CHAPTER – III

METHODS OF INVESTIGATION

Educational research is the process of arriving at dependable solution to problems through planned and systematic collection, analysis and interpretation of data. Research methods are of utmost importance in a research process. It occupies a decisive role in any kind of research, as the validity and reliability of the findings depends upon the methods adopted. The success of any research depends largely upon the availability of the data and the suitability of the method. By indicating the significance of methodology, Barr (1953) pointed out that ‘the vehicle of the research cannot perform its function without it, since it is methodology which lays out the way in which research is to be carried out and outlines the details and description of research variables and procedures’. Research methods describe the various steps of the plan of attack to be adopted in solving the research problem such as the manner in which the problem is formulated, the definition of terms, the choice of subjects for investigation, the validation of data-gathering tools, collection of data, analysis and interpretation of data and the process of inferences and generalizations. (Koul, 1997).

A suitable method helps the researcher to explore the diverse stands of the study and adequately measure them so as to satisfy the requirements and thus it is the means to an end. This chapter is devoted to the description of the method of investigation followed in the study. The method adopted, tools used, description of the tools, sample selected, procedure for data collection and statistical techniques adopted for analyzing the data have also been discussed in this chapter.
3.1 Method adopted

The method adopted should always be valid, reliable and appropriate to the nature of the problem under investigation and the kind of data that the problem demands.

The study being the influence of certain socio-psychological factors on the academic stress and adjustment styles of student-teachers, the investigator selected Normative method, in which Survey is the technique adopted for the collection of data. The word normative is used because surveys are frequently made for the purpose of ascertaining which is normal or typical condition or practice.

The normative survey method is that method of investigation, which attempts to describe and interpret what exist at present in the form of conditions, practices, process, effects, attitudes, beliefs etc. it is concerned with some phenomenon that are typical or normal conditions.

According to Good and Scates (1954), the term ‘Survey’ indicates the gathering of evidences relating to the current conditions. Different types of surveys help to establish the status of the phenomenon under investigation. The purpose is to survey the present conditions, understand relationships and basic future action on the findings. Surveys can be confined to fact-finding on large number of areas or they can be complex and sophisticated in design providing accurate findings. Adoption of the survey method in the present study helped the researcher to collect proper data from an adequate number of college students from different colleges.
3.2 Statement of the Problem

Stress is a normal part of everyday life and occurs whenever our bodies and minds are faced with demands which tax or exceed our capacity to respond. The teaching profession is generally considered as a noble profession with a lot of expectations from the teachers’. These expectations arising from the various sources lead to the component of academic stress among the teacher trainees.

The teacher trainees need to cope up with the demands of the parents and the society. Coping is considered as an important resource that can help the trainees to maintain psychological adaptation during a stressful episode. The teacher trainees must be taught to put their adaptive capabilities to test so as to ward off the negative impact of academic stress. Successful coping of the academic stress not only depends on the personality characteristics of the teacher trainees but also on the realistic appraisal of the situation. Thus, a healthy sense of optimum, tempered with same degree of realism appears to be helpful both in warding off the impact of academic stress and in preventing the insidious effect of adjustment styles in understanding health.

Life would be simple indeed if our needs could always be satisfied. But as we know, there are many obstacles, both environmental and internal which interfere with gratification of our needs and complicate our strivings towards our goals. Most of the stress situations we encounter in everyday life are minor and relatively easy to cope with. Problems of adjustment come not only because our own strivings are frustrated or in conflict but also because of pressures that complicate our journey toward our goals or provide additional demands for us to meet.
A combination of inner aspirations and outer demands often intensifies the pressure. Although each of us faces a unique pattern of demands and pressures, there are several pressures that most of us share by virtue of our membership in our particular society. Prevalent among these are pressure to achieve in a competitive society; pressure to put forth sustained effort, often at an uncomfortably fast pace; pressure to keep adjusting to constantly changing conditions and pressure from family and other close personal relationships.

