

**A STUDY OF ACADEMIC STRESS AND ATTITUDE
AMONG ADOLESCENCE**

Research by

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**A dissertation submitted to the University of Mumbai as part
fulfilment of requirement for the Degree of Master of Education.**

**POST GRADUATE DEPARTMENT OF EDUCATION
MES' PILLAI COLLEGE OF EDUCATION AND RESEARCH
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2020-2022

CERTIFICATE

This is to certify that the dissertation titled '**A Study of Academic Stress and Attitude Among Adolescence**' submitted to the University of Mumbai as part fulfilment of requirement for the degree of Master of Education by Mrs. Dipali Indalkar is her own work; carried out under my guidance and is worthy of examination.

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DECLARATION

I, Dipali Parshuram Indalkar do here by declare that the M.Ed. dissertation entitled, “A Study of Academic Stress and Attitude Among Adolescence.” Submitted to the University of Mumbai, is original work carried out by me and no part or whole part of this work has been submitted to this or any other university or institution for award of any other Degree or Diploma.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

*The purpose of education is to make good human beings with skill and expertise...
Enlightened human beings can be created by teachers.*

- Dr. A. P. J. Abdul Kalam

¹Education is the fundamental means of human development. By it the innate power of human beings is developed their knowledge and skill are enhanced and their behaviour is changed. They are made civilized and cultured citizens and this task begins right from the time we are born and continues till we die. Home is the first school and mother is the first teacher of the child. Education teaches children how to think, not what to think. We can change the world by educating.

²Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, morals, beliefs, habits and personal development. Education originated as transmission of cultural heritage from one generation to the next. Today, educational goals increasingly encompass new ideas such as liberation of learners, critical thinking about presented information, skills needed for the modern society empathy and complex vocational skills.

³The roots of education are bitter, but fruit is sweeter. A tree is nothing without its roots similarly, education is meaningless without exams. Every child has a different learning style and pace. Each child is unique, not only capable of learning but also capable of succeeding. The understanding capacity of students can be judged with the help of their 'Conceptual Knowledge'. Language plays a vital role in shaping one's personality so do mathematical skills and scientific attitude. All the important subjects are being targeted to achieve the goal of competency.

Examination helps in the development of young minds. Developing Young Minds is developing a nation; exams develop children as individuals, gives value, extraordinary thinking, self-assessment, overcome failures, fills them with positivity and in turn

¹ Lal & Palod, (2008). *Educational thoughts and practice*. (4th ed) Vinay Rakheja Publishers) p.g.no.1.

² <https://en.wikipedia.org/wiki/Education>

³ Santrock, J. W., *Educational Psychology*, (4th Edition) TATA McGraw-Hill Edition.

improve the quality of education. ⁴Exams help every teacher to understand the mental capacity of the students and to rectify their shortcomings. In turn it helps the students to perform and think as the way it should be done. It not only opens the doors for better personality, improving skills of mathematical reasoning, communication, logistics, Science and expressive nature of the subject which will provide the platform to add the 'ability', subtract the 'failure' and multiply their 'success'.

Examination is defined as the evaluation of the child's understanding of knowledge and assessment of that knowledge is done using a formal test. Using a variety of objective and subjective questions, the child's knowledge acquisition of a particular subject is checked. Each of these questions in the exam are assigned marks as per the level of knowledge it requires. The students answer the given questions and marks are assigned based on the quality of answers written by the students in their examinations. Then the evaluation of the progress of the child is done based on marks obtained in these exams. Examination causes anxiety and stress in students as it lays emphasis on its outcomes.

1.2 Conceptual framework

The examination is a central part of formal education in many countries of the world. An examination or test is an assessment planned to measure the exam taker's knowledge, attitude, skill or commitment to a cause. A test can be administered orally, on paper, on a computer or in a confined area that requires the exam taker to physically perform a set of skills. Formal examinations often produce grades or marks (Longe & Ajike, 2014). Latham (1877) considered examinations as an 'encroaching power' that influenced learning - 'the power of test'.

According to Cheng (2003), Examination and assessments have continued to play a crucial role in education into the new millennium. Testing functions as a powerful director of teaching and learning in many countries around the world. Tests are developed and administered to determine whether students can pass and continue to higher education; it is aimed at maintaining quality education and held at the end of the learning process. It is used to obtain, examine, and understand the students' learning process and their learning outcomes analytically and sustainably. Examination results of a school will provide information on the success rate of students achieving the learning objectives.

⁴ <https://timesofindia.indiatimes.com/readersblog/vinoth9487/why-exams-are-important-33513/>

Examination and its anticipated outcomes cause stress among the learners.⁵ **Academic stress** is mental distress with respect to some anticipated frustration associated with academic failure or even unawareness to the possibility of such failure. They are subjected under stress, since the demand is related to achievement of an academic goal. So, academic related to the achievement of an academic goal. It is described as the emotional, physiological, and behavioural responses caused by an imminent test or exam. It can be related to a negative previous experience of exams, poor preparation, worry about failure, or pressure to perform.

A mild degree of stress and strain can sometimes be beneficial. For example, feeling mildly stressed when carrying out a project or assignment often compels us to do a good job, focus better and work energetically. But if the students feel intense stress before and during examination, it has consequences for mental health and somatic symptoms (Lee & Larson, 2000; Verma & Gupta, 1990).

As per the report of Banerjee's (2001), every year about 25,000 students in the age group of 18 to 20 years commit suicide during the examination month (i.e., March to June). Due to high examination stress, students spend less time in socializing and get engaged in passive and active leisure which may further magnify the effects of examination stress (Lee and Larson, 2000).

Stress is something that causes strong feeling of worry or anxiety. It is a normal part of life and it is not necessarily harmful until and unless, it takes over the person to feel overwhelmed and even isolated. In fact, getting stressed a bit about examination means that students really care about the result they will get. It pushes them to work hard to get a good score. But when anxiety caused by examination stress reached clinical or sub-clinical levels, it interferes with the ability of the students to perform at their potential. The inability to perform in turn leads to a greater sense of distress (Raina, 1983). Stress and anxiety experienced during the examinations is often attributed to the fear of failure and can have lasting negative impacts on the self-esteem of the student.

Examination anxiety has been reported to produce debilitating cognitive effects including difficulties with memory and recalling information. There is a significant positive relation found between achievement motivation and academic achievement

⁵ Santrock J. (2011), *Educational Psychology*, (4th edition), Tata McGraw Hill Education Private Limited. Page No 31.

and a negative relationship between anxiety and academic achievement (Alam, 2001). Any individual who progresses through life goes through various changes and transitions where stress becomes invariably part of the journey.

Adolescents are particularly vulnerable to the concept of academic stress as the transitions occur at an individual and social level. Academic stress can result in depression, anxiety, and many other hazardous conditions.

An **attitude** is an emotional predisposition for a person to act in some way towards another person, object or idea. Attitude is a central part of human identity. Ajzen (2005) believes that an attitude is a disposition to respond favourably or unfavourably to an object, person, institution, or event. Everyday individuals love, hate, like, dislike, favour, oppose, agree, disagree, argue, persuade etc. All these are evaluative reactions to a thing. Hence, attitudes can be referred as a summary assessment of an object of thought (Bohner & Wanke, 2002). They are feelings and predispositions that guide an individual's behaviour (Rubinstein, 1986) and persuade to an action that can be evaluated as either positive or negative (Fishbein & Ajzen, 1975). Katz (1960) asserts that the reason for holding on to or for changing attitudes is found in the functions they do for the individual.

⁶Attitude is a positive, negative, or mixed evaluation of an object that is expressed at some level of intensity nothing more, nothing less, like, love, dislike, hate, admire, and detest are the kind of words that people use to describe their attitude.

According to (Eagly & Chaiken, 1993), attitudes are influenced by three components. The cognitive component, which is made up of the thoughts and beliefs people hold to about the object of the attitude. The affective component, which consists of the feelings inspired by the object of attitude, and the behavioural component, which consists of tendencies to act in certain ways towards any, object attitude (Maio, Maio, & Haddock, 2010).

A person who shows a definite attitude towards something is responding to his conception of that thing instead of to its actual state. Attitude is shaped by people because of some kinds of learning experience if the experience is favourable a positive

⁶ Kassin S., Fein S., Markus H. (2014) *Social Psychology*, (Ninth edition) Printed in India page no 206.

attitude is found and vice versa (Orunaboka, 2011). The attitude individuals hold can often influence their action in person and larger situation. For this reason, educationist, psychologists and sociologists are concerned with attitude development, how they affect behaviour and how they can be modified. Attitude thus seems like a system of ideas with an emotional core or content.

Attitude towards examination of student is different it depends on, student to student also class to class, board to board. Every student has a different personality with that everyone has different attitude. Sometime this attitude helps them to performance well in their academics' and sometimes it has an opposing effect. Students have positive and negative attitude towards examination and both the attitudes are important. Due to this they may be afraid or have phobia of examination, form opinion towards written and oral examinations, develop healthy or wrong study habits.

Academic stress as well as students' attitude may influence their academic achievement. Hence, this study tries to find whether academic stress experience by the students and their attitude towards examination are correlated with each other.

1.3 Rationale of the study

Academic pressure has increased over the past few years, there are examinations, assignments and many other activities that a student has to shuffle through. Not only the design but teachers and parents also burden the students with a lot of pressure of getting good grades. These expectations make the students work relentlessly and end up in creating more stress. With academics, the parents and the institutions want the students to participate in extracurricular activities too, the current expectations from the students are to be an all-rounder. Lack of proper channels for counselling leads to more confusion and the students are unable to choose a career for themselves even after rigorous studying patterns. This demanding attitude from parents and teachers leave the students puzzled and builds up stress.

Heavy academic workloads and the feeling that you are constantly racing to meet another deadline can be daunting. Compelling need to excel in studies, often prone to abuse, does injure the morale and is one of the greatest causes of stress, failure and breakdown. There is a lot that a child is expected to achieve, but due to lack of proper support, they feel lost at sea and are left directionless.

Prolonged stress can lead to physical and emotional disorders, further resulting in anxiety and depression. It is important to have a channel to relieve the anxiety. McKean et al. (2000) believed that the stressors are not the sole reason for anxiety, tension or depression, rather synergy between stressors and the person's approach and attitude to these stressors create stress. Though stress is often considered bad, but there is always the other side of the coin. The right kind of stress helps in sharpening the mind and reflexes, thus helping in boosting memory. Mild stress is always essential for effective and efficient working. It can help one to meet daily challenges and can motivate students to reach their goals.

Academic stress is a significant aspect of adolescence. There is no doubt that there exists an association between students' attitude towards examination and student's actual practice of learning activities. Although many psychologists disputed the direct influence of attitude on behaviour, however, they opined that attitude were valuable in the sense that they gave people an easy and practical guide for proper behaviour. However, this stage of life is by no means stress-free. By definition this age is associated with academics and academic demands are perceived as significant stressors by youth.

The current generation was very fast, they have lots of information about everything but they do not know about themselves. Higher secondary education is very important for every student as they are choosing their path of career. Also, they have their boards exam. If teachers are aware about the attitude of their students, then it will be helpful for student teacher and parents also.

As teacher I wonder what kind of attitude of student towards examination. Are they afraid of exam or not? They feel exams are important or not. What deprives them of exams and why they couldn't perform well in exams? Sometimes students prepare so much for the exam, but they felt their results are not satisfied. For this purpose researcher wanted to do research.

Here the need of this present study arises, keeping in mind that there is less study done to show the relation of academic stress and attitude of students towards examination. Hence research wants to fill in the gap by finding the relationship between the student's attitude and stress and how they affect the student performance. The study will also focus on the aspect whether the stress is severely or mildly affecting the student. The teacher, peer, parents are the reason of student stress. There is less study done to show

the students attitude towards examination. Hence this research wants to show that examination has both positive and negative effects on student learning. This study help student to understand their stress level and handle their stress and it will help them to achieve their educational goal.

1.4 Statement of the Problem

A study on the attitude and academic stress among adolescents

1.5 Variables of the study

Variables are the basic units of the information studied and interpreted in research studies. Researchers carefully analyse and interpret the value(s) of each variable to make sense of how things relate to each other in a descriptive study or what has happened in an experiment. In a descriptive study, the variables are not manipulated. They are observed as they naturally occur and then associations between variables are studied.

The variables in the present study were Academic Stress (AS) and Attitude towards Examination (AE) and the correlation between these variables was established. The study also focused on studying the effect of moderator variables; commonly denoted as M, on the strength of the relationship between the variables in a correlation. Moderator variables in the study were gender, educational board, stream and standard.

1.6 Conceptual and Operational Definitions

1.6.1 Conceptual Definition

- 1) **Study-** To investigate or examine as by observation, research, etc.
- 2) **Attitude-** Attitude is any belief or opinion that includes an evaluation objects, persons or event along a continuum from negative to positive.
- 3) **Academic stress-** ⁷Academic stress involves mental distress regarding anticipated academic challenges or failure or even the fear of the possibility of academic failure. Academic stressors show themselves in many aspects in the students' environment: at school, home, in their peer relations and even in their neighbourhood.

⁷ <https://medium.com/one-future/academic-stress-in-students-498c34f064d7>

- 4) **Adolescents-** Adolescence involves the transition from childhood to adulthood. It begins around ages 10 to 12 and around 18 to 21. Adolescence starts with rapid physical changes, including height and weight gain and development of sexual functions. Adolescents intensely pursue independence and seek their own identity. Their thought become more abstract, logical and idealistic.

1.6.2 Operational Definition

- 1) **Study-** A detailed investigation on the relationship between academic stress and attitude towards examination among adolescence.
- 2) **Attitude-** It is the feeling or way of thinking of students towards examination. The components that make up the students' attitude are felt fear or phobia towards examination, the idea about written and oral examination, importance of examination, students study habits and their exam preparation
- 3) **Academic stress-** It is a feeling of mental stress encountered by students in terms of academic performance due to determinants like vast syllabus, extra-curricular activities, parental pressure, coaching classes, etc. It is an anticipated fear and frustration associated with academic failure. It is related to the feeling a student undergoes trying to achieve academic goals.
- 4) **Adolescence-** Students in the age group of 16 to 18 studying in class XI and XII Maharashtra state Board (SSC) and Central Board of School Education (CBSE) Board from English medium only.

1.7 Research Questions

1. Is there any relationship between attitude and academic stress among adolescence?
2. To what extent gender, educational board, standard and educational stream influences academic stress and attitude among adolescences towards examination.

1.8 Aim of the study:

To study the attitude and academic stress among adolescents

1.9 Objective of the study

1. To study the correlation between attitude and academic stress among adolescents towards examinations.
2. To study the correlation between attitude and academic stress among adolescents towards examinations with respect to:
 - a) Gender
 - b) Educational board (SSC/CBSC)
 - c) Educational stream
 - d) Standard (XI, XII)
3. To study the attitude among adolescents towards examinations with respect to:
 - a) Gender
 - b) Educational board (SSC/CBSC)
 - c) Educational stream
 - d) Standard (XI, XII)
4. To study the level of academic stress among adolescents towards examinations with respect to:
 - a) Gender
 - b) Educational board (SSC/CBSC)
 - c) Educational stream
 - d) Standard (XI, XII)

1.10 Hypotheses of study

The present study examines the following null hypotheses:

1. There is no significant correlation between the attitude and academic stress of adolescents towards examinations.
2. There is no significant correlation between the attitude and academic stress of adolescents towards examinations. with respect to:
 - a) Gender

- b) Educational board (SSC/CBSE)
 - c) Educational stream
 - d) Standard (XI, XII)
3. There is no significant difference in the attitude of adolescents towards examinations with respect to:
- a) Gender
 - b) Educational board (SSC/CBSE)
 - c) Educational stream
 - d) Standard (XI, XII)
4. There is no significant difference in the level of academic stress among adolescents towards examinations with respect to:
- a) Gender
 - b) Educational board (SSC/CBSE)
 - c) Educational stream
 - d) Standard (XI, XII)

1.11 Scope and Delimitation of the study

1.11.1. Scope of the study

The scope of the study refers to the parameters under which the study will be operating –what the study covers and is closely connected to the framing of the problem. The scope of the present study was to find the academic stress and attitude among adolescents towards examination with respect to gender, educational stream, educational board, standard in Kamothe and Panvel area.

1.11.2 Delimitations of the study

Delimitations are choices made by the researcher that describe the boundaries set for the study. Due to constraint of time and funds, the major delimitations of the study are as follows.

- 1) The present study was restricted to the Maharashtra State Board (SSC), Central Board of School Education (CBSE) Schools only.

There are different boards in India like IGCSE, IB but due to time constraints, we did not consider those boards into the study.

- 2) The present study was restricted only to the students of class XI and XII.
- 3) The present study was delimited to the Schools between Kamothe and Panvel only.
- 4) The present study was delimited to the English Medium Junior Colleges only.

The students of other Marathi and Hindi medium were not considered for the purpose of the study.

1.12 Significance of the Study

The present study investigates the academic stress and attitude of adolescence of SSC and CBSE board students towards examination. It has been observed that examination is increasing pressure upon students and bending them towards coaching centres and notebooks. An attempt has been made to identify the positive and negative attitude of adolescence, it decreases or increases the stress of students towards examination. Students positive attitude help them to improve their academic performance and due to their negative attitude, they do not perform well in their examination.

The study will be useful in the following ways to:

- **Teachers:** the teachers would be able to identify and discuss its ill effects with the individual students. Teacher can help their students to manage their stress. teachers can and do a better job and provide review of academics and exam schedules, more leisure's time to the student for study and other activities also, better interaction with each and every student so they understand the concept.

Knowledge about attitude towards examination is of immense worth both for teachers and learners and it will play an important role in teaching-learning process. There is no doubt that there exists an association between students' attitude towards examination and students' actual practice of learning activities. Teacher will help the student to change their attitude towards examination.

- **Parents:** parents play a very important role in students' life, if they would be identifying the academic stress of their child then they help them to overcome with this stress. Parents providing a healthy home environment it will always contribute to lowering the level of academic stress.

Parents should take precautions to ensure their children develop healthy positive attitude towards examination. Parents evaluating each aspect of student development so lack in one aspect is overcome by the growth in another aspect which also reduce the attitude among students. They help their child to bring a positive attitude.

- **Students** – students will be able to identify its own academic stress. In particular students may be able to improve performance and study habits. Also apply some strategies for reducing the stress

Students can identify their attitude towards examination and change their negative attitude it will help them to achieve academic goals.

The study will also be significant to teachers and parents to understand the overall personality of the children and for including good study habits amongst them.

