CHAPTER - IV

METHODOLOGY

4.1 INTRODUCTION

4.2 STATEMENT OF THE PROBLEM

4.3 OPERATIONAL DEFINITIONS

4.4 OBJECTIVES OF THE STUDY

4.5 HYPOTHESIS OF THE STUDY

4.6 RESEARCH VARIABLES

4.7 SAMPLE

4.8 ADMINISTRATION OF THE TOOLS

4.9 DETAILS OF DATA ANALYSIS

4.10 DATA ANALYSIS
CHAPTER – IV

METHODOLOGY

4.1. INTRODUCTION

The study is a survey intended to analyse the data pertaining the general anxiety, co-operation, competition and motor ability of physical education women students at college level in Colleges of Education and universities of Tamil Nadu. The methodology involves the procedure of scientific enquiry and is outlined in this chapter.

4.2. STATEMENT OF THE PROBLEM

To study “PSYCHO SOCIAL CORRELATES OF ACHIEVEMENT IN PHYSICAL EDUCATION”

Achievements of students in various subjects is affected by a number of personal as well as environmental factors, as evidenced from researches. The mental make up, attitude, emotions, interests etc are integral part of the individual’s personality. Emotions, particularly, influence the behaviour so much, so that mild anxiety triggers one’s effort to do well in any activity; on the other hand too high anxiety mars the performance leading to failure. Thus, anxiety is identified as a key correlate to achievement. As one’s motivation influences his or her own activities, the interaction with other people is markedly influenced by co-operation as well as competition. These two
practices lead to success in work, establishing one's superiority over the others. The negative aspect of unrealistic competition, for lack of co-operation, results in poor performance that may lead to frustration. Hence the social factors, co-operation and competition are also taken into consideration.

Physical education has psycho-motor components that explain the interrelationship of the cognitive, psychological and motor abilities. The interesting relationship of the psycho-social variables to the achievement of students of physical education has been envisaged by the investigation. She has identified the problem and started to analyse a few selected psycho-social variables in relation to the achievement in physical education. It is hoped that substantive findings will be arrived at from the present investigation, which may pave way to the drawing up of meaningful theoretical statements.

4.3. OPERATIONAL DEFINITIONS

i) PSYCHO SOCIO CORRELATES

Psychological variables like personality factors, interest, attitudes, anxiety, are the independent variable studied in most of the investigations.

Social factors like co-operation, adjustment, interpersonal relationships, sociability, aloofness, competition are studied for their effect on selected dependent variables.

The psychological factors are 'intra' from individuals side and more personal. Sociological factors are 'inter' group dominant and more social,
when a combination of these factors, namely, psychological and sociological are ‘considered’ for their effect on theory dependent variable they form the psycho-social correlates.

PSYCHO – SOCIAL NEED

Halliday coined the phrase ‘sick society’ because of the amount of ill health (particularly mental) that there is in the community. By way of remedy, he offers the term ‘integrated health’ which is virtually synonymous in meaning with the psychological concept of ‘integrated personality’. Physical education may be regarded not only as an antidote to the stresses of modern living but as a form of therapeutic and preventive medicine which takes its place along with innumerable other measures that contribute to the all-embracing concept of health.

a) ANXIETY

Levit – Anxiety is a subjective feeling of apprehension accomplished by a heightened level of physiological arousal. Physiological arousal is an automatic response that results in the excitation of various organs of the body.

Performance anxiety plays an important role in competitive situation. Research has confirmed that ‘the more successful athletes tended to use’ their anxiety as a stimulant to better performance, for many less competent athletes, the intensity of pre-competition anxiety is often distressing and may be interpreted as a sign of insufficient self-confidence, lack of preparation or ‘poor
control. Conceptual learning and mental practice which work under high anxiety states, are the best in directing and channeling anxiety into beneficial ways, moderate anxiety is preferable to very low and very high states.

b) CO-OPERATION

Co-operation is the very basis on which the very survival of the humanity depends. The family exists through co-operation of its members, co-operation is rather a tool with us which help us in achieving higher goals in case the aim behind it, is good.

The foundations of co-operation are, a few attitudes, sympathy, friendliness, fellow-being, willingness to go more than halfway, ordination of efforts, trust in others, confidence and assurance.