Most of our pressures stem from demands for academic and occupational achievement. In our highly competitive society we compete for grades, athletic honours, leadership, jobs, financial advantages, social status and almost everything we want. Competitive pressures have been acclaimed as leading to greater productivity, an increased sense of purpose, higher standards of excellence and the feel of life. Thus, the need for mutual help and support among the members of the society leads to life adjustment and higher levels of academic excellence.

If the educational endeavours of trainees are to succeed in deriving optimal benefit from the input, the capabilities of students need to grow constantly unhampered through the encounter of the individual with his environment. Students who have more academic stress and less adjustment with situations cannot fit into the normal situations. They become a problem to themselves as well as to the parents, home, school and society.
3.3 Title of the study

A considerable number of studies have focused their attention on the academic stress and burnout from various angles in the USA, the UK and Canada. But systematic studies of this sort made in the Indian context are very few. It is under this background an attempt has been made to study, “A study of Academic Stress and Adjustment styles of Teacher Trainees”. Some other variables like gender, group studied, locality, caste, religion, type of family, interest in the course study habits, mental health etc., also included in the present study.

3.3.1 Definitions of the key terms

Academic Stress:-

Academic stress is a relatively new area of empirical research while a large number of studies on student burnout have been initially directed towards educational institutions, government and private.

Academic stress is the area of stress which is caused in the students that causes the stress through the studying the course.

Adjustment Styles:-

Adjustment needs one’s conformity to the requirement of one’s culture and the society. In this way, adjustment does not only cater to one’s needs but also to the demands of the society.

A working definition proposed by Pearlin and Schoolar (1978) refers to it as any response to external life strains that serves to prevent, avoid and control external distress.
Folkman and Lazarus (1980) defined coping as the cognitive and behavioural efforts made to master, tolerance or reduce external and internal demands and conflicts among them.

**Study Habits:-**

The basic features involved in the application of the mind to a problem or subject; the characteristic pattern which an individual follows in learning about things and people. ... Good (1973)

Study habit may be defined as the complex of reading behaviour of a person, resulting from the varying degree of interaction of a number of variable factors, when he seeks graphic records for acquiring information knowledge.

For achieving good study habits, one must have the desire to learn with full working abilities and talents. All these are fulfilled in his assignment work, in classroom interaction, for examination purpose.

**Mental Health:-**

By mental health, we mean the proper and balanced development of intellect, creativity, reasoning, emotionally mindfulness, initiative and maintenance of mutually rewarding social relationship, ability to face day to day problems and multi-fold challenges without using patience. Provide solutions and relaxation with self-confidence. ... Bhargava (2006)

Mental Health is the positive capacity for living and enjoying the good life. ... Tripati (2006)
Well being is undoubtedly a desired aim of human existence and all of us strive to achieve it. Well-being refers to the harmonious functioning of the feeling to contentment, happiness satisfaction, etc.

... Khan (2006)

As mutually healthy persons we trend to do something about our problems as they occur. We set realistic goals and strive to make use of our capacities. We learn these characteristics from our parents, from our friends, from important persons in our lives like teachers, ministers or relatives from our readings and from our experience in life. Our ability to imagine, initiate, think, compare, evaluate and enjoy our experiences allows us to acquire these characteristics. If we cut off our openness to learning throughout our lives, we reduce our opportunities of learn and progress toward mental health.

Teacher Trainees:-

A person enrolled in a teacher training institution / college of education who has been assigned to assist a regular teacher in a real school institution. . . . Good (1973)

Demographic Variables:-

Personal and Social indicators of an individual teacher trainee.

3.4 Purpose of the study

The present study aims at investigating how the academic stress and adjustment styles of the D.Ed. teacher trainees are related to certain factors. The purpose of the study is an attempt to answer the following aspects.
i. Whether there is any significant influence of the socio-psychological factors on the academic stress and adjustment styles of the D.Ed. teacher trainees, in general.

ii. Whether there is any relationship between mental health and the academic stress and adjustment styles of D.Ed. teacher trainees.

iii. Whether there is any influence of study habits of D.Ed. teacher trainees on their level of academic stress and adjustment styles.