1.13 Conclusion

An examination may be a good way to measure students learning but it has some limitations. Although students may be positive towards examination, this examination could not fulfil the expectation level of our students, parents or the education system. Question setters should not follow guidebooks to set questions rather than questions should focus on creativity and problem-solving tasks. This will open a window for students to move forward from guidebooks. The aim of education is to make the students learn their subjects deeply and acquire necessary skills. The aim of examinations should not be to prevent them from learning. Government and necessary stakeholders need to improve examination system to achieve the goal of assessment for learning. Students should continue to develop a positive attitude towards examination. This is because for an individual to be promoted, he/she needs to be assessed on what was taught. Therefore, when students become more focused on their studies, treasure and value education, they would know the reason why they are in school and would thus not cut corners to pass examinations. Examinations would thus be seen as a test to assess an individual's mastery of the concept taught.

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 Introduction

Research takes advantages of the knowledge which has accumulated in the past as result of constant human endeavour. It can never be undertaken in isolation of the work that has already been done on the problems which are directly or indirectly related to a study proposed by research. A careful review of the research journals, books, dissertations, these and other sources of information on the problem to be investigated is one of the important steps in the planning of any research study.

Nothing new can be built unless all that went on before is surveyed. A study of the past tells us many things including the mistakes that were committed, the element that got skipped the failures that were inherent and the gains that came naturally. the past always has a lesson for the present as well as the future. by reviewing the related literature the researcher understanding the research methodology which refers to the way the study is to be conducted. It also helps researcher to know about the tools and instruments which proved to be useful and promising in the previous studies. The advantages of the related literature are to provide insight into the statistical method through which validity of result is to be established. The final and important specific reason for reviewing the related literature is to know about the recommendations of previous researchers listed in their studies for further research. According to ⁸Best (2006) “A summary of the writings of recognized authorities and of previous research provides evidence that the researcher is familiar with what is already known and what is still unknown and untested.”

2.2 Purpose of Literature Review

Besides, allowing the researcher to acquaint himself with the current knowledge in the field or area in which he is going to conduct his research, literature review helps the researcher in the following ways⁹:

- Focusing on the nature of the problem by defining it.

⁸ Best J. & Kahn J. (2006). *Research in Education* (10th ed.). (Pg. 39) New Delhi. Prentice-Hall of India Private Limited

⁹ Kaul, L (2008). *Methodology of Educational Research* (Rev. ed.). New Delhi. Vikas Publishing House Pvt. Ltd

- Justifying the need of the study based on rational judgment and logical arguments.
- Prevents duplication of study
- Limits the field of study.
- Selecting those areas of the problem in which the research findings can contribute positively to the existing body of knowledge
- State the objectives and formulate useful hypothesis
- Understand the methodology and decide the nature of the tools for collecting the data and analysis.
- Know the recommendations of the previous researcher and provides an insight as to what is known and what remains to be researched.
- Provides definite direction and systematizes the research work

The investigator has reviewed literature and arranged the reviewed literature into a chronological sequence. The researches of the last decade (2011-2021) and articles are published related to the study:

- 1) Study conducted abroad.
- 2) Study conducted in India.

2.3 Studies Conducted Abroad

1. A study was conducted by **S Jiang, Q Ren, C Jiang, L Wang** (2021) on **‘¹⁰Academic stress and depression of Chinese adolescents in junior high schools: Moderated mediation model of school burnout and self-esteem’** and published in the Journal of Affective Disorders, in 2021. The methodology of the study was descriptive survey, and the number of samples were 552 Chinese adolescents in junior high schools (mean age = 14.48 years, SD =0.98). The sampling technique used was multi-stage cluster random sampling. Mediation and moderation analyses was carried out in SPSS macroprocess. The findings of the study were contributed to the understanding of how academic stress predicts adolescent depression and provide practical implications for prevention and intervention programs to protect adolescents’ mental health in the school setting.

¹⁰ <https://pubmed.ncbi.nlm.nih.gov/34492431/>

2. A study was conducted by **Carlo Buzzi, Maurizio Tucci, Riccardo Ciprandi, Ilaria Brambilla** (2020) on ‘¹¹**The psycho-social effects of COVID-19 on Italian adolescents’ attitude and behaviours at the Italian Ministry of education university and research**. They studied concern of fear, provision of public authorities (e.g., Lockdown) and impact on everyday life. The tool used for the study was questionnaire developed by Carlo, Maurizio, Riccardo, Ilaria. They took survey on large group of adolescents in Italy. The findings of the study were indicated that majority of the student declared that to be worried but not too much or not at all. So, the result provides interesting information about the adolescents.
3. A study was conducted by **Jiandong Sun, Michael P. Dunne, Xiang-yu Hou and Ai-qiang Xu** (2013) conducted study on ‘¹²**Educational Stress among Chinese Adolescents: Individual, Family, School and Peer Influences**’. A cross-sectional questionnaire survey was conducted with 1627 students (grades 7-12) from six secondary schools in rural and urban areas of Shandong Province. A wide range of individual, family, school and peer factors were associated with stress measured using the Educational Stress Scale for Adolescents (ESSA) according to this study, such policies should include a special focus on rural schools and female students should be the priority target group. The findings of the study were school should pay more attention to students’ physical and psychological development rather than solely on their academic grades. Further efforts to prevent emotional and physical corporal punishments by teachers and peer bullying could effectively reduce students’ academic stress.
4. A study was conducted by **Gladys Nakalema, Joseph Ssenyonga** (2014) (*Department of Educational Foundations and Psychology Faculty of Science Mbarara University of Science and Technology P. O. Box 1410, Mbarara. Uganda*) on ‘¹³**Academic Stress: Its Causes and Result at a Ugandan University**’. The study examined academic stress, study habits and academic performance of 196 (113 males and 83 females) undergraduates of Mbarara University of Science and Technology in Uganda using a cross-sectional survey research design. Findings showed that daily academic hassles were found to be the most stressful ($M = 3.11$;

¹¹ <https://ijponline.biomedcentral.com/articles/10.1186/s13052-020-00833-4>

¹² <https://www.tandfonline.com/doi/abs/10.1080/00131911.2012.659657>

¹³ <https://journal.lib.uoguelph.ca/index.php/ajote/article/view/2762>

SD = 0.96) while personal problems were reported as the least stressful (M = 2.27; SD = 0.86). First year students experienced greater academic stress from financial hardships ($\chi^2 = 10.71$; $p = .03$), academic overload/time ($\chi^2 = 10.23$; $p = .04$) and social expectations ($\chi^2 = 10.79$; $p = .01$) than the continuing students. Motivation was the most used study habit (M = 6.52; SD = 1.18) among the respondent, while studying a chapter was the least common study habit (M = 3.86; SD = 1.35) among the students. Faculty of Development Studies students had better study habits ($\chi^2 = 8.75$; $p = .03$) than other faculties/institute based on grade performance. The GPA/CGPA 4.40 - 5.00 category had superior study habits ($\chi^2 = 11.47$; $p = .01$) than the other GPA/CGPA categories. Age (OR = .88) was a significant predictor of having supplementary exams. It was found that need for strategic interventions focusing on reducing academic stressors and improving the study habits of the undergraduates considering the uniqueness of the different faculties and year of study for improved academic performance.

5. A study was conducted by **Narasappa Kumaraswamy (2013)** (*School of Medicine, University Malaysia Sabah Jalan University, Kotakinabalu, Malaysia*) on ¹⁴**‘Academic Stress, Anxiety and Depression among College Students- A Brief Review’**. Method used in this research was survey method. The study of psychological problems of college students of 100 medical students, it was found 26% having psychological distress and 31% anxiety and Depression. This study briefly describes the research carried out in especially regarding stress, anxiety & depression. It focuses stress among college students, nature of psychiatric morbidity, emotional problems and adjustment, psychological problems of college students. Emphasising how counselling will help students with emotional problems and also suggested preventive measures to be taken by colleges such as setting up student counselling centres, create awareness among college students in seeking help with counselling centres. The findings of the study were majority of students having psychological depression. like anxiety and Depression, the result helpful to the students.to overcome to their anxiety and depression. It is also suggested to have mentor mentee programme compulsorily on all colleges. A student health committee should be formed in each college with mental health professionals as its

¹⁴ <https://www.tandfonline.com/doi/abs/10.1080/00131911.2012.659657>

members. There should be regular seminar & workshop for teachers & college students on various issues of psychological problems and its coping mechanisms.

6. A study was conducted by **Karin Sharmal, A.P. (2011)** on the ‘¹⁵**Stress symptoms among adolescents: The role of subjective psychosocial conditions, lifestyle, and self-esteem**’. Stress-related problems are increasing among Swedish adolescents, especially among females. The aims of this study were to survey the incidence of stress symptoms among 16-year-olds, to investigate the related gender differences, and to understand the factors that may contribute to stress symptoms. The study is questionnaire based, and the sample included 304 first-year high school students from two comparable schools. More than 30% of the high school students reported serious stress symptoms. Almost every second girl and every fifth boy reported that they felt stressed to a high degree. 8.2% were found to have severe stress symptoms, which would be considered a sign of chronic stress in adults. Besides the perception of high demands, low levels of global self-esteem, sleep disturbances, and poor social support played a crucial role in the prediction of stress symptoms. The highlight the need to develop and implement adequate stress prevention measures for adolescents.

2.4 Studies Conducted in India

1. A study was conducted by **Ramesh Chandra and Sudhir Sen (2021)**, on ‘¹⁶**Academic stress, self-efficacy and Anxiety Mathematics of higher secondary students in west Bengal, India**. The purpose of this study was to compare Academic Stress, Self-efficacy in mathematics and Anxiety Mathematics of higher secondary level students of Purulia District of West Bengal, India. Five independent variables sex (boys and girls), class (XI and XII), family type (joint and Nuclear), residence (urban and rural) and stream (science and arts) were considered for this study. To compare above mentioned variables Levenes' test of homogeneity of variance and Shapiro-Wilk test of normality were done. Appropriate tests are administered to test null hypotheses. For most of the cases there were no statistically

¹⁵ Karin Sharmal, A. p. (2011). *Stress symptoms among adolescents: The role of subjective psychosocial conditions, lifestyle, and self-esteem*. Journal of Adolescence, Pages 987-996

¹⁶ <http://www.researchguru.net/volume/Volume%2021/Issue%202/RG133.pdf>

significant differences are found. There was no significant difference between boys and girls and also XI and XII std. Student.

2. A study was conducted by **Sibnath Deb** (*Department of Applied Psychology, Pondicherry University, Puducherry, India*), **Esben Strodl** (*School of Psychology and Counselling, Queensland University of Technology, Kelvin Grove, Australia*), **Jiandong Sun** (*School of Public Health and Social Work, Queensland University of Technology, Kelvin Grove, Australia*) in (2020), on ‘¹⁷**Academic Stress, Parental Pressure, Anxiety and Mental Health among Indian High School Students**’. This work investigates the academic stress and mental health of Indian high school students and the associations between various psychosocial factors and academic stress. A total of 190 students from grades 11 and 12 (mean age: 16.72 years) from three government-aided and three private schools in Kolkata India were surveyed in the study. Data collection involved using a specially designed structured questionnaire as well as the General Health Questionnaire. Nearly two-thirds (63.5%) of the students reported stress due to academic pressure – with no significant differences across gender, age, grade, and several other personal factors. About two-thirds (66%) of the students reported feeling pressure from their parents for better academic performance. The degree of parental pressure experienced differed significantly across the educational levels of the parents, mother’s occupation, number of private tutors, and academic performance. In particular, children of fathers possessing a lower education level (non-graduates) were found to be more likely to perceive pressure for better academic performance. About one-thirds (32.6%) of the students were symptomatic of psychiatric caseness and 81.6% reported examination-related anxiety. Academic stress was positively correlated with parental pressure and psychiatric problems, while examination-related anxiety also was positively related to psychiatric problems. Academic stress is a serious issue which affects nearly two thirds of senior high school students in Kolkata. Potential methods for combating the challenges of academic pressure are suggested.
3. A study was conducted by **Sweta Sonali** in (2018) on ‘¹⁸**A Comparative Study of Academic Stress Among Senior Secondary Students Enrolled in Different**

¹⁷ Deb, Sibnath, Strodl, Esben, & Sun, Hansen (2015) *Academic stress, parental pressure, anxiety and mental health among Indian high school students*. International Journal of Psychology and Behavioural Science, 5(1), pp. 26-34.

¹⁸ <http://www.researchguru.net/volume/Volume%2012/Issue%202/RG133.pdf>

Streams’. The results revealed that students enrolled in science and commerce streams were found academically more stressed as compared to students enrolled in arts stream. However, there was no significant difference found between academic stress of students enrolled in science and commerce stream. It was also observed that girls and boys enrolled in science stream didn’t vary significantly in their academic stress. Similarly, girls and boys enrolled in commerce stream didn’t vary significantly in their academic stress while unlike science and commerce girls and boys enrolled in arts stream vary significantly in their academic stress. Boys enrolled in arts stream were found academically more stressed than girls enrolled in arts stream. It was concluded that students enrolled in science and commerce streams might come across a variety of stress inducing situations which may increase the stress particularly in academics. It was also concluded that boys enrolled in arts stream might come across a variety of stress inducing situations regarding their worry about their future responsibilities and inadequate academic environment that increase the level of stress among them. It is, therefore, suggested to develop programmes and strategies to cope up with the students’ stressors

4. A study was conducted by **Reddy et al. (2018)** on ‘¹⁹**Academic stress and its sources among university students**’ their study concludes that stream wise difference in stress does exist in students. It is important to deal with stress at personal, social and institutional level. Remedies such as feedback, yoga, life skills training, mindfulness, meditation and psychotherapy have been found useful to deal with stress. To identify the main reason of stress is the key to deal with it. Professionals can develop tailor made strategies to deal with stress. The integrated well-being of the students is important not only for the individual but for the institute as well.
5. A study was conducted by **Ujjwal Kumar and Khabirul Alam (2018)** on ‘²⁰**Academic stress and academic performance among higher secondary student: A Gender Analysis**’. The study was conducted to explore difference in academic stress and academic performance among the higher secondary students with respect to their gender and to estimate the relation between academic stress

¹⁹ <https://biomedpharmajournal.org/vol11no1/academic-stress-and-its-sources-among-university-students/>

²⁰ https://www.researchgate.net/publication/327237596_Academic_Stress_and_Academic_Performance_among_Higher_Secondary_Students_A_Gender_Analysis

and academic performance of the students of class XI of Bengali medium higher secondary schools affiliated to the West Bengal Council of Higher Secondary Education in Malda District, West Bengal. The researchers adopted the Academic Stress Scale consisted of forty items developed by Kim (1970) and adopted by Rajendran and Kaliappan (1990) and Rao (2012) and the scores obtained by the students in Madhyamik Examination were taken for the study. The researchers applied the Pearson Product Moment Method to find out the said relation and t-tests to find out the difference among the sub-samples. The present study found that there was a significant difference in academic stress and also revealed that there was a significant difference in academic performance due to the gender of the students of class XI. The present study explored negative correlation between the academic stress and academic performance of the student

6. A study was conducted by **Kalapalli Jayasankar Reddy & Karishma Rajan Menon (2017)** on ‘²¹**Understanding Academic stress among Adolescents at the Department of Psychology**’, **Christ University, Bengaluru, India**. They studied depression, anxiety, behavioural problems, irritability are few of the many problems reported in students with high academic stress. Using Descriptive Method (questionary-developed by the Kalapalli and Karishma), data was collected from four academic stream The student who responded to the questionnaire, the obtained data was subjected to appropriate statistical analysis and the results are discussed. Based on this study it is clear that the present study brought into light that academic stress still continues to be a devastating problem affecting a student’s mental health and well-being. Improving holistic well -being of the student would eventually be productive not only the individual but for the overall productivity of the institutions as well.
7. A study was conducted by **Subramani and Kadhiraavan (2017)** on ‘²²**Academic Stress and Mental health among High school Students**’ revealed the link between academic stress and mental health among students. He endorsed that academic stress and mental health are correlated and that students are cramped with the academic structure. Parents and schools pressurize the student’s way too much

²¹ <https://journals.christuniversity.in/index.php/artha/article/view/1560>

²² https://www.researchgate.net/publication/321572693_Academic_Stress_and_Mental_Health_Among_High_School_Students

for the higher grades that disheartens the students, further, to add on there is not enough support from the parents and school in terms of guidance. The students are mentally healthy when they perform constructively in the academic forums. They also propounded that student from private schools are more pressurized as compared to students from government schools due to the excess of homework and other academic related assignments. Significant difference in mental health of students from private and government schools was found. He asserted that students from private schools have a different nurturing and vast exposure as compared to government school students who belong to poor socio-economic background and lack of exposure. This is one of the reasons for the escalation of stress.

8. A study was conducted by **Dr. P. Suresh Prabhu (2015)** on ‘²³**A Study on Academic Stress among Higher Secondary Student**’. The present study consists of 250 XI standard students studying in higher secondary schools situated in Namakkal District of Tamil Nadu, India. The sample was selected by using simple random sampling technique. The present study reveals that the higher secondary students are having moderate level of academic stress and irrespective of sub samples of the higher secondary students are having moderate level of academic stress. The male student's academic stress is higher than female students. The urban student's academic stress is higher than rural student. The Government school student's academic stress is less than private school student. The science subject student's academic stress is higher than arts student. The students whose parent's education as literate level academic stress is higher than their counter part.
9. A study was conducted by **Deb et al. (2014)**, studied on ‘²⁴**Academic – related stress among private secondary school students in India**’. 400 male students from five private secondary schools in Kolkata who were studying in grades 10 and 12. 35 percent students were found to have high academic stress and 37 percent were found to have high anxiety levels. Students with marginal grades were said to have higher level of stress as compared to students with better grades. Also, students involved with extra-curricular activities were noted to be more stressed as related to those students who were not involved with it.