Hence, we may conclude, that competition and co-operation should go hand in hand in order to ensure progress. Competition should be healthy and co-operation, sincere – keeping in view the benefits of all concerned. Co-operation and competition in physical education are means of success in games and achievement of higher standards.

It is believed by some educators that competitive athletics help in developing those traits of good citizenship, essential to democratic living which includes qualities such as initiative, trust worthiness, social consciousness, loyalty, respect for the individual, respect for authority and outstanding leadership, abiding by the rules and co-operation.
It almost all the countries of the world, the programmes of physical education are competition-oriented. Competition in physical education and sports have come to stay as an extra-motivational force.

Competition athletics, provide a social laboratory for the students to learn how to work with others in a co-operative manner to contribute towards the common purposes of the group, to promote a feeling of social consciousness and to develop an understanding of the rights and feelings of others.

c) COMPETITION

Bertrand Russel – says “Competition and co-operation are both natural human activities and it is difficult to suppress completely without destroying individuality.”

Competition is effective as an aid to motivation. Competition is a process of test and measurement and an examination of a kind.

Competition is an educational device, is neither good nor bad, but the manner it is used, decides whether the outcomes would be beneficial or detrimental.

d) COMPETITION AND CO-OPERATION

Stemming from a Latin word ‘competere’ – meaning ‘seek together’ – competition usually indicate a sort of ‘contest with another or others’, and often involves evaluation of one’s performance. A competition, then, is a conscious struggle or rivalry in which an individual or a group of individuals – in co-
operation with others – seeks to excel others in terms of performance. Competition may be considered as an open-conflict where the individual or the group makes efforts to surpass the other individual or the group in anything for which the competition is held. Competition is a biological as well as socio-cultural phenomenon that has existed since time immemorial, it is an universal tendency which has enabled human beings to improve their standard of living, invent hundreds and thousand of things and better performance in almost every walk of life.

"Excelling", "doing better", "surpassing" are some of the expressions which are generally used to denote competition. There is competition in business, in war, in sports and in every walk of life. No individual can escape it.

Competition in sports may be direct or indirect. Groups and individuals are seen contesting against one another without avoiding physical confrontations or contact as in wrestling, football, hockey etc., in indirect competition there is no physical contact. In group games competition would not be a thrilling experience unless the teams are suitably matched against one another and various members of the team co-operate with one another in perfect co-ordination and understanding.

Competition is sometimes undesirable. When a child has a very strong desire of winning but fails in his efforts and takes his failures very seriously,
competition is harmful for his mental health. But often it has many values. It is one account of the competition spirit that we continue to participate in many activities.

Competition also spurs the individual to have better and still better performance. In team games and activities competition promotes co-operative or joint spirit. If a team is to win a match, the co-operation of its members is required and the child learns this lesson quite adequately participating in such competitive games. Teachers should try to turn competitive impulses into the most constructive channels.

ii) ACHIEVEMENT & MOTOR ABILITY

Achievement is something which is done successfully with effort and skill either individually or by the team.

CHARLES G. MORRIS – "Achievement is a desire to excel, to overcome obstacles to exercise power, to strive to do something difficult and as quickly as possible.

Achievement is often defined in relation to the concept of aptitude by a simple contrast, measuring the learning that takes place during a definable course of instruction.

Motor ability, a rather nebulous term, was originally used to represent one's innate ability to perform motor tasks. However it was impossible to separate innate ability from learned skills. Motor ability has also been referred
to as a predictor of athletic ability. Gradually the term took on a new meaning and new thought to reflect motor educability, one's ability to learn motor skills. Although it seems intuitively reasonable that individuals possess an innate motor ability, there is no scientific evidence that the tests available at the present time tap this trait. This does not mean these tests are not at all useful in an educational setting but rather that labeling these tests as measures of motor ability is questionable.

According to Barrow and McGee “Motor ability has been defined as the present acquired and innate ability to perform motor skills of a general or fundamental nature, exclusive of highly specialized sports and gymnastic techniques.”

This definition implies that motor ability is a result of innate capacity and diverse training and experience. Since motor ability is looked upon as a mosaic comprised of many components then each of those components must contribute interdependently in a successful performance of a movement skill.