3.5 Scope of the study

Academic stress was treated as a dependent variable in the present study. A set of independent variables viz., adjustment styles, study habits and mental health of the teacher trainees were used along with the set of socio-demographic variables viz., gender, subject background, locality, caste, religion, type of family, handicappedness and interest in the course.

3.6 Objectives of the study

The present investigation was made to obtain useful insights concerning different academic stress and adjustment styles areas of teacher trainee boys and girls studying in the District Institute of Education and Training (DIETs).

The main objectives of the present investigation are:

i. To estimate the general level of academic stress and adjustment styles among the teacher training students.
ii. To find the correlation between academic stress and adjustment styles with the independent and demographic variables.

iii. To study the relationship between academic stress and adjustment styles with the study habits and mental health of the teacher training students.

iv. To find out the influence of different personal and demographic variables on academic stress and adjustment styles of teacher training students.

v. To identify the most prevalent academic stress areas and adjustment style areas of teacher training students, studying DIETs.

vi. To analyze the relationship between academic stress and adjustment styles of the teacher training students.

vii. To study the influence of study habits on the academic stress and adjustment styles of the teacher training students.

viii. To find the influence of mental health of the teacher trainees on their academic stress and adjustment styles.

3.7 Hypotheses

In accordance with the above objectives a set of hypotheses were formulated for the purpose of testing.

A. Simple Correlation

1. There is no significant relationship between adjustment styles, study habits and mental health and the academic stress of the teacher training students.
2. There is no significant relationship between adjustment styles, study habits and mental health and the personal inadequacy of the teacher training students.

3. There is no significant relationship between adjustment styles, study habits and mental health and the fear of failure of the teacher training students.

4. There is no significant relationship between adjustment styles, study habits and mental health and the interpersonal difficulties with teachers and parents of the teacher training students.

5. There is no significant relationship between adjustment styles, study habits and mental health and the teacher-pupil relations/teaching methods of the teacher training students.

6. There is no significant relationship between adjustment styles, study habits and mental health and the inadequate study facilities of the teacher training students.

7. There is no significant relationship between demographic variables and the academic stress of the teacher trainees.

8. There is no significant relationship between study habits and mental health and the adjustment styles of the teacher training students.

9. There is no significant relationship between demographic variables and the adjustment of the teacher trainees.
B. ‘t’ test analysis:

10. There would be no significant difference between boys and girls in their level of academic stress.

11. There would be no significant difference between the students with science background and arts background in their level of academic stress.

12. There would be no significant difference between the experience of academic stress of rural and urban teacher trainees.

13. There would be no significant difference between caste of the trainees and the experience of their academic stress.

14. There would be no significant difference between religion of the trainees and the experience of their academic stress.

15. There would be no significant difference between the experience of academic stress of the trainees coming from joint families and nuclear families.

16. There would be no significant difference between the trainees who are handicapped and normal in their level of academic stress.

17. There would be no significant difference between the trainees who entered the course by self-interest and by force, in their level of academic stress.

18. There would be no significant influence of study habits of the students on their experience of academic stress.
19. There would be no significant influence of mental health of the students on their experience of academic stress.

20. There would be no significant influence of adjustment styles of the students on their experience of academic stress.

21. There would be no significant difference between the adjustment styles of boys and girls teacher trainees.

22. There would be no significant difference between the adjustment styles of the science background and arts background students.

23. There would not be any significant difference between the adjustment styles of the trainees came from rural and urban areas.

24. There would be no significant difference between caste of the trainees and their adjustment styles.

25. There would be no significant difference between religion of the trainees and their adjustment styles.

26. There would be no significant difference between the adjustment styles of the trainees coming from joint families and nuclear families.

27. There would be no significant difference between the adjustment styles of the handicapped and normal students.

28. There would be no significant difference between the adjustment styles of the trainees who joined the course with self-interest and by the force of others.
29. There would be no significant influence of study habits of the trainees on their experience of adjustment styles.