²³ <https://ijcrt.org/papers/IJCRT1704236.pdf>

²⁴ <https://www.emerald.com/insight/content/doi/10.1108/AEDS-02-2013-0007/full/html>

10. A study was conducted by **Marwan Zaid Bataineh** in (2013). on ‘²⁵**Academic stress among undergraduate students: the case of education faculty at King Saud University**’. This study investigated the academic stressors experienced by the students at university. A total sample of 232 subjects participated in this study were obtained from faculty of education at KSU. Data were collected through self-administered questionnaire which was randomly distributed to the students during lecture time. Data obtained were analysed using descriptive statistics, correlation, and analysis of variance (ANOVA). The result showed that academic overloads, course awkward, inadequate time to study, workload every semester, exams awkward, low motivation, and high family expectations were drive moderately stress among students. It was also found that fear of failure is the major source of stress among undergraduate students. Moreover, the study found that there was positive correlation between religiosity sources and academic stress ($r = .300^{**}$, $p = .00$). Lastly, the study found that there were no significant differences in academic stress among students with different, level of study and specializations.
11. A study was conducted by **Kaur** in (2012) on ‘²⁶**Impact of academic stress on mental health: A study of school going adolescents**. acknowledged that mental health of teenagers gets affected due to the academic stress. Girls with academic stress were found to have poor mental health as compared to the boys. This was accounted on the study that parents at times put pressure and strain on students that leads to deteriorated mental health

2.5 Conclusion-

The researcher has presented all the reviews of the studies done in India and abroad which she came across so far. After having taken an in-depth survey of the available literature related to the study, the researcher found that the studies conducted were basically on academic stress or their different dimensions. The researcher did not come across any research correlating attitude and academic stress. Therefore, the researcher felt the need to correlate the two variables viz. academic stress and attitude.

The next chapter deals with the methodologies for the analysis of the data obtained from the various tools used to study the correlation between the academic stress and the attitude of students towards examination.

²⁵https://iijoe.org/v2/IJJOE_05_01_02_2013.pdf

²⁶https://www.researchgate.net/publication/270505915_Impact_of_Academic_Stress_on_Mental_Health_A_Study_of_School_going_Adolescents

CHAPTER3

RESEARCH DESIGN

3.1 Introduction

Research is a systematic attempt at seeking answers to meaningful questions about events, processes or phenomena through the application of the scientific method. It refers to the organized, structured, and purposeful attempt to gain knowledge about a suspected relationship. ²⁷The Advanced Learner's Dictionary of Current English lays down the meaning of research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge."

²⁸Creswell defines research as "a process of steps used to collect and analyse information to increase our understanding of a topic or issue". In short, the search for knowledge through objective and systematic method of finding solution to a problem is research. Every research undertaken follows a certain pattern of activities by the investigator. Decision regarding what, where, how much and by what means concerning an enquiry or research constitute a research design. It is the first step to take and the whole research. According to Claire Selltiz "²⁹A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure."

According to Kerlinger "Research design is the plan, Structure, and strategy of investigation conceived so as to obtain answers to research question and to control variance. "Research design also give us the description of tools that is used for collecting the information, the methodology that is used, the sample, and the material used to analyse the data. All the research plan in the research design is serve on the paper and thus give us the blueprint for the research. therefore, it also helps the researcher to work systematically without any disorganization it helps researcher to work logically, scientifically and methodologically.

²⁷ Best J. W. & Kahn J.V. (2006), *Research-in Education*. New Jersey USA: Pearson Prentice Hall. p. 290. Table of Contents.

²⁸ Creswell, J. W., *Educational Research-Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. New Jersey USA: Pearson Prentice Hall. 2012. p. 3. 82

²⁹Selltiz C., Wrightsman, L. S., Cook S.W. & *Society for the Psychological Study of Social Issues, Research Methods in Social Relations*. California: Holt, Rinehart and Winston. 1976. p. 90.

Thus, research design is the most vital and critical aspect of researcher methodology, which involves the process of planning out and working on the investigation.

3.2 Meaning of Research Design

Research design is a blue print or structure with in which research is conducted. It constitutes the blue print for the collection, measurement and analysis of data. According to Gay and Airasian (2000), —A design is general strategy for conducting a research study. The nature of the hypothesis, the variables involved, and the constraints of the —real world|| all contribute to the selection of design. ³⁰Kothari (1988) says, —Decisions regarding WHAT? WHERE? WHEN? HOW MUCH? by WHAT? means concerning an inquiry or a research study constitute research design.

Research design is a comprehensive master plan of the research study to be undertaken, giving a general statement of the methods to be used. The function of a research design is to ensure that the requisite data in accordance with the problem at hand is collected accurately and economically. Simply stated, it is the framework, a blueprint for the research study which guides the collection and analysis of data.

The research design, depending upon the needs of the researcher may be a very detailed statement or only furnish minimum information required for planning the research project.

Features of a good Research Design

- It should be flexible, appropriate, efficient and economical.
- It should be free from bias.
- It should maximize the reliability of the data collected and analysed.
- It should yield maximum information and provide an opportunity for considering many different aspects of a problem.

3.3 Need of Research Design

A research design is what a blue print is to an engineer. It facilitates the smooth sailing of the various research operations thereby making research as efficient as possible yielding maximal information with minimal expenditure of effort, time and money. The design helps the researcher to organize his ideas in a form whereby it will be possible

³⁰ Kothari, C.& Garg, G. (2003). *Research Methodology Methods and Technique*. New age International Publishers

for him to look for flaws and inadequacies. Since it is a systematic process, there is definite sequence of steps involved. These steps are problem identification, hypothesis formulation, observation, collection of data, and analysis of data and drawing of conclusions. It stands for advanced planning of the methods to be adopted for collecting relevant data and the techniques to be used in their analysis. Once the design has been prepared, the steps logically fall into place and the whole process goes on smoothly.

3.4 Methodology of the present study

In any research process, research methods are of great significance. Though methods of research can be classified from many points of view, the categories of research methods are historical, descriptive and experimental. Historical research involves examining past events to draw conclusions and make predictions about the future. Descriptive research includes surveys and fact-finding enquiries of different kinds. The major purpose of descriptive research is description of the state of affairs as they exist and discover causal relationships. Experimental research is characterized by much greater control over the research environment and in this case, variables are manipulated to observe their effect on the other variables. The selection of the research methodology depends upon the nature of the study and the kind of data the problem entails. The research method used for the present study was descriptive research which attempts to describe, explain and interpret the state of affairs as they exist. Descriptive method tells us about what exists at present by determining the nature and degree of existing conditions. It is the most popular and widely used research method in education. The main characteristic of this method is that the researcher has no control over the variables.

The research method used for the present study was descriptive research which attempts to describe, explain and interpret the state of affairs as they exist. Descriptive method tells us about what exists at present by determining the nature and degree of existing conditions. It is the most popular and widely used research method in education. The main characteristic of this method is that the researcher has no control over the variables.

There are five descriptive research methods viz. correlational research, comparative research, causal-comparative research, survey research and developmental research.

Correlational research designs provide an opportunity to predict scores and explain relationship among variables. This technique is used when we seek to relate two or more variables to see if they influence each other. It describes what exists at the moment and comprises of collecting data to determine whether and to what extent relationship exists between the quantifiable variables. This method makes use of numerical data to explore relationships between two or more variables. The degree of relationship is expressed in terms of coefficient of correlation.

Correlational study does not specify cause and effect relationships between variables under consideration. It merely specifies concomitant variations in the scores of the variables. Correlational studies are not done just to find out what exists but it is done for the ultimate purpose of explanation and prediction of phenomena.³¹ The coefficient of correlation tells us the way in which two variables are related to each other. It also helps us to understand how the change in one is influenced by the change in the other with the direction and magnitude of the obtained measures. However, in order to predict the change in one variable in a systematic way with the change in another variable can be done with the help of statistical processes known as Regression analysis. Regression analysis is widely used for prediction and forecasting. The equation of the line of regression obtained by plotting the scores of two variables on a scatter plot helps to predict the score value of the dependent variable when the corresponding value of the independent variable is given. It is calculated using the following formulas:

$$Y - M_y = r \frac{\sigma_y}{\sigma_x} (X - M_x) \text{ and } X - M_x = r \frac{\sigma_x}{\sigma_y} (Y - M_y)$$

In these equations, X and Y alternatively represent a given score and a score to be predicted. M_x and M_y represent means for the X and Y variables, σ_x and σ_y represent values of standard deviations for the distributions of X and Y scores, and r represents Pearson's r for the variables X and Y. Thus, these two regression equations can be used for prediction of scores of Y variable and other for the X variable respectively.

The present study was aimed at establishing relationship of adolescence attitude and academic stress towards examination. Descriptive correlational research method was used to ascertain the relationship between the variables and regression analysis was

³¹ Mangal S.K. Statistics in Psychology and Education. New Delhi: PHI Learning Pvt. Ltd. 2012. p. 242.

done to ascertain the extent to which they were related and prediction of the scores of one variable when the other is given.

3.5 Population, Sample and the Setting

A research population is generally a large collection of individuals or objects that are the main focus of a scientific query. It is for the benefit of the population that researches are done. According to Creswell, ³²“A population is a group of individuals who have the same characteristics.” All individuals or objects within a certain population usually have a common, binding characteristics or traits.

All items in any field of inquiry constitute a population’. A population may be described as any group of individuals that has one or more characteristics in common and that are of interest to the researcher the population of the study. The student both male and female of secondary school constituted the populations of the study.

In the present study, the population comprised of students of XI and XII, Different streams and boards like Maharashtra state Board (SSC) and Central Board of Education (CBSE).

3.6 Sampling and Sample Size

A technique which is used to select the sample from a larger population is called Sampling. Sampling techniques are used to select the sample from a larger population. The different types of sampling techniques include simple random sampling, systematic random sampling, purposive sampling, stratified sampling and cluster sampling. viz. XI and XII Class, CBSC and SSC boards, Arta, Commerce, Science stream from the Kamothe and Panvel area, for collecting data from them.

The nature and size of the sample is as follows.

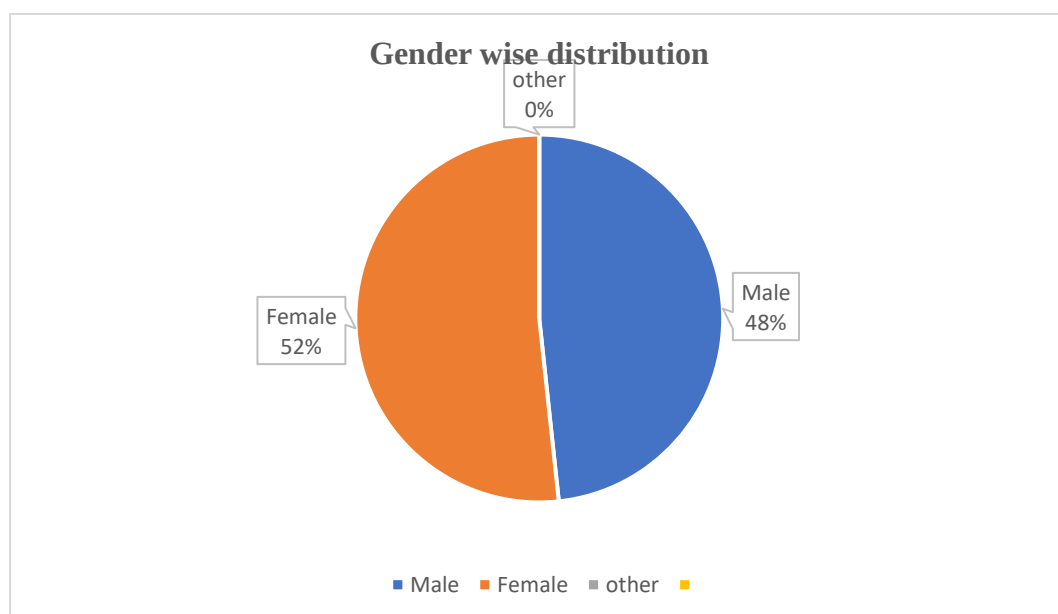
3.6.(a) Gender wise distribution of the sample: Gender wise distribution of the sample shown in the table 3.5 (a) and is graphically represented in figure3.5 (a) . It was observed that the total male atudents were 128 and female students were 138.

³² Creswell J. W., Educational Research-Planning, Conducting, and Evaluating Quantitative and Qualitative Research. New Jersey USA: Pearson Prentice Hall. 2012. p. 142.

Table No. 3.6 (a) Sample distribution with respect to Gender.

Gender	Number of students	Percentage(%)
Males	128	48 %
Females	138	52%
Total	266	100%

Figure 3.6 Sample distribution with respect to Gender.

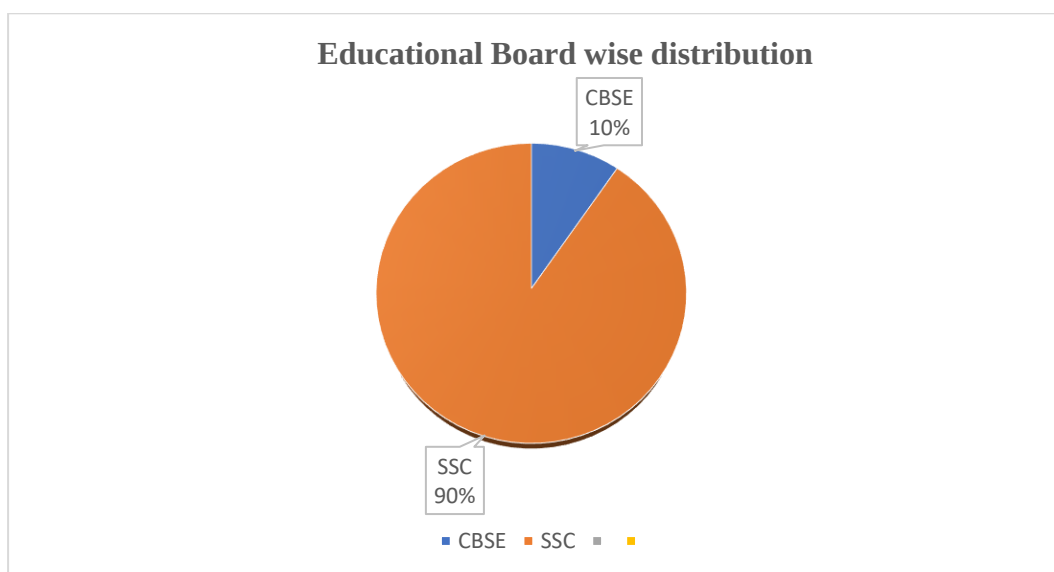


3.6.(b) Educational Board wise Distribution of Sample: Educational Board wise distribution of the population is shown below in table number 3.5 (b) and is graphically represented in figure number 3.5 (b). The number of student from CBSE board was 61 and SSC board 205 students.

Table 3.6.(b) Sample distribution with respect to Educational board.

Board	Number of Students	Percentage (%)
CBSE	61	22.93
SSC	205	77.06

Figure No 3.6.(b) sample distribution with respect to Educational board.

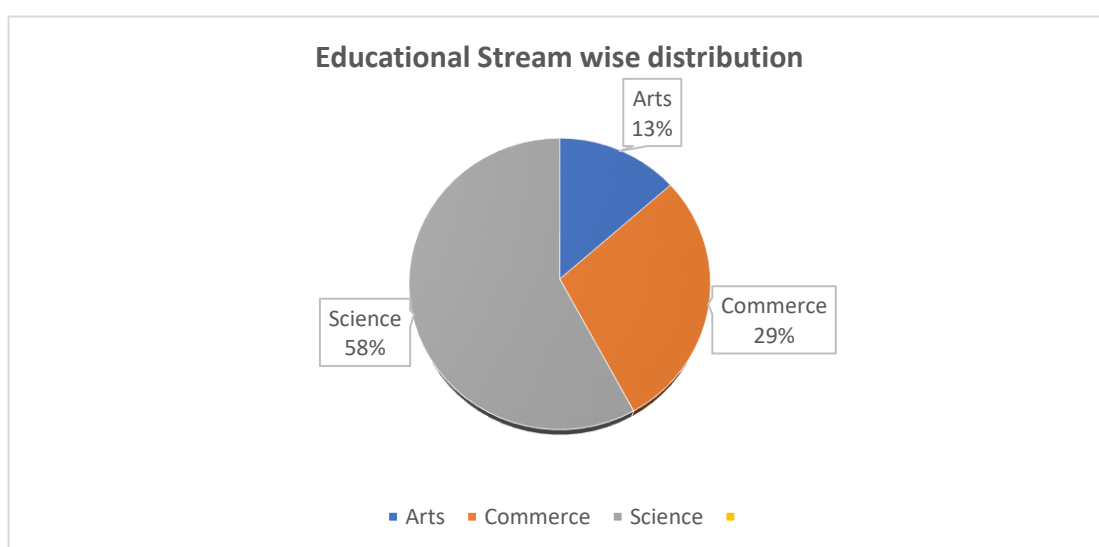


3.6.(c) Educational Stream wise Distribution of the Sample: The Educational stream wise distribution of the population is shown below in the table number 3.6 (c) and is graphically represented in figure 3.6 (c). The number of students from stream Arts 36, number of the students from stream Commerce 76 and number of the students from stream Science 154.

Table No.3.6 (c) Sample distribution with respect to educational stream.

Stream	Arts	Commerce	Science
Numbers of students	36	76	154

Figure No.3.6.(c) sample distribution with respect to educational stream.

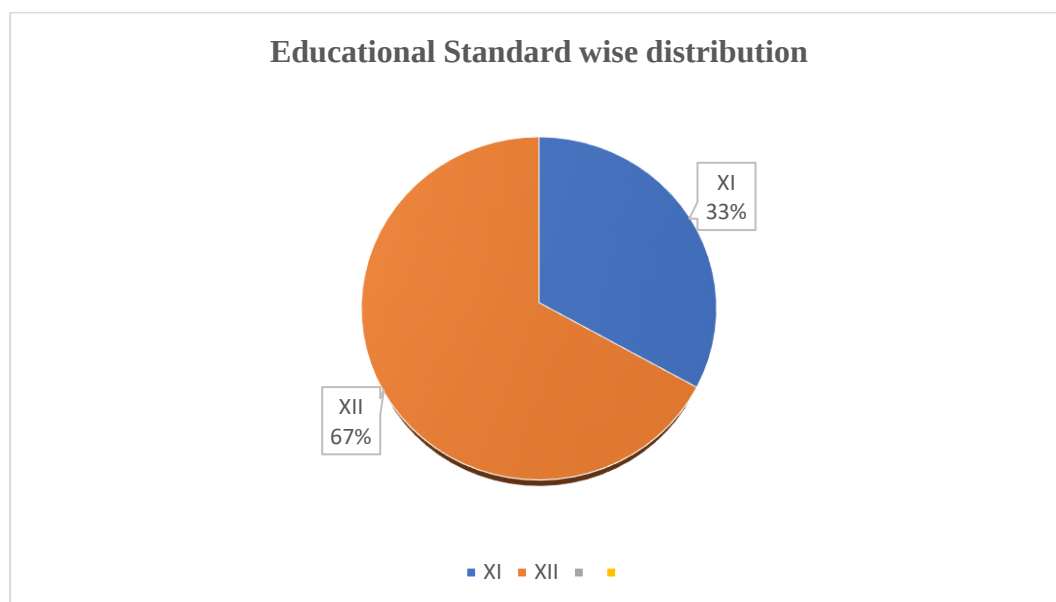


3.6.(d)Educational Standard Wise Distribution of Sample: The class wise distribution of the population is shown in the table no 3.6(d) and the graphically represented in figure 3.6(d). The number students from class XI were 88 and XII were 178.