Singer described motor ability as indicating present athletic ability and as denoting “the immediate state of the individual to perform in a wide range of motor skills.”

According to Harrison Clarke, general motor ability was considered as one's levels of ability in a wide range of activities. It has been thought of as an integrated composite of such individual traits as strength, endurance, power,
speed, agility, balance, reaction time and co-ordination times underlying performance in many motor complexes. Motor ability is complex - physical, mental, emotional and social - enter into efficient motor performance.

**Reliability and Validity of the Study**

Simla's Anxiety Scale

**Reliability**
- Split half reliability = 0.92 (N=88)

**Validity**
- Correlation with Taylor's Manifest Anxiety Scale = 0.69 (N=70)

Co-operation – Competition Disposition Inventory

**Authors**
- Udat Pareek and Narendra Dixit

**Reliability**
- Test retest reliability was 0.59 (N=19) with a difference of two weeks.

**Validity**
- Content Validity through ratings of judges.

### 4.4. OBJECTIVES OF THE STUDY

The objectives of the study are as follows:

1. To find out the general anxiety of the Bachelor's Degree and Master's Degree women students of physical education Colleges in Tamil Nadu.

2. To study the co-operation – competition abilities of the Bachelor's Degree and Master's Degree women students of physical education colleges in Tamil Nadu.

3. To study the motor ability of the Bachelor's Degree and Master's Degree women students of physical education colleges of Tamil Nadu.

4. To study the psycho-social correlates of achievement in physical education of the Bachelor’s Degree and Master’s Degree women students of physical education colleges in Tamil Nadu.

74
4.5 HYPOTHESIS OF THE STUDY

1. The undergraduate students of physical education differ in their general anxiety.

2. The undergraduate students of the colleges of physical education differ in their co-operation.

3. The undergraduate students of the colleges of physical education differ in their competition.

4. The undergraduate students of the colleges of physical education differ in their motor ability.

5. The postgraduate students of the colleges of physical education differ in their general anxiety.

6. The postgraduate students of the colleges of physical education differ in their co-operation.

7. The postgraduate students of the colleges of physical education differ in their competition.

8. The Post graduate students of physical education differ in their motor ability.

9. Undergraduate students of Sri Sarada College of physical education and YMCA college of physical education differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.
10. Undergraduate students of Sri Sarada College of physical education and Department of physical education Alagappa University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.

11. Undergraduate students of Sri Sarada College of physical education and Department of physical education Annamalai University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.

12. Undergraduate students of Y.M.C.A College of physical education and Department of physical education Alagappa University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.

13. The Undergraduate students of Y.M.C.A College of physical education and Department of physical education Annamalai University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.

14. The Undergraduate students of Department of physical education Alagappa University and Department of physical education Annamalai University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.


16. Postgraduate students of Sri Sarada College of physical education and Department of physical education Alagappa University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.

17. Postgraduate students of Sri Sarada College of physical education and Department of physical education Annamalai University differ in i) anxiety ii) co-operation iii) Competition iv) motor ability.
18. Post graduate students of YMCA college of physical education and Alagappa University College of physical education differ in i) anxiety
   ii) co-operation iii) competition iv) motor ability
19. Post graduate students YMCA college of physical education and Annamalai University College of physical education differ in i) anxiety
   ii) co-operation iii) competition iv) motor ability
20. Post graduate Students of Department of physical education Alagappa University and Department of physical education Annamalai University differ in i) anxiety ii) co-operation iii) competition iv) motor ability
21. Students with low anxiety and high anxiety at under graduate level differ in their motor ability skills.
22. Students with low co-operation and high co-operation at under graduate level differ in their motor ability skills.
23. Students with low competition and high competition at under graduate level differ in their motor ability skills.
24. Students with low anxiety and high anxiety at Post graduate level differ in their motor ability skills.
25. Students with low Co-operation and high Co-operation at Post graduate level differ in their motor ability skills.
26. Students with low competition and high competition at Post graduate level differ in their motor ability skills.