30. There would be no significant influence of mental health of the trainees on their experience of adjustment styles.

C. Chi-square Analysis:

31. Boys and Girls teacher trainees do not differ significantly in their proneness to academic stress.

32. Science and Arts subject background teacher trainees do not differ significantly in their proneness to academic stress.

33. Rural and Urban locality teacher trainees do not differ significantly in their proneness to academic stress.

34. Teacher trainees belonging to SC/ST, BC and OC do not differ significantly in their proneness to academic stress.

35. Teacher trainees belonging to Hindu, Muslim and Christian do not differ significantly in their proneness to academic stress.

36. Teacher trainees hailing from joint family and nuclear family do not differ significantly in their proneness to academic stress.

37. Teacher trainees having handicapness and not having do not differ significantly in their proneness to academic stress.

38. Teacher trainees who joined with self interest and by force of others do not differ significantly in their proneness to academic stress.
39. Teacher trainees who have less adjustment, average adjustment and high adjustment do not differ significantly in their proneness to academic stress.

40. Teacher trainees who had poor study habits, average study habits and good study habits do not differ significantly in their proneness to academic stress.

41. Teacher trainees who had poor mental health, average mental health and good mental health do not differ significantly in their proneness to academic stress.

3.8 Measurements of the Variables

The main thrust of the present investigation is to find and compare different academic stress areas and adjustment styles areas of the teacher training students. Out of the 12 variables investigated in the present study, 8 are personal and demographic variables for which the information is gathered through a personal data sheet, 4 variables are measured with suitable instruments. A brief description is given in the following paraes.

I. List of Dependent and Independent variables:

The two dependent variables included in this study are academic stress and adjustment styles. The independent variables are broadly grouped under two categories as given below:

A. General Variables

   a) Study habits

   b) Mental Health
B. Personal and Demographic variables

a) Gender

b) Subject (group) studied

c) Locality

d) Caste

e) Religion

f) Type of family

g) Handicappedness

h) Interest in the course

II. Brief description of the variables

The following descriptions are operated for the purpose of measuring the variables in the present study.

3.8.1. Academic Stress Scale

Life today has become increasingly complex and tension ridden. It is the era of speed, rapid changes, never ending wishes and desires, which sometimes result in stress, anxiety, negativity and depression. Stress is an integral part of life. It operates in almost every walk of life. The investigator identified stress in the educational learning situation especially in the teacher training institutions (DIETs). Teachers’ are trained to face the complex problems that occur in schools during teaching-learning process.
Teachers can act as trail blazers in the lives of learners and in the process of education for development. If student-teachers (teacher trainees) acquire academic excellence and adjustment then they are empowered to perform multiple tasks in the classroom and in the community in a professional manner.

Stress is the internal response of the individual to pressure – when the pressure experienced is greater than normal ability. In the college situation, this pressure may be accountable for individual’s success and failures. Hence, the kind of stress (Academic Stress) is an important factor accounting for variation in academic success. Academic stress among D.Ed. teacher trainees leads to problems of adjustment in their teaching career. In the academic stress of teacher trainees their personal inadequacy, fear of failure, interpersonal difficulties with teachers, teacher-pupil relationship/teaching methods and inadequate study facilities were assessed.

i. Description of the Inventory:

Keeping this in view a 40 item rating scale which was originally developed by Kim (1970) was used in the present study. The scale was adopted to Indian conditions by Rajendran and Kaliappan (1990) by administering the adapted version of the Students’ Academic Stress Scale to 285 subjects of their study and assessed the efficiency of behavioural programmes in managing academic stress in improving academic performance. The academic stress scale comprises of 40 items. Each item had five alternatives varying from the response ‘No Stress’ to ‘Extreme Stress’. Each response carries a score of ‘0’, ‘1’, ‘2’, ‘3’ and ‘4’ respectively. The items are classified into five areas contained 8 items each viz.,
a. Personal Inadequacy … (F1)

b. Fear of Failure … (F2)

c. Interpersonal difficulties with teachers … (F3)

d. Teacher-pupil relationship / Teaching methods (F4)

e. Inadequate study facilities … (F5)