Table No. 3.6(d)Sample distribution with respect to Educational Standard..

Class	Number of Students	Percentage (%)
XI	88	33.08
XII	178	66.91

Figure No. 3.6 (d)Sample distribution with respect to Educational Standard.



3.7 Sampling Technique

A researcher has to prepare a sample design for study i.e., how a sample should be selected and what size the sample should be. There are different types of sampling designs based on the representation basis and element selection technique. Based on representation there may be probability sampling or non- probability sampling.

Probability sample scheme is one in which every unit of the population has a chance of being selected in the sample, and this probability can be accurately determined. The combination of these traits makes it possible to produce unbiased estimates of population totals. Probability sample includes: Simple Random Sampling, Systematic

Sampling, Stratified Sampling and Cluster Sampling. All these methods have one thing in common that random sampling is done at one point or the other.

Non-Probability sampling is any sampling method where some elements of the population have no chance of selection or where the probability of selection cannot be accurately determined. It involves the selection of elements based on assumptions regarding the population of interest, which forms the selection. Hence, because the sampling is non-random, non-probability sampling does not allow estimates of sampling errors. Information between the sample and population is limited.

On element selection basis, the sample may be either restricted or unrestricted. When each sample is drawn individually from the population then it is unrestricted where all other forms are under restricted.

To select the sample from a larger population this technique is called Sampling. There are different type of sampling techniques and those are simple random sampling, systematic random sampling, purposive sampling, stratified sampling and cluster sampling.

Each unit of the population is given equal opportunity of being selected in this random sampling technique. The selection is done in such a manner that every unit gets chance of being chosen, and it is free from biasness it is not compulsory that if one is selected other one also gets selected. As per law of chance it allows to operate freely in selection of sample and conditions are controlled carefully to ensure that each population gets equal change of being selected and included in the sample.

For the present study, simple random probability type sampling technique has been used. This method is used When the population of the study is infinite and when the geographic distribution of unit is scattered. This technique involves division of populations in clusters that serve as sampling units. The sampling unit may consist of element or individual members of the population.

In present study the sample consisted of 266 secondary school students from school in Navi Mumbai.

3.8 Research Tools

Tools are the instrument to gather new fact or to explore new field. An appropriate tool is the key to successful research. Following are some types of the methods of research.

- Observation Method- The researcher make use of observation, sometimes under condition of normal living and at other times withsome special set of factors, Observation can be of two types viz, participant observation and non-participation.
- Interview methods- it is a type of oral Quetionnaire where the required information is obtained orally and face to face.The interviewer must prepare properly for the interview, he must be clearly decided. The three types of interviews are structured interviews , unstructured interviews and semi-structural interviews.
- Questionnaires- They are widely used to obtain facts about past, present and anticipated events or conditions. The two Forms of Quetionnaire are open and closed.
- Rating scale- It is used to study the degree, intensity or frequency of aparticular condition. The three types of rating scale are category rating scale, numerical rating scale and graphic rating scale.

The other tools which may be used are 1. Aptitude test 2. Achivement Test 3. Content analysis 4. Schedules etc.

Tools Used For The Study

³³Research investigation of any type requires data to be gathered to test the hypotheses or answer questions. There are several methods and procedures developed for the acquisition of data. These tools employ distinctive ways of describing and quantifying the data. The researcher may select a tool from the available ones; modify them as per the requirement of study or construct a tool which will enable valid and reliable data gathering suitable to test the hypothesis of the research. For the present study the researcher wanted to report and discuss the correlation of ecological footprint of student teachers with their emotional and spiritual quotient and therefore employed the following tools

1. Researcher made rating scale for attitude towards examination.
2. Readymade tool for acedemic stress.

³³ Best J. W. & Kahn J. V., *Research-in Education*. New Jersey USA: Pearson Prentice Hall. 2006. p. 290.

Tool 1- Attitude towards Examination

This tool is a researcher made tool. For developing the tool researcher has reviewed various research studies. The scale is a collection of items that help us identify the students' feeling, thinking and behaviour towards examination. There are statements related to 5 components which are included in the tool to test the Attitude towards Examinations. They are fear or phobia of examination, opinion towards written and oral examinations, content coverage for exams, regular study habits and importance of exams.

The tool consisted of 30 statements rated on a five point rating scale. The responses that were asked was like strongly agree, agree, neutral, disagree, strongly disagree.

Scoring of the tool

Negative statements were be scored as follows:

Table 3.8.(a) Score of negative statements.

Always	Often	Sometimes	Rarely	Never
1	2	3	4	5

Positive statements will be scored as follows:

Table 3.8.(b) Score of positive statements.

Always	Often	Sometimes	Rarely	Never
5	4	3	2	1

Validation of the Tools

Validity indicates the degree to which an instrument measures what it is supposed to measure. It can also be thought as utility. In other words, validity is the extent to which difference found with a measuring instruments reflect true differences among those being tested.

There are four types of validity which can be done based on the nature of the researcher there are a) content validity b) criterion-reference validity c) concurrent validity and d) face validity.

For present study, content validity was done for rating scale for attitude scale. This was done by giving the rating scale to four expert in the filed of education.

The list of experts is attached in the appendix B.

The suggestions given by the experts were incorporated in the tool. To further check the appropriateness of tool, pilot study was carried out.

Pilot study- Reliability of the Tools

To prepare the final form of the tool for attitude towards examination, the researcher carried out a pilot study. Using random sampling techniques, a representative sample was chosen from all two boards (SSC, CBSE). The number of students for pilot study were 30. Pilot study consist of calculating the reliability of the tool.

The reliability of a test is the extent to which it can be relied upon to produce true scores i.e., a measure of its consistency/ variability across occasions or with different sets of equivalent items.

There are different methods to test the reliability of atool like:

1. The test-retest method.
2. The equivlent or parallel form methods
3. The split half method and
4. The rational equivalence method.

The formula for Pearson's correlation coefficient is:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where,

R = relibility co-efficient of the half test.

$\sum x$ = sum of the X scores.

$\sum y$ = sum of the Y scores.

$\sum y^2$ = sum of the squared X scores.

$\sum y^2$ = sum of the squared Y scores.

$\sum xy$ = sum of the products of paired X and Y scores.

N= Number of paired scores.

The reliability of co-efficient for the half test was found to be 0.64. From this value the internal consistency of the test was calculated using Spearman Brown Prophecy Formula (ρ)

$$\rho = 2r / 1+r$$

Table No.3.8.(c) Reliability of academic stress towards examination tool

Method	N	ΣXY	ΣX	ΣY	Reliability Co-efficient	Reliability Index (ρ)
Split Half Method	30	3325.26	1634	1489	0.64	0.78

The Final form of the tool is attached in appendix C.

Tool :2- Academic stress –

The tool was prepared by the Juhi Bahl (2011) for her study “³⁴A study of academic stress among school students and its relation to their personality types.” The tool tested the students felt academic stress on the basis of vast syllabus, extra-curricular activities, parental pressures and coaching classes. It had 32 statements each was rated on a five point rating scale.

The content validity of the tool was established with the help of experts in the field of education and was found to be reliable with reliability coefficient of 0.78.

Scoring of the tool

Positive statements were scored as follow:

Table no 3.8.(d) Score of positive statements.

Always	Often	sometimes	Rarely	Never
5	4	3	2	1

Negative statements were scored as follows:

Table.No.3.8.(e) Score of negative statements.

Always	Often	Sometime	Rarely	Never
1	2	3	4	5

³⁴ Bahl, J. (2012) *A study of academic stress among school students and its relation to their personality types*. M.Ed. Research Thesis: University of Mumbai

Since the tool was a valid tool, the reliability was re established by the researcher using split-half method and the values are as follows.

Table No. 3.8.(f) Reliability of academic stress tool.

Method	N	$\sum XY$	$\sum X$	$\sum Y$	Reliability Co-efficient	Reliability Index (ρ)
Split Half Method	30	57031.76	1087.6	785.07	0.97	0.98

3.9 Data Collection Procedure

After the pilot study when the tool was validated to be reliable data was collected. Data collection is an essential and important stage in any research endeavour. It is a stage where the researcher collects the data required for the investigation with the help of the tools designed. Colleges were identified and a prior permission was obtained from the principals of each of these colleges for collecting data from their student teachers. The student teachers were given basic instructions on filling the data in the given answer sheets using the questionnaires. During data collection, students were given common instructions to fill the rating scale honestly and completely. Care was taken that students did not copy the answer from each other. Once this was done the incomplete sheets were rejected and the remaining was analysed.

Data was collected from different college and tutorials in Kamothe, Panvel (Navi Mumbai). *The list of school is attached in appendix A. Permission letter is attached in appendix D.*

3.10 Data Analysis

Analysis of data involves descriptive and inferential analysis. Descriptive statistics implies a simple quantitative summary of a data set that has been collected. It helps us understand the experiment or data set in detail and tells us all about the required details that help put the data in perspective. In descriptive statistics, we simply state what the data shows and tells us.

³⁵In the application of statistical treatments, two types of data are recognized:

³⁵ Best J. W. & Kahn J. V. *Research in Education*. (10th ed.) New Jersey USA: Pearson Education, Inc. (2006). p. 354.

- Parametric data: Data of this type is measured data, and parametric statistical tests assume that the data are normally, or nearly normally, distributed.
- Non-Parametric data: Data of this type are either counted or ranked. Non-parametric tests, sometimes known as distribution-free tests, do not rest on the more stringent assumption of normally distributed populations.

Measures of central tendency such as the mean, median and mode summarize the performance level of a group of score, and measures of variability describe the spread of scores among participants. Both are important. One provides information on the level of performance and the other reveals the consistency of that performance.

Inferential statistics is used to test the tenability of the hypothesis formulated for the study. It helps to obtain the statistical significance of a result achieved. This allows formation of conclusions based on the sample to be valid for the whole population. It requires ascertaining the significance of the statistics at 0.95 and 0.99 level of significance and generalizing the confidence or fiduciary limits within which the population parameters will lie. Thus, inferential analysis helps the researcher to extend beyond the immediate data alone and also make recommendations for further research.

In the present study, the data was nearly normally distributed therefore;

Descriptive data analysis was done using:

- Measures of Central Tendency: Mean and median
- Measures of Variability: Standard deviation, Skewness and Kurtosis

Inferential data analysis was done using:

- Pearson's Product-Moment coefficient of correlation –to find the correlation between the academic stress of student with their attitude towards examination. The correlation was studied with reference to the moderator variables.

The obtained value of correlation was interpreted as per the given in table 3.9.

Table: 3.10 Computed correlation coefficient and interpretation.

The range of computed correlation coefficient Interpretation

0 (zero value) Zero relation, absolutely no relationship.

From ± 0.00 to ± 0.20 Slight, almost negligible relationship.

From ± 0.21 to ± 0.40 Low correlation, definite but small relationship.

From ± 0.41 to ± 0.70 Moderate correlation, substantial but small relationship.

From ± 0.71 to ± 0.90 High correlation, marked relationship.

From ± 0.91 to ± 0.99 Very high correlation, quite dependable relationship.

± 1 Perfect correlation, almost identical or opposite relationship.

- t-test –to find the difference between the Academic stress and Attitude towards examination among study with respect to gender different types of educational boards, different educational stream, and class (XI and XII).
- ANOVA – to find the difference between the Academic Stress and attitude towards Examination of student belonging to the gender, different types of educational boards, different educational stream, and class (XI and XII).

3.11 Conclusion

The researcher has made an attempt to study the academic stress and attitude of students towards examination. The researcher tried her best to follow all the basic principles of research methodology and conduct all steps ethically. Investigation was free from bias and done with sincerity without any preconceived notions or conclusions. The following chapter throws light on the analysis of data namely descriptive and inferential data analysis.

CHAPTER 4

DESCRIPTIVE DATA ANALYSIS

4.1 Introduction

Once the data collection is done, the next step is the data analysis. Data analysis is a practice in which raw data is ordered and organized so that useful information can be extracted from it. The process of organizing and analyzing about data is the key to understanding what the data does and does not contain. Analysis of the data is a process of inspecting, cleaning, transforming and modeling data with the goal of highlighting useful information, suggesting conclusions and supporting decision making. Raw data can be incredibly useful, but also difficult to understand. Data analysis helps in organizing the data in such a way it becomes useful.

Research consists of systematic observation and description of the characteristics or properties of the objects or events for the purpose of discovering relationships between variables, while the role of statistics is to function as a tool in designing research, analysing its data and drawing conclusions from them. Statistics helps in scientific collection, presentation, analysis and interpretation of numerical facts. More research studies result in large volume of raw data which must be suitably reduced so that the same can be read easily and can be used for further analysis. Statistical Analysis is of two types – Descriptive analysis and Inferential analysis.

Descriptive statistical analysis limits generalization of the particular of individuals observed. No conclusions are extended beyond this group, and any similarity to those outside the group cannot be assumed. The data describes one group and that group only. Much simple action research involves descriptive analysis and provides valuable information about the nature of a particular group or individuals.

4.2 Meaning and Need of Descriptive Analysis

Descriptive statistics is the term given to the analysis of data that helps to describe the characteristics of the sample or population in a meaningful way. They limit generalisation to the particular group of individuals observed or studied and does not allow us to make conclusions beyond the data we analysed or reach conclusions regarding any hypothesis we might have made. The statistical analysis based on the computation of descriptive statistical measures provides valuable information about the nature of a particular group and that group only. They are simply a way to describe our data and thus are used to present quantitative description in a manageable form.

Quantitative analysis uses the syntax of mathematical operations to investigate the properties of data. We can express with numbers what is impossible to state in words.

4.3 Descriptive Statistical Measures

Descriptive statistical measures are used to describe the characteristics of the sample or population in totality. They limit generalization to the particular group of individuals or studied. No conclusion are extended beyond this group. This statistical analysis based on the computation of descriptive statistical measures is mostly applied in the research and also it provides valuable information about the nature of a particular group and that group only.

The measure of descriptive statistics most commonly used in educational research are:

1. Measure of central tendency (averages)
2. Measure of spread, dispersion or variability.
3. The Normal Probability Curve.

4.3.1. Measure of central tendency or averages

³⁶Measures of central tendency describe the central point in a data set. They tell us the point about which items have a tendency to cluster. Such a measure is considered as the most representative figure for the entire mass of data. Measure of central tendency is also known as statistical average. Mean, median and mode are the most popular averages used in quantitative studies.

The Mean- The mean of a distribution is commonly understood as the arithmetic average. It is perhaps the most familiar, most frequently used and well understood average. The mean of a set of observation or scores is obtained by dividing the sum of all values by the total number of values.

The mean is calculated by the following formula.

$$\text{Mean} / \bar{x} = \frac{\sum x}{N}$$

In which ,

$$\text{Mean} / \bar{x} = \text{Mean}$$

$\sum$ = symbol for summation

³⁶Best, J. W, Kahn, J.V. (2017). Research in Education (10th ed.) India: Persons India Education Services. Pvt. Ltd Pg.no.337-341.

X = scores in a distribution

N= total number of scores.

The Median is the middle score of a set of data that has been arranged in order of magnitude. When the frequency distribution for our data is skewed, we usually prefer the median over the mean. When the data is perfectly normal, the mean, median and the mode are identical. Moreover, they all represent the most typical value in the data set. However, as the data becomes skewed the mean loses its ability to provide the best central location for the data because the skewed data is dragging it away from the typical value. However, the median best retains this position and is not as strongly influenced by the skewed values.

The Mode is the score that appears more frequently in the list of scores. On a histogram it represents the highest bar in a bar chart or histogram.

4.3.2 Measures of Variability

Although measures of central tendency are very useful in describing the nature of a distribution of measures, they will not give the researcher a complete picture of the data. To know how the scores tend to be distributed, measure of variability is used. It is also called the measure of spread or dispersion. Some frequently used measures of variability are the range, variance and standard deviation. Range is obtained by subtracting the lowest score from the highest score of a data distribution. Variance is the sum of the squared deviation from the mean, divided by the total number of scores. Standard deviation is the square root of variance.

³⁷Standard deviation is the most widely used stable and reliable measure of variability as it employs the mean for its computation. It is used mostly in research studies and is regarded as a very satisfactory measure of dispersion in a series. It is commonly denoted by the Greek symbol sigma 'σ'. It is calculated using the following formula.

$$\text{Standard deviation } (\sigma) = \sqrt{\frac{\sum(x - \bar{x})^2}{n}}$$

³⁷ Dr. Gupta S., (2008) *Statistics methodology* India: New A.S. Offset Press, Laxmi Nagar, Delhi.pg.no.282

Where,

$\bar{x}$ = The symbol we use for mean

$\sum$ = Symbol for summation

x_i = Value of the item x , $i = 1, 2, \dots$,

n = total number of items

Standard deviation is denoted by the absolute dispersion or variability of distribution. The greater the amount of variability, the greater the standard deviation, the greater will be the magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposite. Thus, if we have two or more comparable series with identical or nearly identical means, it is the distribution with the smallest standard deviation that has the most representative mean. Hence, standard deviation is extremely useful in judging they represent.

4.3.3. The Normal Probability

The normal probability curve can be used as a model to compare various distributions with it, i.e., to say whether the distribution is normal or not and if not, in what way it diverges from the normal. A normal curve is a perfectly symmetrical curve in which the mean, median and mode are the same. This deviation or divergence from normality tends to vary in two ways in terms of Skewness and in terms of Kurtosis.

Skewness refers to the lack of symmetry. The distributions are said to be skewed negatively when there are many individuals in a group with their scores higher than the average score of the group i.e., the value of median is greater than the value of mean. Similarly, the distributions are said to be skewed positively when there are many individuals in a group with their scores less than the average score of their group i.e., the value of median is less than the value of mean.

Kurtosis refers to the divergence in the height of the curve, especially peakiness. A frequency distribution is said to be Mesokurtic, when it almost resembles the normal curve (neither too flattened nor too peaked). The value is equal to 0.263 in the case of a normal curve. Consequently, if the value of Kurtosis is greater than 0.263, the distribution is said to be Platykurtic; if less than 0.263, then the distribution was Leptokurtic.