27. Students with low anxiety and high anxiety at Post graduate level differ in their motor ability skills.

28. Students with low co-operation and high co-operation at Post graduate level differ in their motor ability skills.

29. Students with low competition and high competition at Post graduate level differ in their motor ability skills.

30. The Undergraduate and Post graduate students of the YMCA and Sri Sarada College of physical education differ in their psycho-social variables and motor skills.

31. The Undergraduate and Post graduate students of the Universities differ in their psycho-social variables and motor skills.

32. The students of the Universities and the other institutions at the Undergraduate level differ in their psycho-social variables and motor skills.

33. The students of the Universities and the other institutions at the Post graduate level differ in their psycho-social variables and motor skills.

34. The students of urban college of physical education differ from students of rural colleges of physical education in their psycho-social variables.
35. The undergraduate students of urban college of physical education, differ from the undergraduate students of rural college of physical education in their psycho-social variables.

36. Post Graduate students of Urban colleges of physical education differ from the post graduate students of rural college of physical education in their psycho-social variables.

37. The students of co-education colleges of physical education differ from the students of women's college of physical education in their psycho-social variables.

38. The Post graduate students of co-education colleges of physical education differ from post graduate students of women's college of physical education in their psycho-social variables.

39. The undergraduate students of co-education colleges of physical education, differ from the undergraduate students of women's college in their psycho-social variables.

40. There is correlation between, anxiety and co-operation of the Undergraduate students of physical education.

41. There is correlation between, anxiety and competition of the Undergraduate students of physical education.

42. There is correlation between, anxiety and motor ability of the Undergraduate students of physical education.
43. There is correlation between, co-operation and competition of the Undergraduate students of physical education.

44. There is correlation between, co-operation and motor ability of the Undergraduate students of physical education.

45. There is correlation between, competition and motor ability of the Undergraduate students of physical education.

46. There is correlation between, anxiety and co-operation of the Undergraduate students of physical education.

47. There is correlation between, anxiety and competition of the Postgraduate students of physical education.

48. There is correlation between, anxiety and motor ability of the Postgraduate students of physical education.

49. There is correlation between, co-operation and competition of the Postgraduate students of physical education.

50. There is correlation between, co-operation and motor ability of the Postgraduate students of physical education.
There is correlation between competition and motor ability of the Postgraduate students of physical education.

2. There exists relationship between course of study and motor ability subskill – 3

3. There exists relationship among course of study, competition and total motor ability.

54. There exists relationship among Institution, course of study, competition and the motor ability subskills ml.

The present investigation is a survey type relational study.

**TABLE - I**

**THE TABLE GIVEN BELOW PRESENTS THE DESIGN OF THE STUDY IN A PARADIGMATIC FORM.**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variables</th>
<th>Nature of study</th>
<th>Sample</th>
<th>Tools</th>
</tr>
</thead>
</table>
4.6 RESEARCH VARIABLES

Two types of variables, dependent and independent are included in this study. Dependent variable of the study is the motor ability score of the students. Independent variables are anxiety, co-operation and competition.

DATA GATHERING TOOLS

To measure the dependent variable Scott Motor Ability Test was conducted.

OVERVIEW OF THE TEST

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Description of the Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Obstacle Race</td>
</tr>
<tr>
<td>2.</td>
<td>Basket Ball Throw</td>
</tr>
<tr>
<td>3.</td>
<td>Standing Broad jump</td>
</tr>
<tr>
<td>4.</td>
<td>Wall Pass</td>
</tr>
<tr>
<td>5.</td>
<td>4-Second Dash</td>
</tr>
</tbody>
</table>

To administer the tests, the investigator made use of the following apparatus and equipments.
1. Obstacle Race:

**Purpose:** To measure the speed, co-ordination and ability

![Diagram of obstacle course]

**FACILITIES AND EQUIPMENTS**

The space on the floor measuring 55 feet by 12 feet, 3 jumping stands, one cross bar at least 6 feet long, one stop watch.

**PROCEDURE**

The above drawn figure depicts the layout of the obstacles course. The subject in supine position, heels touching line 'a' gets up and runs toward 'j' at the command "go". As the subject reaches each square she must step on it with both feet. She runs twice around 'j' and then crawls under the cross bar at 'd'. Rising on the other side she runs to line 'c' and continues to shuttle between 'c' and 'b' until she comes to 'c' the third time.
SCORING

The time is taken to the nearest tenth of a second required to run the course.