The total items were 40. Therefore 160 (4 x 40) is the maximum possible score and the highest score on each factor would be 32 (4 x 8). Each factor has equal number of items. The higher the value of the score, the more the academic stress and vice-versa. Academic stress scale is given in Appendix – A.

ii. Validity and Reliability: - There are various methods of estimating the validity of measuring the instrument. The authors established content validity of the tool on the basis of the scrutiny of experts and item validity through item analysis. As the investigator is using the tool viz., Students’ Academic Stress Scale, is assumed that the adopted version is having validity and reliability. The test-retest correlation of 50 students with an interval of 25 days has been found to be 0.82.

3.8.2. Adjustment Styles Questionnaire

Adjustment Style (Coping Style) is an action in which the individual interacts with the environment for the purpose of accomplishing something. The term ‘adjustment’ has been used to denote the way of dealing with stress. In an effort to master the conditions of harm, threat or challenge when a routine or automatic
response is not readily available, there are many ways by which individuals adjust with stress and each approach appears to be unique in each individual. However, various attempts have been made to classify them into several ways. Perlin and Schooler (1978); Kendall and Hollon (1980); Lazarus (1961); Billings and Moose (1981) classification has been taken into consideration because it covers most of the procedures usually adopted by researchers. Another reason for selecting this classification is its wide use in the doctoral research on stress in the department of Psychology (Kumar, 1988; Reddy, 1994; Srinivas, 1999) Sri Venkateswara University, Tirupati.

Adjustment styles generally refer to the ability to adjust in the difficult situations and compete effectively by avoiding stressful conditions. When it refers to teachers it is taken to mean effective functioning as a teacher and excelling in the teaching-learning situations. Keeping this in view, for purpose of the present study a tool to assess adjustment styles of D.Ed. teacher trainees was constructed afresh as follows. Literature was searcher to gain a glimpse of variables that are supposed to compose adjustment styles. Discussions with experience teachers, professors and educators were held. After considerable scrutiny of appropriateness to the task on hand a set of 47 items were developed that constitute adjustment styles. These items were given to a sample of 50 student-teachers for their rating as a pilot study.

On the basis of their feedback, (ambiguity of items, clarity, etc.) 40 items were retained. The final form of the adjustment styles questionnaire contains 40 items with a five point scale varying from the responses ‘Never’ to ‘Always’. Each response carries the following
scores varying from 0 to 4. The higher the score the more the student has used that particular style of adjustment and vice-versa. The adjustment styles questionnaire was given in Appendix – B. The test-retest correlation of 50 individuals with an interval of 25 days is found to be 0.868.

3.8.3. Study Habits Inventory

The situation, habits and conditions, which affects the use of the study time and consequent success in college work and study is an area, which cannot be neglected, in educational institutions. This is a good assessment technique for measuring pupils’ study habits. A counsellor can assist students to recognize the particular habits, which come in the way of their attaining their best scholastic achievement. It is a list of statements of situations, habits and conditions, which affect the use of study time and consequent success in college work and study. The inventory was designed and developed by Wren (1941) and later adapted to suit the Indian conditions by Bengalle (1973).

The inventory consists of 25 items. There are three response categories ‘Never/Rarely’, ‘Sometimes / Often’ and ‘Always’ at the end of the each item. The subject responds to each item by putting a ‘✓’ mark as applicable to him / her. A score of 3, 2 and 1 is given when responses are marked ‘never’, ‘sometimes’ and ‘always’ respectively. The higher the score the better the study habits of the student. Its validity and reliability were established by the authors. The study habits inventory is given in the Appendix – C. The test-retest correlation of 50 individuals with an interval of 25 days is found to be 0.882
3.8.4. Mental Health Inventory

A state of good adjustment with a subjective state of wellbeing, just for living and the feeling that one is exercising his talents and abilities. Health is an indispensable asset to every human being. It has been described as the soil from which the finest flowers grow. Health is a state of being hale, sound or whole in body and mind. Mental health has been reported as an important factor influencing individual’s various behaviours, activities, happiness and performance. This tool was constructed by Jagadesh and Srivastava (1988) published by Manovaigyanik Parikchaan Sansthan, Varanasi.