Since the collected data is normally distributed, for the descriptive analysis of the data in the present study, the measures calculated were mean, median, standard deviation, skewness and kurtosis. Graphical methods have been adopted for translating numerical facts into more concrete and understandable form.

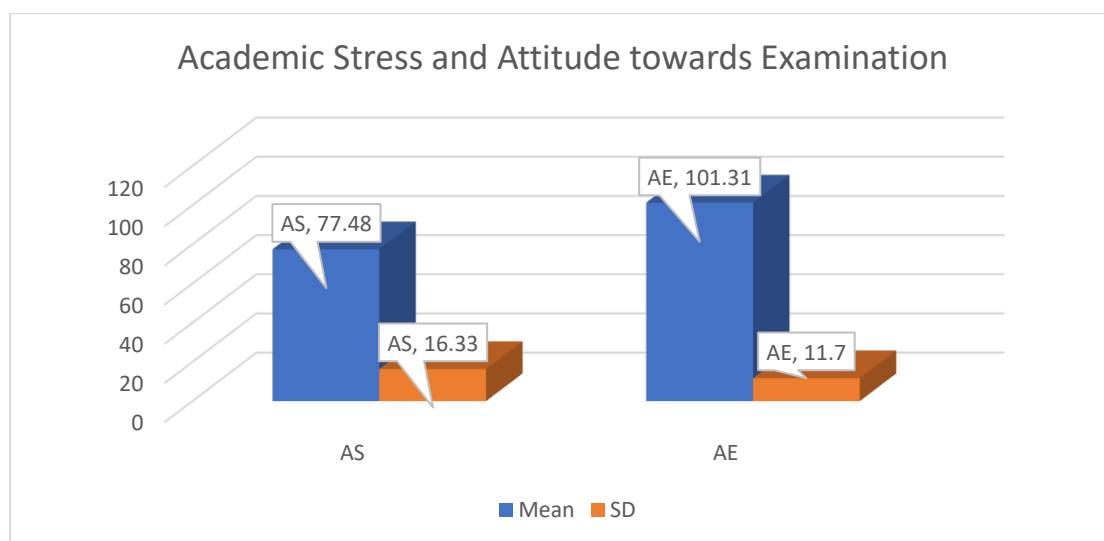
4.4 Descriptive analysis of the present data

4.4.1. Correlation between attitude and academic stress among adolescents towards examinations.

Table 4.4.1: Correlation between Academic stress and Attitude towards examination.

Variables	N	Mean	Median	SD	SEm	Skew	Kurt
AS	266	77.48	78	16.33	1.00	0.111	0.006
AE	266	101.31	101	11.70	0.71	2.238	0.415

Figure 4.4.1.(i): Academic stress and Attitude towards examination:



From Table 4.4.1 and Figure 4.4.1.

- The mean value of the Academic stress of student was 77.48 and standard deviation was 16.33. The value of median was 78 which is slightly higher than the mean value therefore the distribution was slightly negatively skewed indicating that more student had an academic stress score more than the average score of the group. The value of Kurtosis was 0.006 which was less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in nature.
- The mean value of the attitude towards examination of student was 101.31 and the standard deviation was 11.70. The value of median was 101 which is slightly higher

than the mean value therefore the distribution was negatively skewed indicates many students had an attitude towards examination more than the average score of the group The value of Kurtosis was 2.2381, which was more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.

Figure 4.4.1.(ii): Correlation between Academic stress and Attitude towards examination:

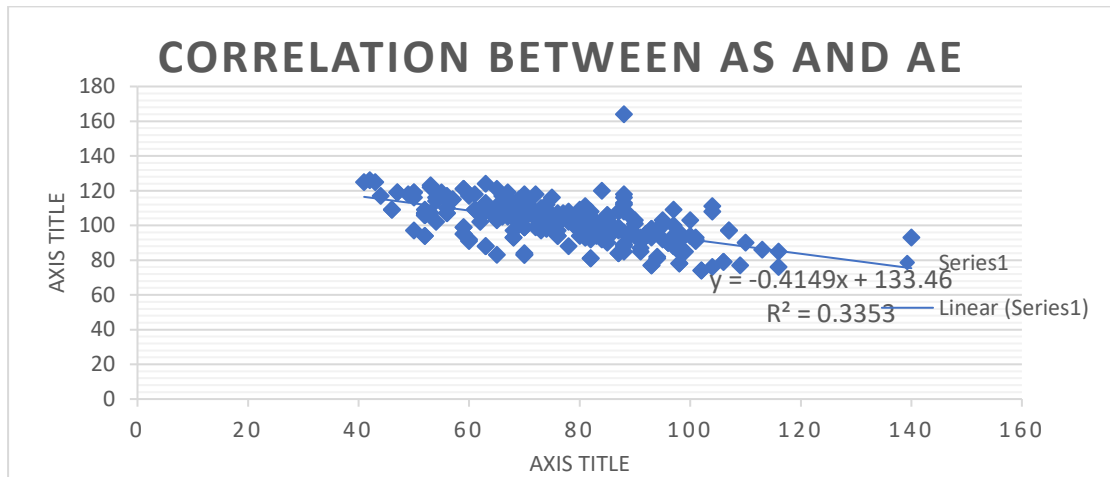


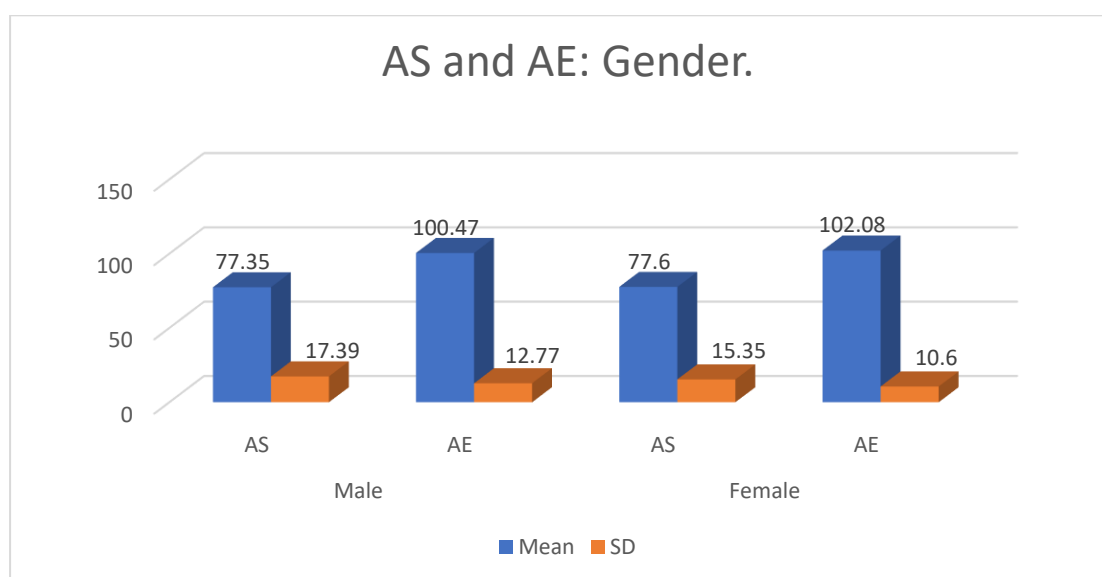
Figure 4.4.1 (ii) shows the obtained value of R^2 as 0.335 among students. The obtained value is low and indicates that the line of regression does not fit the data properly i.e., the correlation is low and definite but small.

4.4.2 Correlation between attitude and academic stress among adolescents towards examinations with respect to Gender.

Table 4.4.2: Correlation between Academic stress and Attitude towards examination: Gender.

Gender	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Male	AS	128	77.35	76	17.39	1.53	0.307	0.14
	AE	128	100.47	100	12.77	1.128	0.8033	3.77
Female	AS	138	77.60	79	15.35	1.307	-0.145	-0.239
	AE	138	102.08	103	10.60	0.9028	-0.112	-0.279

Figure No.4.4.2 (i) Academic stress and Attitude towards examination: Gender.



From Table 4.4.2(a) and Figure 4.4.2 (i)

- The mean value and the standard deviation of the Academic stress of male student was 77.35 and 17.39 respectively. The value of median was 76 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an academic stress score less than the average score of the group. The value of Kurtosis was 0.14 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in case of male student.
- The mean value and the standard deviation of the Academic Stress of female student was 77.60 and 15.35 respectively. The value of median was 79 which is higher than the mean value therefore the distribution was negatively skewed indicating that many female students had an Academic stress score more than the average score of the group. The value of Kurtosis was -0.239 which is slightly less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among female student.
- The mean Academic Stress score among female student was higher i.e., girls were more stressed as compared to boys.
- The mean value and the standard deviation of the Attitude towards Examination of male student was 100.47 and 12.77 respectively. The value of median was 100 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was 3.77 which is higher

than the normal distribution value 0.263. Thus, the distribution was Platykurtic among male students.

- The mean value and the standard deviation of the Attitude towards Examination of female student was 102.28 and 10.60 respectively. The value of median was 103 which is higher than the mean therefore the distribution was negatively skewed indicating that many female students had an Attitude towards Examination score more than the average score of the group. The value of Kurtosis was -0.279 which is slightly higher than the normal distribution value 0.263. Thus, the distribution was platykurtic in case of female student.
- The mean score of Attitude towards Examination among male student was lower i.e., not better than the female student.

Figure 4.4.2 (ii) Correlation between Academic stress and Attitude towards Examination: Male student

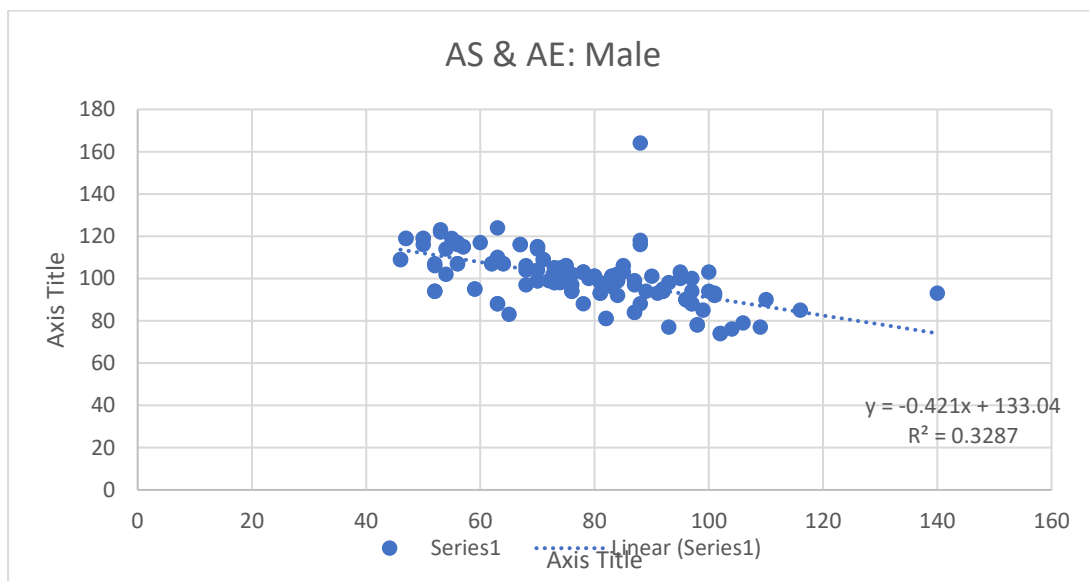


Figure 4.4.2 (ii) shows the obtained value of R^2 as 0.328 among male students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is low, definite but small relationship.

Figure 4.4.2 (iii) Correlation between Academic Stress and Attitude towards Examination: Female students.

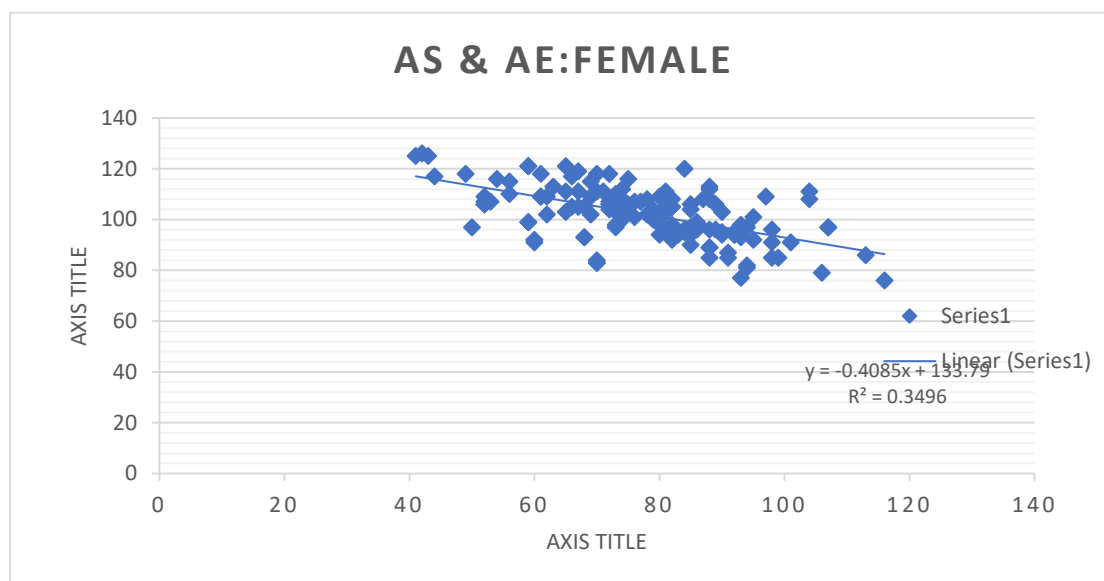


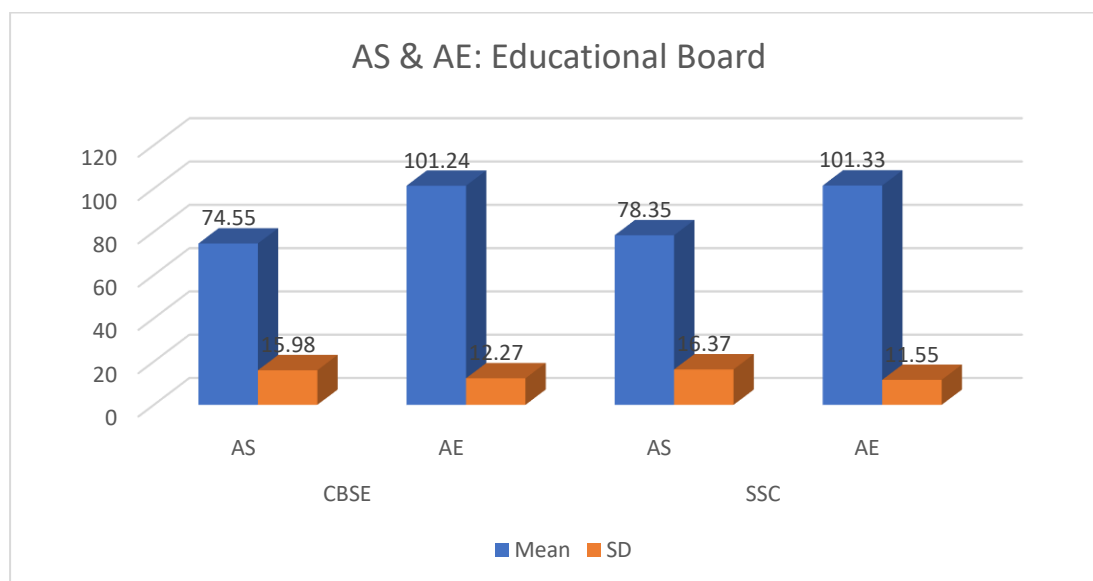
Figure 4.6.2 (iii) shows the obtained value of R^2 as 0.349 among female students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is low, definite but small relationship.

4.4.3 Correlation between attitude and academic stress among adolescents towards examinations with respect to Educational Board.

Table 4.4.3: Correlation between Academic stress and Attitude towards examination.: Educational Board

Edn Boards	N	Var	Mean	Median	SD	SEm	Skew	Kurt
CBSE	61	AS	74.55	74	15.98	2.046	-0.1828	-0.72
		AE	101.24	99	12.27	1.57	-0.1442	-0.421
SSC	205	AS	78.35	79	16.37	1.14	0.087	0.230
		AE	101.33	102	11.55	0.80	0.6114	3.369

Figure 4.4.3 (i) Academic Stress and Attitude towards Examination with respect to Educational board



From Table 4.4.3. and Figure 4.4.3(i)

- The mean value and the standard deviation of the Academic stress of educational board CBSE students was 74.55 and 15.98 respectively. The value of median was 74 which is slightly lower than the mean value therefore the distribution was positively skewed indicating that many CBSE board students had an academic stress score less than the average score of the group. The value of Kurtosis was 0.73 which is more than the normal distribution value 0.263. Thus, the distribution was in case of CBSE board student was Platykurtic nature.
- The mean value and the standard deviation of the Academic Stress of SSC board student was 78.35 and 16.37 respectively. The value of median was 79 which is more than the mean value therefore the distribution was negatively skewed indicating that many SSC Board students had an Academic stress score more than the average score of the group. The value of Kurtosis was 0.230 which was less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among SSC board student
- The mean Academic Stress score among SSC board student was higher i.e., CBSE student are slightly better equipped to handle stress as compared to SSC students.
- The mean value and the standard deviation of the Attitude towards Examination of CBSE board student was 101.24 and 12.27 respectively. The value of median was 99 which is less than the mean value therefore the distribution was positively

skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was -0.421 which is more than the normal distribution value 0.263. Thus, the distribution Platykurtic was among CBSC board students.

- The mean value and the standard deviation of the Attitude towards Examination of female student teachers was 101.33 and 11.55 respectively. The value of median was 102 which is slightly higher than the mean therefore the distribution was negatively skewed indicating that many CBSE board students had an Attitude towards Examination score more than the average score of the group. The value of Kurtosis was 3.369 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of SSC board student.
- The mean Attitude towards Examination score among CBSC board student was less than the SSC board students i.e., Attitude towards Examination score of SSC board student is better than the CBSE board students.