2. BASKET BALL THROW

Purpose:

To measure arm and shoulder strength and co-ordination.

FACTILITIES AND EQUIPMENTS

For basket ball throw, an area marked approximately 20 by 100 feet long. A throwing or scratched line was placed at one end of the course and parallel lines at intervals of 10 feet.

Procedure:

The subject throws a basket ball from behind a line, for distance, a running approach is allowed if desired. Three consecutive throws are given and the longest throw is counted.
SCORING

The final score is the distance of the best trial measured to the nearest foot.

3. STANDING BROAD JUMP

Purpose:

To measure leg power.

FACILITIES AND EQUIPMENTS

Jumping pit, 13 inch take off board from the pit.

PROCEDURE:

The subject assumes the starting position with feet parallel and toes slightly curled over the end of the take off.

The jumper swings the arm, bends the knee in a preliminarily movement and jumps forward on the pit.
SCORING

The distance from the take off board to the close heel landing or any other part of the body balances is lost. Three trials are permitted and best one is measured to the nearest inch.

4. WALL PASS.

Purpose:

To measure handling and the controlling power.

FACILITIES AND EQUIPMENTS:

Regulation Basketball. A flat wall space of 9 feet square with the line a feet from the wall as a restraining line, one stop watch.

PROCEDURE:

On the signal to start, facing the wall the subject stands behind the restraining line and post the ball against the wall as many times as possible in 15 seconds.

SCORING

The number of times the ball hits the wall in a fifteen second period.
CO-OPERATION COMPL ETTION DISPOSITION INVENTORY

This tool was prepared by Uday Pareek and Narendra Dixit. It is given to U.G and P.G students of physical education. It is a self checking inventory, subject is required to respondent on a four point scale from applicable to not applicable.

4.7 SAMPLE

The sample of students was drawn from two colleges of physical education and two university Department of physical education. Details of sample are furnished in the table.

**TABLE - 2**

**DISTRIBUTION OF THE SAMPLE SELECTED FOR THE STUDY**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of the Institution</th>
<th>University</th>
<th>Sex</th>
<th>BPED/ BPES</th>
<th>MPED/ MPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sri Sarada College of Physical Education, Salem</td>
<td>Madras</td>
<td>Female</td>
<td>37</td>
<td>8</td>
</tr>
<tr>
<td>2.</td>
<td>YMCA College of Physical Education, Saidapet, Madras</td>
<td>Madras</td>
<td>Female</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>3.</td>
<td>Department of Physical Education, Karalkudi</td>
<td>Alagappa University</td>
<td>Female</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>4.</td>
<td>Department of Physical Education, Chidambram</td>
<td>Annamalai University</td>
<td>Female</td>
<td>43</td>
<td>15</td>
</tr>
</tbody>
</table>

Total Sample = 210 (Figure - 1A, 1B)
FIGURE - 1A
DIAGRAM SHOWING DISTRIBUTION OF THE SAMPLE OF MPED / MPES

FIGURE - 1B
4.8 ADMINISTRATION OF THE TOOLS

The General Anxiety scale co-operation competition disposition Inventory and Scott Motor Ability Tests were administered to the students.

The tests were conducted after the First Semester Examinations. Detailed instructions for answering the questionnaire were given to the students, before they were required to answer the questionnaire was also given.

"Tick the appropriate answer Yes/No or Always applicable /Some times applicable / Rarely applicable / Not at all Applicable as the case may be. There need not be any hesitation to mark as you feel."

Instructions were given for understanding the Scott Motor Ability Test.

4.9 DETAILS OF DATA ANALYSIS

The skill tests were conducted in the morning and evening sessions for two days in each institution. The questionnaires where given to the students on the third day and the data were collected on the same day. Totally three days were allotted to each institutions for the collection of data.

The analysis of data has been undertaken. The differential analysis and correlation analysis were done. The details of data analysis are explained in the next chapter.

4.10 CONCLUSION

In the present chapter, the methodology adopted to collect the data and the sample details are explained. In the next chapter the details of data analysis are presented.