This tool consists of 54 statements, four alternative responses have been given to each statement i.e. Always, Often, Rarely and Never. A response of ‘Always’ is given a score of 4, a score of 3 is given to the response of ‘Often’, a score of 2 is given to the response of ‘Rarely’ and response of ‘Never’ is given a score of 1 for true keyed (positive) items, whereas 1, 2, 3 and 4 scores are given for ‘Always’, ‘Often’, ‘Rarely’ and ‘Never’ respectively in the case of false keyed (negative) statements. The Mental health inventory is presented in Appendix – D. The test-retest correlation of 50 students with an interval of 25 days is found to be 0.874.

The inventory is intended as an aid in counselling individuals in various spheres of life mostly employed in industrial and educational research fields. The scale helps to screen the individuals with poor mental health who may need assistance and counselling for their happier life and excellent future. **High score on this scale indicates poor mental health.**
3.8.5. Gender

Students of both sexes i.e. boys and girls were included in the present study to find out whether there exists any significant difference between them in the level of academic stress and adjustment styles.

3.8.6. Type of Course (Group)

There was a general feeling that the students of Science courses felt high academic stress rather to the students of Arts courses. To find the effect of the type of course they studied, the sample was divided into two groups viz., (i) Students studied science groups (Mathematics-Physics-Chemistry / Biological Science-Physics-Chemistry) and (ii) Students studied arts groups (Commerce-Economic-Civics / History-Economics-Civics).

3.8.7. Locality

The place of study may have some influence on the academic stress and adjustment styles of the students. According to the place of study, all the sample of trainees were divided into two groups viz., (i) students of rural areas and (ii) students of urban areas. It is assumed that the rural and urban living brings variations in the level of academic stress and adjustment styles of students due to facilities available in the rural and urban institutions. Therefore, locality under which the students are studying is taken as a variable in the present investigation to test the significance of academic stress and adjustment styles of the students of rural and urban areas.

3.8.8. Caste

Caste i.e. community of the student may have some influence on the academic stress and adjustment styles. Hence, the caste of the
students is considered as one of the variables in the present study. The
students were divided into three groups depending on their caste and
the significance difference between the caste and academic stress and
adjustment styles of the students was tested.

3.8.9. Religion

Many of the Indian religions had some faiths and beliefs on the
education of the children. Most of the religions had the belief on
‘karma sidhanta’. Therefore, the religion of the students is also
included as one of the variable to find the influence on their academic
stress and adjustment styles. A very few studies carried out into this
aspect reported contradictory results. The sample students were
classified into three categories on the basis of their religion viz.,
Hindus, Muslims and Christians.

3.8.10. Type of family

To examine the relationship between the type of family and the
academic stress and adjustment styles of the teacher trainees, they were
divided into two categories: i) Joint family (where the students are
living with grand parents and near and dear relatives) and ii) Nuclear
family (where the students are living only with the parents). The
significance and difference between the level of academic stress and
adjustment styles were tested.

3.8.11. Handicappedness

Today there is 3% of the reservation for the handicapped
students in every course. They are joining not only in science courses
but also in professional courses including the teacher training
institutions. The academic stress and adjustment style scores of the
teacher trainee students were analysed to see whether handicappedness had any effect on their level of academic stress and adjustment. For this purpose the students who participated in this study were divided into two sub-groups on the basis of their handicappedness i.e. whether they are suffering from handicapped or not.