Figure 4.4.3.(ii) Correlation between Academic Stress and Attitude towards Examination with respect to educational board CBSE

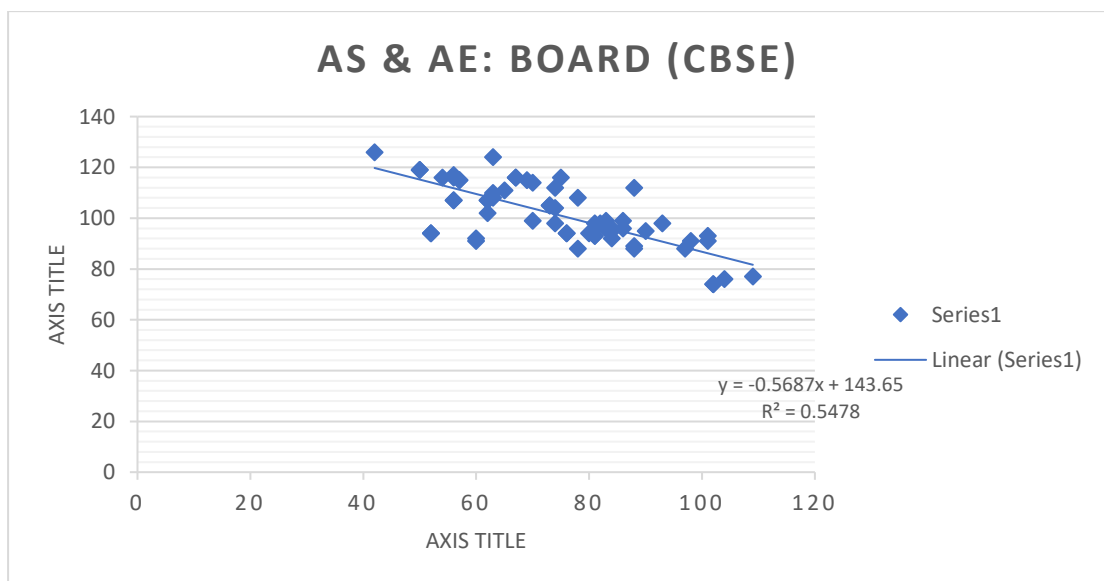


Figure 4.6.3 (ii) shows the obtained value of R^2 as 0.547 among CBSE students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is Moderate correlation, substantial but small relationship.

Figure 4.4.3 (iii) Correlation between Academic Stress and Attitude towards Examination with respect to educational board SSC.

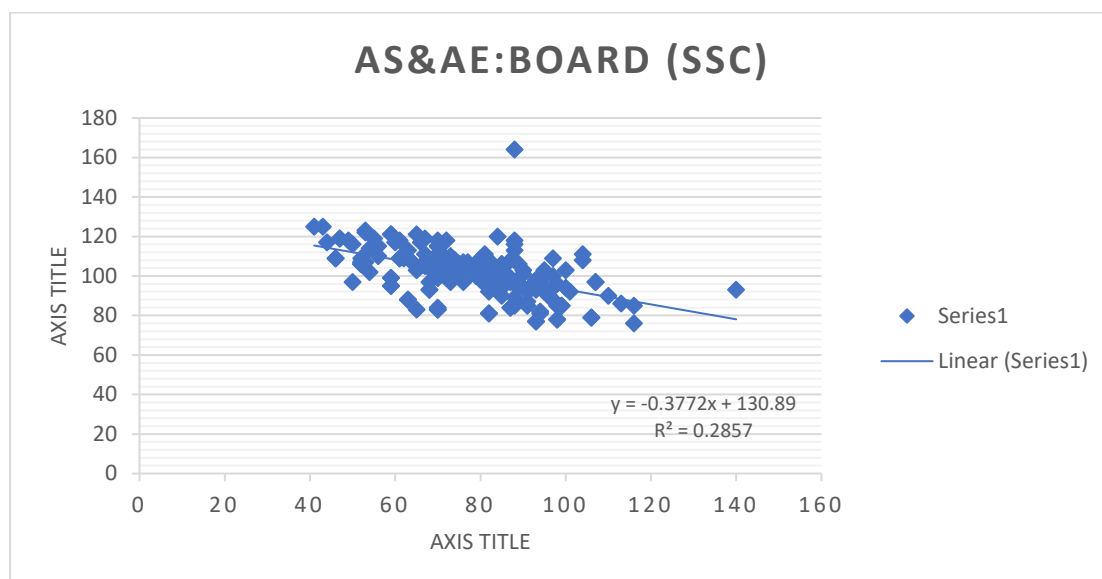


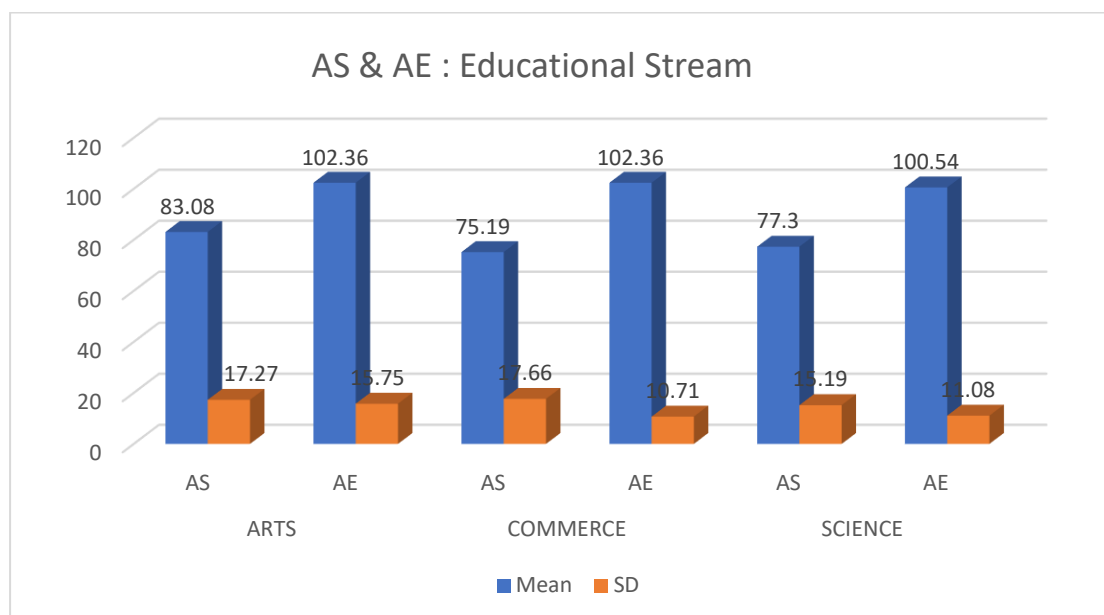
Figure 4.6.3.(iii) shows the obtained value of R^2 as 0.285 among SSC students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the low correlation, definite but small relationship.

4.4.4 Correlation between attitude and academic stress among adolescents towards examinations with respect to Educational Stream.

Table 4.4.4: Correlation between Academic stress and Attitude towards examination: Educational stream.

Streams	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Arts	AS	36	83.08	85	17.27	2.87	0.53	2.453
	AE	36	102.36	102	15.75	2.62	1.71	5.43
Commerce	AS	76	75.19	78.5	17.66	2.02	-0.08	-1.049
	AE	76	102.36	103.5	10.71	1.22	-0.23	-0.351
Science	AS	154	77.30	76	15.19	1.22	0.133	-0.251
	AE	154	100.54	101	11.08	0.89	-0.17	-0.095

Figure 4.4.4 (i) Academic Stress and Attitude towards Examination with respect to Educational Stream



From Table 4.4.4(a) and Figure 4.4.4(i)

- The mean value and the standard of deviation of the Academic stress of student studying in Arts stream was 83.08 and 17.27 respectively. The value of median was 85 which is higher than the mean therefore the distribution was negatively skewed indicating that many students had an Academic stress score more than the average score of the group. The value of Kurtosis was 2.453 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard of deviation of the Academic stress of student studying in Commerce stream was 75.19 and 17.76 respectively. The value of median was 78.5 which is more than the mean value therefore the distribution was negatively skewed indicating that many student teachers had an academic stress score more than the average score of the group. The value of Kurtosis is -1.049 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard of deviation of the Academic Stress of student studying in science stream was 77.30 and 15.19 respectively. The value of median was 76 which is less than the mean therefore the distribution was positively skewed indicating that many students had an Academic stress score slightly less than the

average score of the group. The value of Kurtosis was -0.251 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in nature.

- The mean Academic stress score of the student from Commerce stream student were lowest i.e., better than those from science stream which in turn were better than those from Arts stream.
- The mean value and the standard deviation of Attitude towards Examination of student studying in Arts stream was 102.36 and 15.75 respectively. The value of median was 102 which is less than the mean value therefore the distribution was positively skewed indicating that many students from Arts stream had attitude towards examination scores less than the average score of the group. The value of Kurtosis was 5.43 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard deviation of Attitude towards Examination of student studying in commerce stream was 102.36 and 10.71 respectively. The value of median was 103.5 which is higher than the mean value therefore the distribution was negatively skewed indicating that many students from Attitude towards examination had scores more than the average score of the group. The value of Kurtosis was -1.028 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard deviation of Attitude towards Examination of student studying in science was 105.54 and 11.08 respectively. The value of median was 101 which is less than the mean value therefore the distribution was positively skewed indicating that many student teachers from science stream had Attitude towards Examination scores less than the average score of the group. The value of Kurtosis was -0.095 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in nature. 117
- The mean attitude towards examination scores of the student from Arts and Commerce Stream students were same means higher i.e., better than those from Science Stream students.

Figure 4.4.4 (ii) Correlation between Academic Stress and Attitude towards Examination with respect to educational stream Arts.

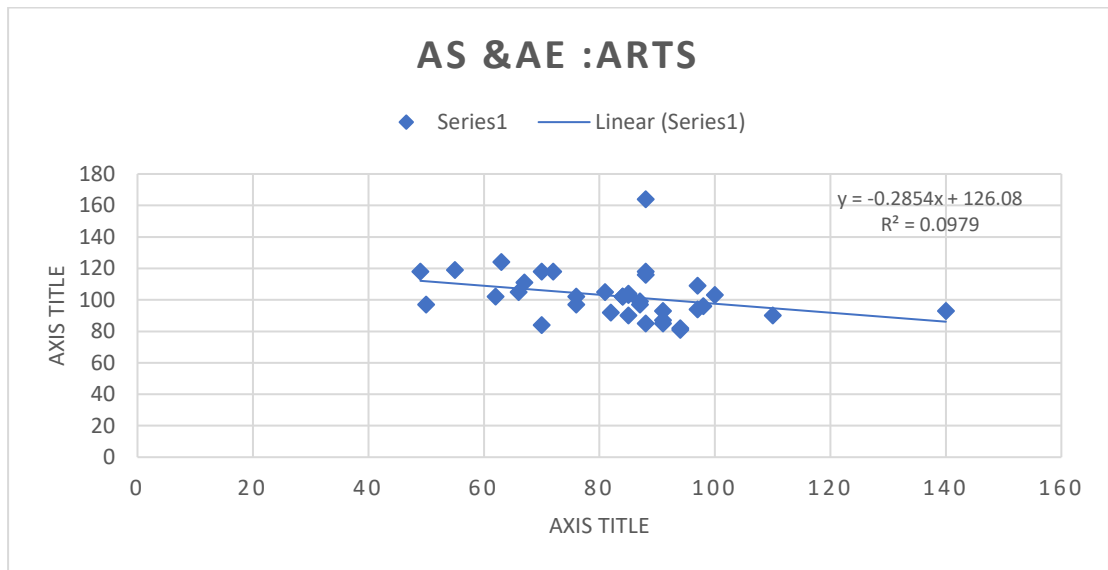


Figure 4.4.4.(ii) shows the obtained value of R^2 as 0.097 among Arts students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation slight, almost negligible relationship.

Figure 4.4.4 (iii) Correlation between Academic Stress and Attitude towards Examination with respect to educational stream Commerce.

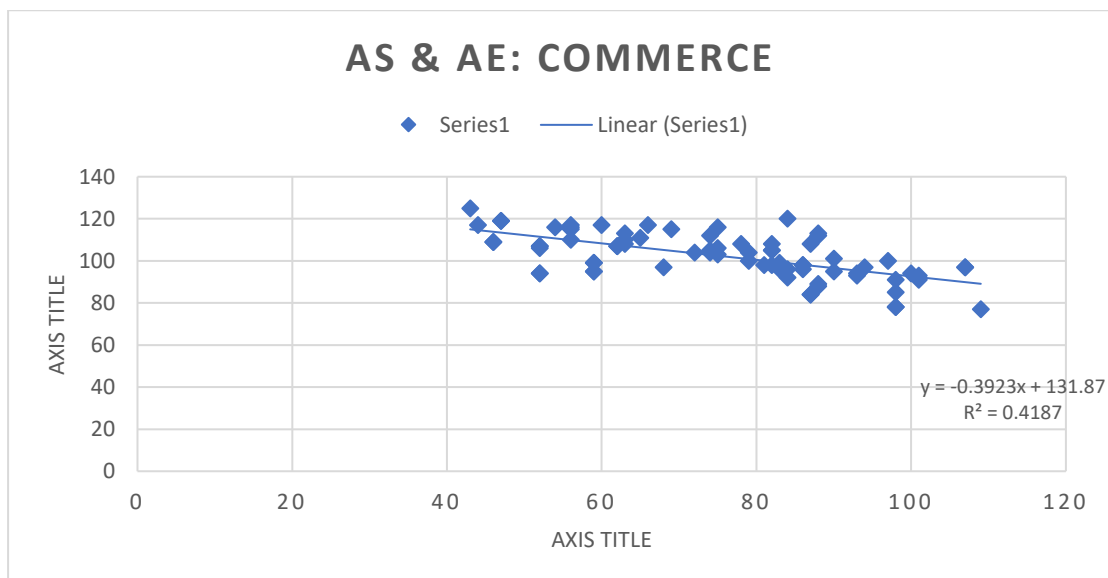


Figure 4.4.4.(iii) shows the obtained value of R^2 as 0.418 among Commerce students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is, Moderate correlation, substantial but small relationship.

Figure 4.4.4.(iv) Correlation between Academic Stress and Attitude towards Examination with respect to educational stream Science.

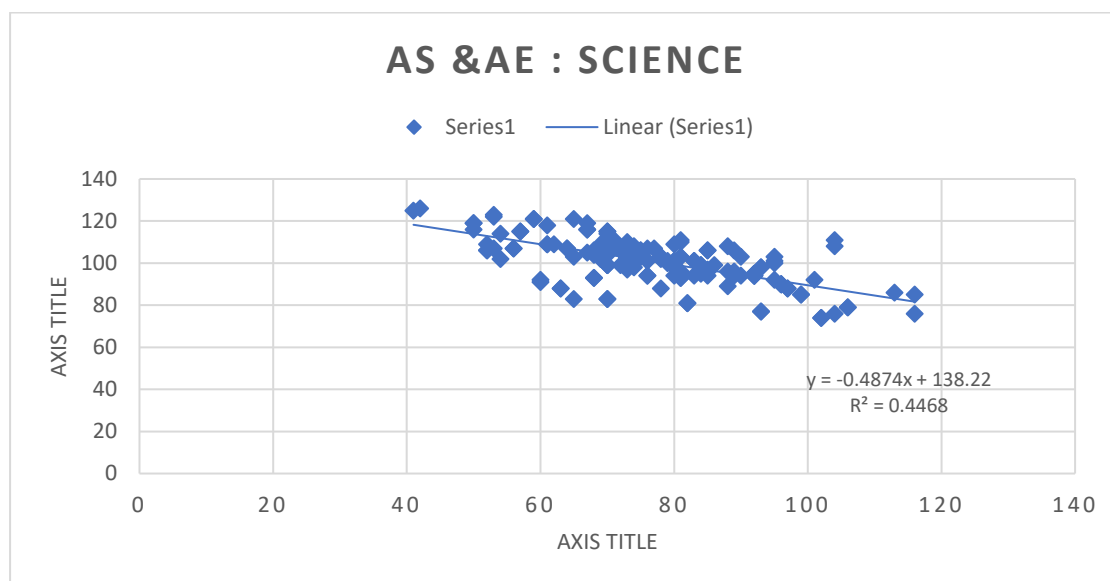


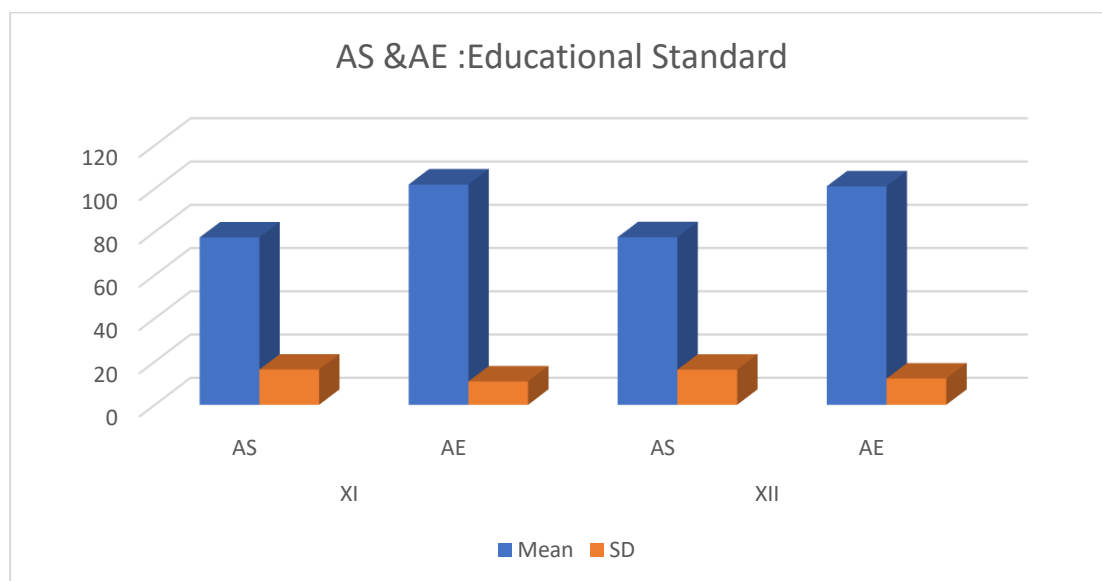
Figure 4.4.4.(iv) shows the obtained value of R^2 as 0.446 among science students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is Moderate correlation, substantial but small relationship.

4.4.5 Correlation between attitude and academic stress among adolescents towards examinations with respect to Educational Standard.

Table 4.4.5: Academic stress and Attitude towards examination: Educational Standard.

