micro Process -1
- Selection of Most Appropriate Statements (N-188) Micro Process -2

**PILOT STUDY PHASE**

- Samples - 50
- Results and Analysis

**Extraction of Final Statements (N-120)**

**QUESTIONNAIRE**