3.8.12. Interest in the course

It was observed from many studies that there is an impact of interest on the course of study on the academic stress and adjustment styles of the students. It is general observation that there may be ‘a negative feeling’ among students, if they were not joined the course as per their will. So, there appears to be adverse results between the children who are studying the course according to their interest and by the force of parents or others. The academic stress and adjustment styles scores of the students were analysed by the two group of the students viz., (i) the students who are studying the course by their self interest and (ii) the students who are studying the course by the force / can’t but position.

3.8.13 Personal data

The information regarding the gender, type of course, locality, caste, religion, type of family, handicapness and interest in the course etc, of the students were obtained with a carefully designed personal data sheet. The personal data sheet is given at the beginning of the questionnaires. The personal data sheet is given in the Appendix – E.

3.9 Sample

The study is aimed at investigating the academic stress and adjustment styles of the teacher training students studying in DIETs
(District Institute of Education and Training) of Nellore and Prakasam districts from Costal region, Hyderabad and Warangal from Telangana region and Kadapa and Anantapur from Rayalaseema region were taken in the study. There are 100 Telugu medium students in each DIET and 50 Urdu medium students in Nellore and Hyderabad DIETs. All the 600 (500 Telugu medium and 100 Urdu medium students) trainees were selected for the present study.

### 3.10 Administration of the test

The investigator personally visited all the institutions included in the sample. A good rapport was developed with the teacher trainees and explained the purpose and importance of the study as a matter of motivation. The pilot study has been conducted on 50 students (25 boys and 25 girls) who fulfilled the established criteria for the following purposes:

1. To test the suitability of the academic stress and to assess the sources and intensity of academic stress.
2. To decide on the order of presentation of the tools.
3. To estimate time taken to complete evaluation of each subject.
4. To familiarize the researcher with administration of the tools.

The investigator visited the six DIETs and administrated the scales to the D.Ed students after taking permission from the respective principals. A good rapport was developed with the students and explained the purpose and importance of the study as a matter of motivation. Though all the above instruments were self-administrating,
they were explained clearly each of them. Sufficient time was given to respond to the items. The teacher trainees were given a copy of all the instruments viz., academic stress scale, adjustment styles questionnaire, study habits inventory, mental health inventory and a personal data sheet and requested them to respond all parts of the instruments and all items without leaving any part or any item. Though all the above instruments are self-administrating, they have been helped whenever they have felt ambiguous about an item or expressed a feeling not to discuss the proceeding with other fellow students. In order to minimize discussion among the teacher trainees, data collection has been spaced in such a way that all the students have been able to fill first questionnaire in a short time and then proceed on to the next one. Sufficient time was given to respond to the items.

3.11 Statistical Techniques Used

The statistical techniques used and the purpose for which they were used are given below:

<table>
<thead>
<tr>
<th>Name of the Statistical Technique used</th>
<th>Purpose for which they Used</th>
</tr>
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<tbody>
<tr>
<td>1. Correlation</td>
<td>To test the significant relationship between academic stress and adjustment styles scores and study habits and mental health and with the different personal and demographic variables.</td>
</tr>
<tr>
<td>2. ‘t’ test or Critical Ratio</td>
<td>To test the significant difference of Mean’s pertaining to the academic stress and adjustment styles scores to different independent variables.</td>
</tr>
</tbody>
</table>
3. ‘F’ test or ANOVA test

To test the significant difference of means of more than two groups of teachers pertaining to the academic stress and adjustment styles scores to different independent variables.

### 3.12 Analysis of the data

Thus, the total scores obtained by each of 600 teacher training students on all the variables were computed. The data was analysed using relevant statistical techniques, to find out whether the differences in the independent variables accounted for significant differences in the dependent variables. The usual levels of significance viz., 0.05, 0.01 and 0.001 were employed to test the significance of the obtained values.

The obtained numerical results were also adumbrated by graphical representation wherever necessary. The next chapter deals with the analyses of the data in detail.

All these statistical analysis was carried out using the **SPSS statistical package 11.5 version.**