Educational Standard	N	Var	Mean	Med.	SD	SEm	Skew	Kurt
XI	88	AS	77.40	78.5	16.29	1.73	0.048	-0.367
		AE	101.85	101	10.80	1.150	0.33	-0.495
XII	178	AS	77.52	78	16.40	1.22	0.142	0.211
		AE	101.03	102	12.14	0.910	0.459	3.189

Figure 4.4.5 (i) Academic Stress and Attitude towards Examination with respect to Educational Standard.



From Table 4.4.5(a) and Figure No 4.4.5 (i)

- The mean value and the standard deviation of the Academic stress of XI student was 77.40 and 16.29 respectively. The value of median was 78.5 which is higher than the mean value therefore the distribution was negatively skewed indicating that many XI students had an academic stress score more than the average score of the group. The value of Kurtosis was- 0.367 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of XI student.
- The mean value and the standard deviation of the Academic Stress of XII student was 77.52 and 16.40 respectively. The value of median was 78 which is higher than the mean value therefore the distribution was negatively skewed indicating that many XII students had an Academic stress score more than the average score of the group. The value of Kurtosis was 0.211 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among XII student.
- The mean Academic Stress score among XII was higher i.e., students of standard XII were going through more stress as compared to XI students.
- The mean value and the standard deviation of the Attitude towards Examination of XI student was 101.85 and 10.8 respectively. The value of median was 101 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was -0.495 which is

higher than the normal distribution value 0.263. Thus, the distribution was Platykurtic among XI students.

- The mean value and the standard deviation of the Attitude towards Examination of XII student was 101.03 and 12.14 respectively. The value of median was 102 which is higher than the mean therefore the distribution was negatively skewed indicating that many female students had an Attitude towards Examination score more than the average score of the group. The value of Kurtosis was 3.189 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of XII student.
- The mean Attitude towards Examination score among XII student was lower i.e., not better than the XI student.

Figure 4.5.5.(ii) Correlation between Academic Stress and Attitude towards Examination with respect to Standard XI.

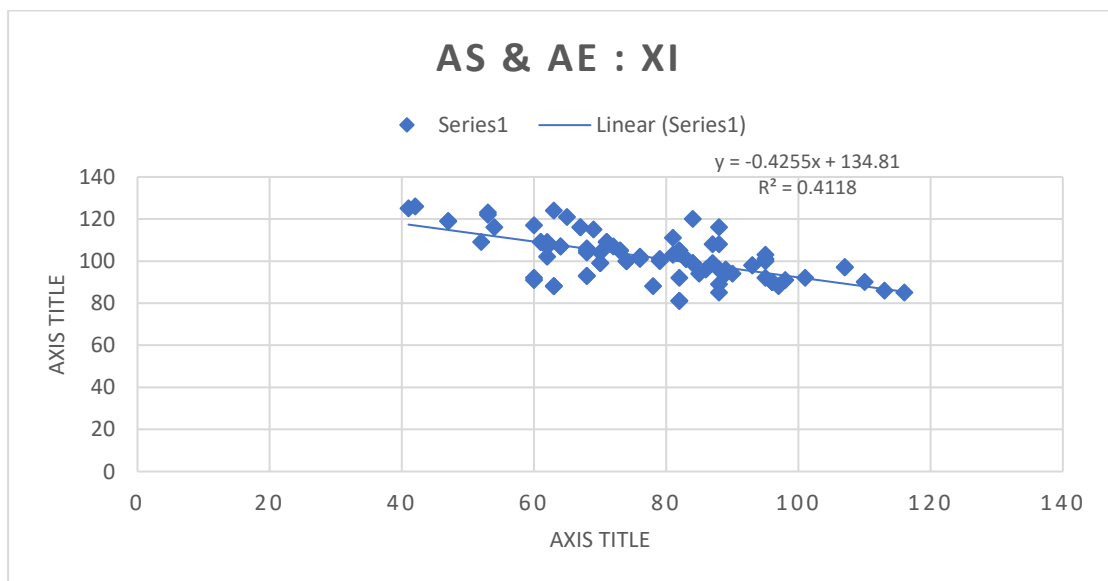


Figure 4.5.5.(ii) shows the obtained value of R^2 as 0.411 among XI students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation was Moderate correlation, substantial but small relationship.

Figure 4.5.5.(iii) Correlation between Academic Stress and Attitude towards Examination with respect to Standard XII.

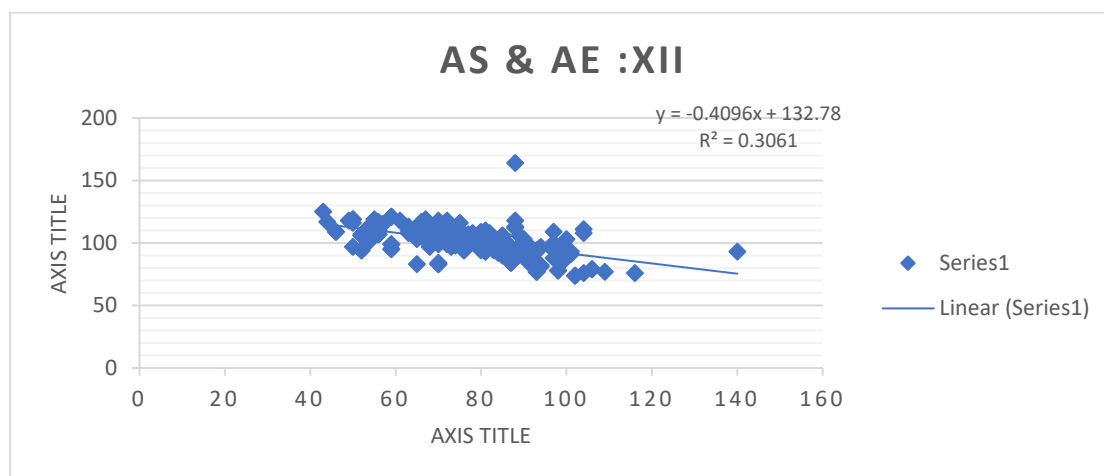


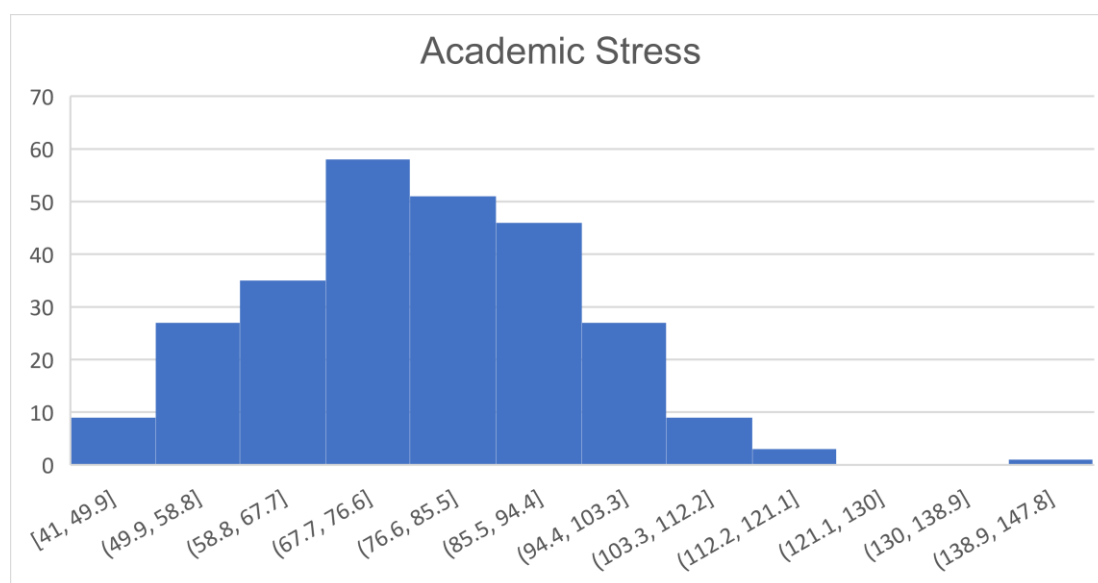
Figure 4.6.5.(iii) shows the obtained value of R^2 as 0.306 among XII students. The obtained value is very low and indicates that the line of regression does not fit the data properly i.e., the correlation is low, definite but small relationship.

4.4.6. Academic Stress of students:

Table 4.4.6 (a) Descriptive summary of the Academic Stress of student.

Variables	N	Mean	Median	SD	SEm	Skew	Kurt
AS	266	77.48	78	16.33	1.00	0.111	0.006

Figure 4.4.6.(i) Histogram: Normal distribution curve for Academic Stress.



From Table and Figure 4.4.6.

- It can be seen that the data obtained for studying the academic stress of student was normally distributed. The mean value of the Academic Stress of student 77.48 was and standard deviation was 16.33. The value of median was 78 which is slightly higher than the mean value therefore the distribution was negatively skewed indicating that more student had an academic stress score more than the average score of the group. The value of Kurtosis was 0.006 which is less than the 0.263. Thus, the distribution was Leptokurtic in nature.

Table 4.4.6. (b) Academic Stress (Percentage Analysis):

Range of T Score with Level	Total samples	Percentage
Low	0	22.55%
Moderate	206	77.44%
High	60	0.05%
Total	266	100%

Figure 4.4.6 (ii) Academic Stress (Percentage Analysis).

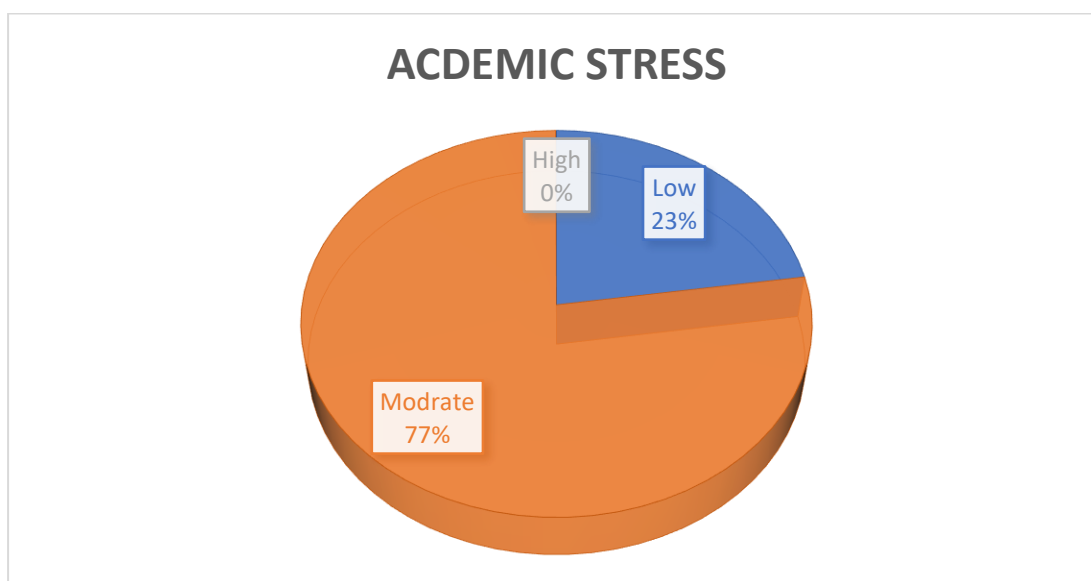


Table and Figure 4.4.6(ii) depicts the range of scores of academic stresses of the total sample of student.

From the table it can be seen that:

- 23% student have a low academic stress.
- 77% of student teachers have moderate. academic stress

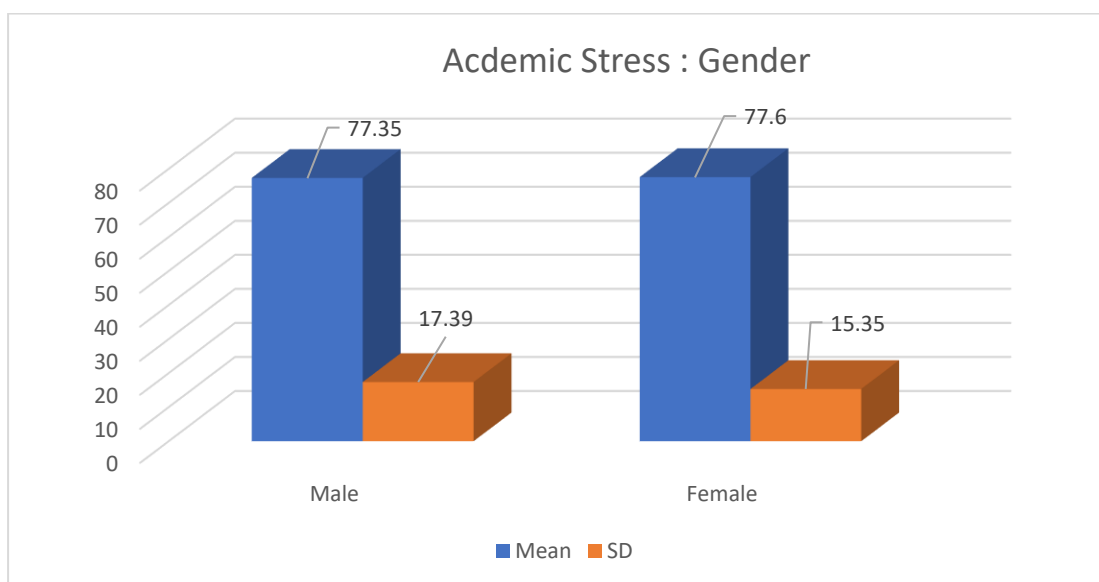
- 0% student teachers have high academic stress.
- Maximum numbers of student teachers lie in the moderate range of Academic Stress.

4.4.7: Academic Stress of student teachers with respect to Gender.

Table No.4.4.7. Academic Stress – Gender.

Gender	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Male	AS	128	77.35	76	17.39	1.53	0.307	0.14
Female	AS	138	77.60	79	15.35	1.307	-0.145	-0.23

Figure No.4.4.7. Academic Stress- Gender.



From Table 4.4.7. and Figure 4.4.7.

- The mean value and the standard deviation of the Academic stress of male student was 77.35 and 17.39 respectively. The value of median was 76 which is slightly lower than the mean value therefore the distribution was positively skewed indicating that many male students had an academic stress score less than the average score of the group. The value of Kurtosis was 0.14 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in case of male student.
- The mean value and the standard deviation of the Academic Stress of female student was 77.60 and 15.35 respectively. The value of median was 79 which is higher than

the mean value therefore the distribution was negatively skewed indicating that many female students had an Academic stress score more than the average score of the group. The value of Kurtosis was -0.239 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among female students.

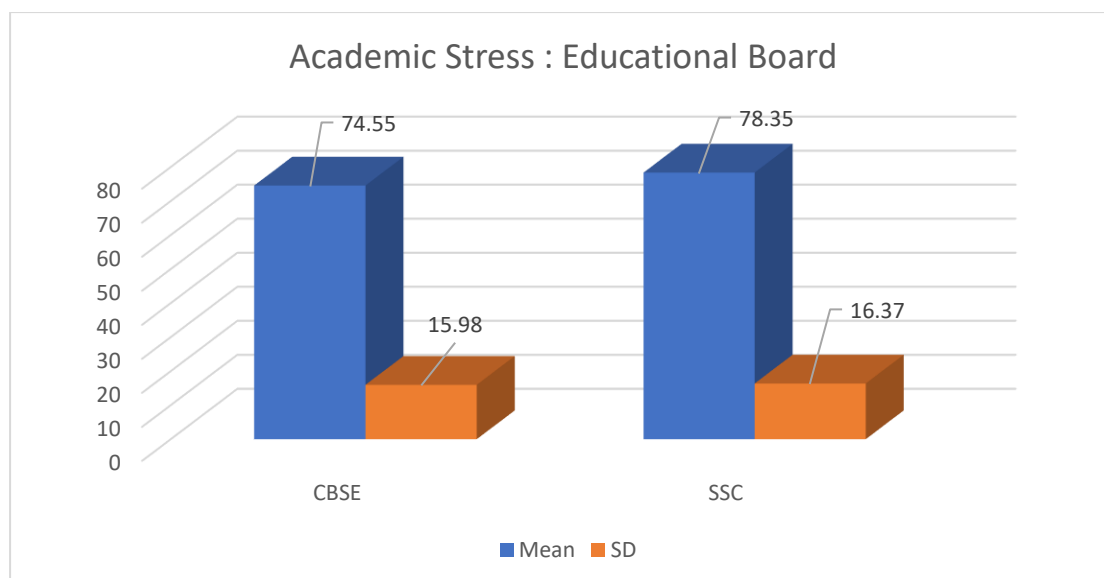
- The mean Academic Stress score among female student was higher i.e., male students are better equipped than the female students to handle stress.

4.4.8 Academic Stress with respect to Educational Board.

Table 4.4.8: Academic Stress: Educational Board

Board	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
CBSE	AS	61	74.55	74	15.98	2.046	-0.182	-0.72
SSC	AS	205	78.35	79	16.37	1.14	0.087	0.230

Figure No.4.4.8. Academic Stress – Educational Board.



From Table 4.4.8. and Figure 4.4.8.

- The mean value and the standard deviation of the Academic stress of CBSE student was 74.55 and 15.98 respectively. The value of median was 74 which is slightly less than the mean value therefore the distribution was positively skewed indicating that many male students had an academic stress score less than the average score of the group. The value of Kurtosis was- 0.72 which is more than the normal

distribution value 0.263. Thus, the distribution was Platykurtic in case of male student.

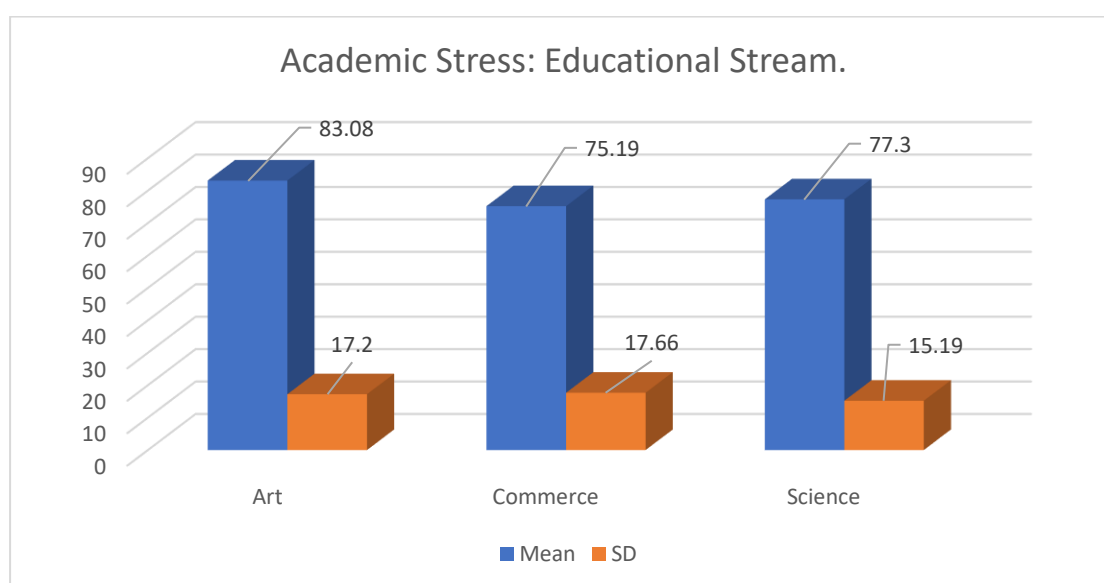
- The mean value and the standard deviation of the Academic Stress of SSC. student was 78.35 and 16.37 respectively. The value of median was 79 which is more than the mean value therefore the distribution was negatively skewed indicating that many female students had an Academic stress score more than the average score of the group. The value of Kurtosis was -0.230 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among female student.
- The mean Academic Stress score among SSC student was higher i.e., CBSE student slightly better equipped to handle stress as compared to SSC students.

4.4.9. Academic Stress of student with respect to Educational Stream.

Table 4.4.9. Academic Stress – Educational Stream.

Streams	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Arts	AS	36	83.08	85	17.27	2.87	0.53	2.453
Commerce	AS	76	75.19	78.5	17.66	2.020	-0.08	-1.049
Science	AS	154	77.30	76	15.19	1.22	0.133	-0.251

Figure 4.4.9. Academic Stress with respect to Educational Stream



From Table 4.4.9. and Figure 4.4.9.

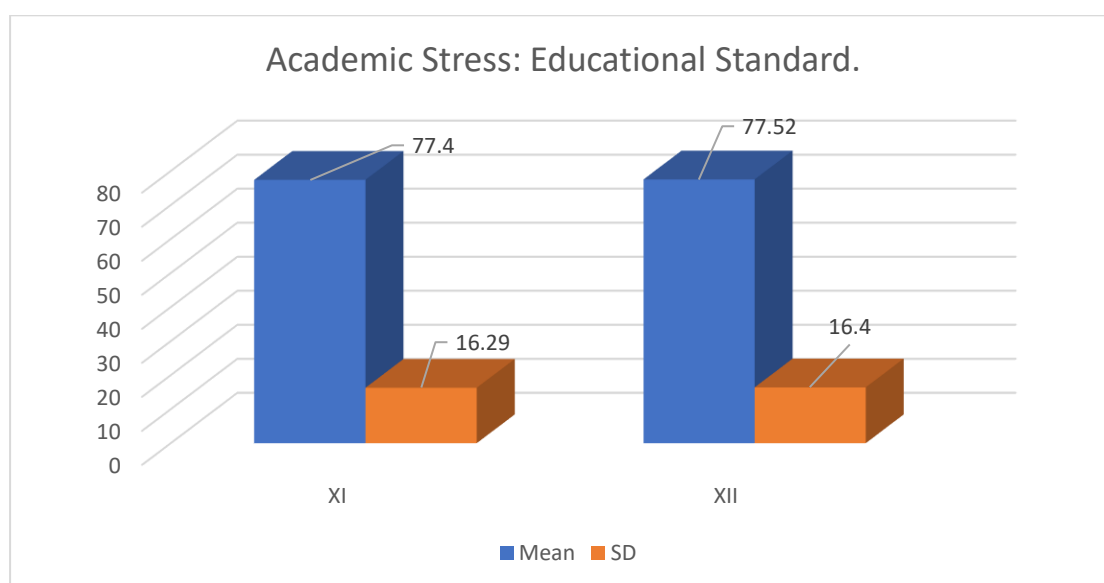
- The mean value and the standard of deviation of the Academic stress of student studying in Arts stream was 83.08 and 17.27 respectively. The value of median was 85 which is more than the mean therefore the distribution was negatively skewed indicating that many students had an Academic stress score more than the average score of the group. The value of Kurtosis was 2.453 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard of deviation of the Academic stress of student studying in Commerce stream was 75.19 and 17.66 respectively. The value of median was 78.5 which is more than the mean value therefore the distribution was negatively skewed indicating that many student teachers had an academic stress score more than the average score of the group. The value of Kurtosis is -1.029 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard of deviation of the Academic Stress of student studying in science stream was 77.30 and 15.19 respectively. The value of median was 76 which is less than the mean therefore the distribution was positively skewed indicating that many students had an Academic stress score slightly less than the average score of the group. The value of Kurtosis was -0.251 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in nature.
- The mean Academic stress score of the student from Commerce stream were lowest i.e., better than those from science stream which in turn were better than those from Arts stream students.

4.4.10. Academic Stress with respect to Educational Standard.

Table 4.4.10. Academic stress with respect to educational standard (XII and XI)

Educational Standard	N	Var	Mean	Med.	SD	SEm	Skew	Kurt
XI	88	AS	77.40	78.5	16.29	1.73	0.048	-0.367
XII	178	AS	77.52	78	16.40	1.22	0.142	0.211

Figure 4.4.10. Academic Stress with respect to Educational Standard.



From Table 4.4.10. and Figure 4.4.10.

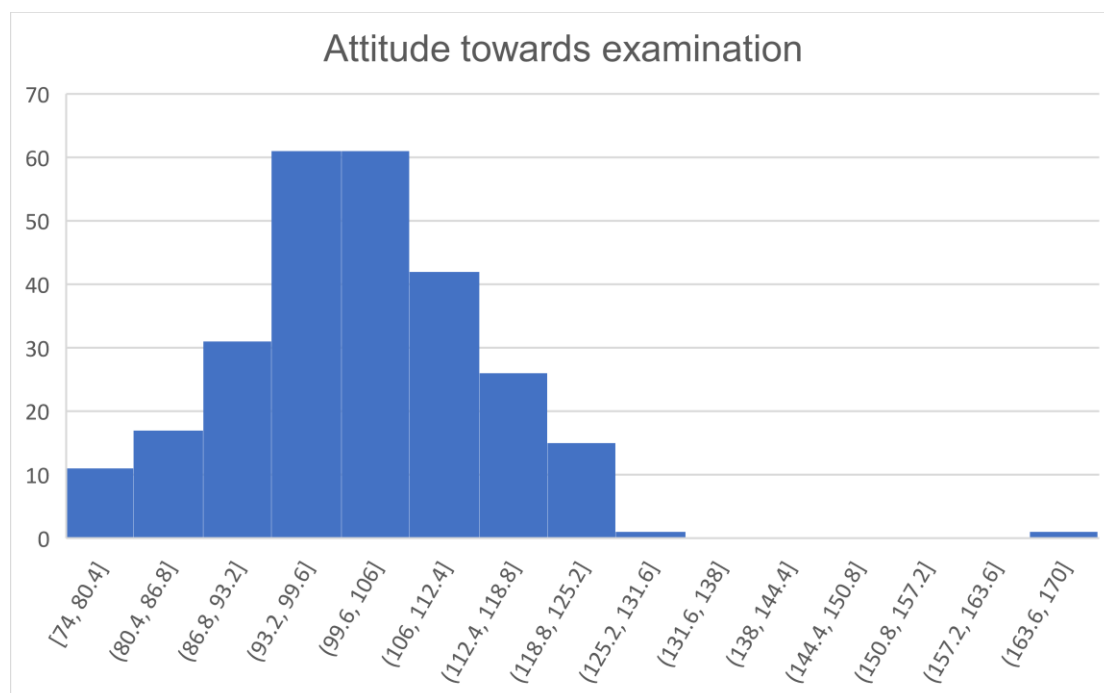
- The mean value and the standard deviation of the Academic stress of XI student was 77.40 and 16.29 respectively. The value of median was 78.5 which is higher than the mean value therefore the distribution was negatively skewed indicating that many XI students had an academic stress score more than the average score of the group. The value of Kurtosis was -0.367 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of XI student.
- The mean value and the standard deviation of the Academic Stress of XII student was 77.52 and 16.40 respectively. The value of median was 78 which is more than the mean value therefore the distribution was negatively skewed indicating that many XII students had an Academic stress score more than the average score of the group. The value of Kurtosis was 0.211 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic among XII student.
- The mean Academic Stress score among XII was higher i.e., student of standard XII were going to through more stress as compare to XI students.

4.4.11. Attitude towards Examination of students:

Table 4.4.11: Descriptive summary of the Attitude towards Examination of student.

Variables	N	Mean	Median	SD	SEm	Skew	Kurt
AE	266	101.31	101	11.70	0.71	2.2381	0.4150

Figure 4.6.11.(i) Histogram: Normal distribution curve for Attitude towards Examination.



From Table No.4.4.11 and Figure No.4.4.11 (i)

- It can be seen that the data obtained for studying the attitude towards examination was normally distributed. The mean value of the attitude towards examination of student was 101.31 and the standard deviation was 11.70. The value of median was 101 which is slightly lower than the mean value therefore distribution was positively skewed indicates that the many students had an attitude towards examination. Less than the average group of the student. The value of Kurtosis was 0.415, which was more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.

Table No 4.4.11 (b) Attitude towards Examination (Percentage Analysis)

Range of T Score with Level	Total samples	Percentage
Low	0	0%
Moderate	256	96%
High	10	4%
Total	266	100%

Figure 4.4.11 (ii) Attitude towards Examination (Percentage Analysis).

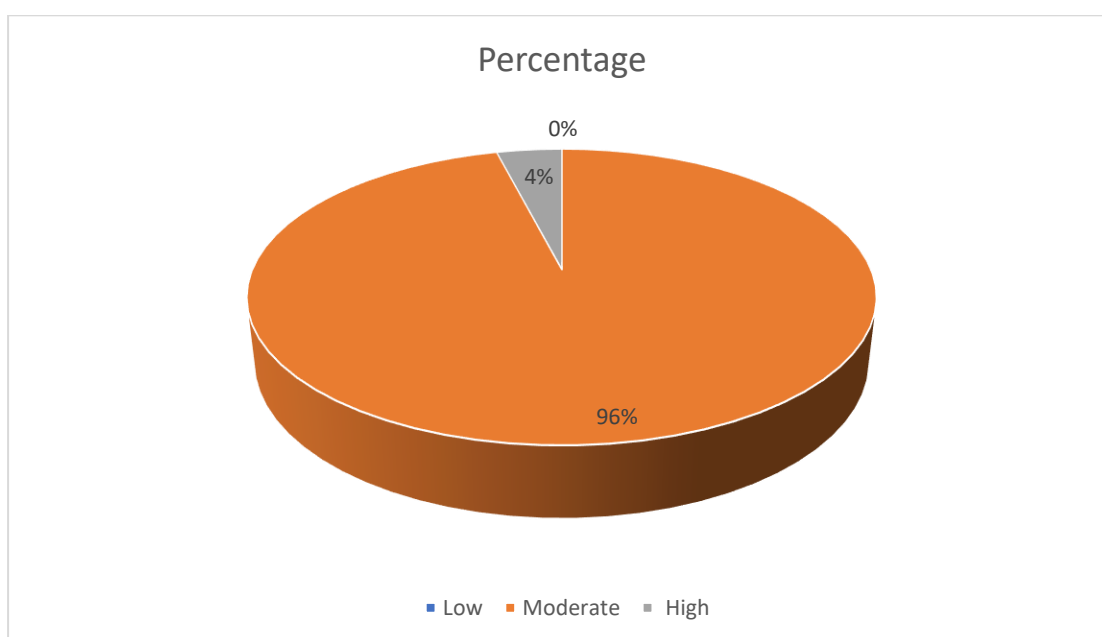


Table and Figure 4.4.11(ii) depicts the range of scores of academic stresses of the total sample of student.

From the table it can be seen that:

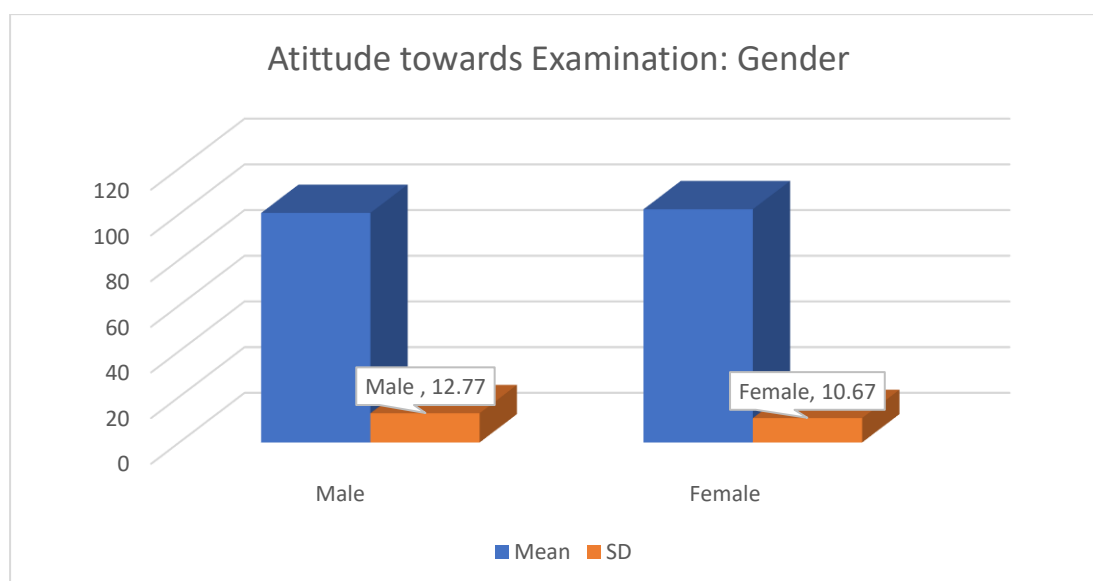
- 4% student have a high academic stress.
- 96% of student teachers have moderate academic stress.
- 0% student teachers have low academic stress.
- Maximum numbers of student teachers lie in the moderate range of Academic Stress.

4.4.12. Attitude towards Examination with respect to Gender

Table No.4.4.12. Attitude towards Examination- Gender.

Gender	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Male	AE	128	100.47	100	12.77	1.128	0.8033	3.77
Female	AE	138	102.08	103	10.60	0.9028	-0.112	-0.279

Figure No. 4.4.12. Attitude towards Examination-Gender.



From Table No. 4.4.12. and Figure No.4.4.12.

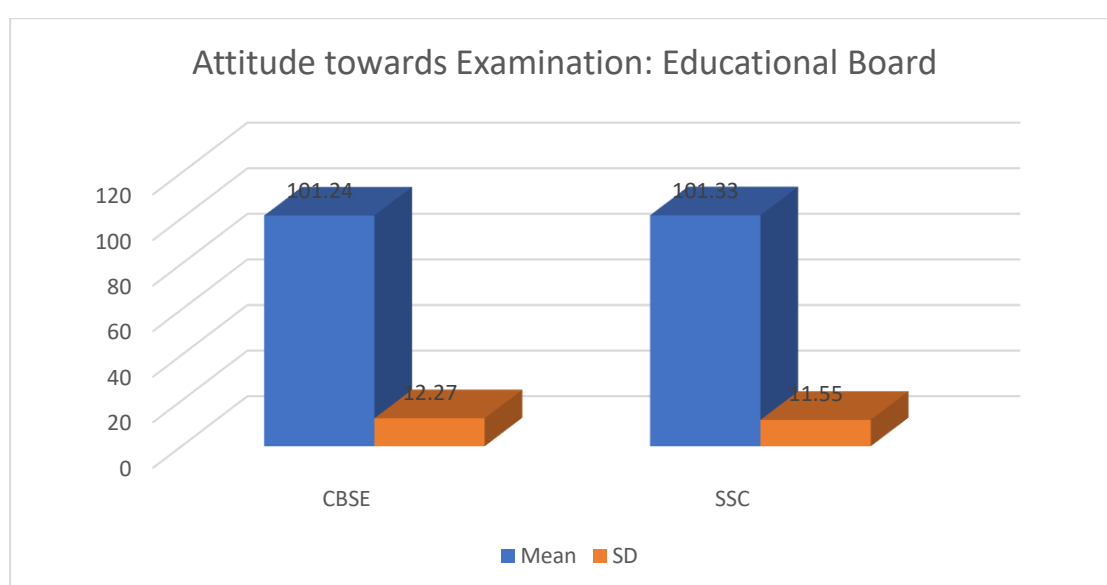
- The mean value and the standard deviation of the Attitude towards Examination of male student was 100.47 and 12.77 respectively. The value of median was 100 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was 3.77 which is higher than the normal distribution value 0.263. Thus, the distribution was Platykurtic among male students.
- The mean value and the standard deviation of the Attitude towards Examination of female student was 102.28 and 10.60 respectively. The value of median was 103 which is higher than the mean therefore the distribution was negatively skewed indicating that many female students had an Attitude towards Examination score more than the average score of the group. The value of Kurtosis was -0.279 which is less than the normal distribution value 0.263. Thus, the distribution was Mesokurtic in case of female student.
- The mean Attitude towards Examination score among male student was lower i.e., not better than the female student.

4.4.13. Attitude towards Examination of student with respect to Educational Board.

Table 4.4.13. Attitude towards Examination – Educational board

Educational Boards	N	Var	Mean	Median	SD	SEm	Skew	Kurt
CBSE	61	AE	101.24	99	12.27	1.57	-0.1442	-0.421
SSC	205	AE	101.33	102	11.55	0.80	0.6114	3.369

Figure No. 4.4.13. Attitude towards Examination _ Educational Board.



From Table No. 4.4.13. and Figure No. 4.4.13.

- The mean value and the standard deviation of the Attitude towards Examination of CBSE board student was 101.24 and 12.27 respectively. The value of median was 99 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was -0.421 which is less than the normal distribution value 0.263. Thus, the distribution Platykurtic was among CBSC board students.
- The mean value and the standard deviation of the Attitude towards Examination of female student teachers was 101.33 and 11.55 respectively. The value of median was 102 which is slightly higher than the mean therefore the distribution was negatively skewed indicating that many CBSE board students had an Attitude towards Examination score more than the average score of the group. The value of

Kurtosis was 3.369 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of SSC board student.

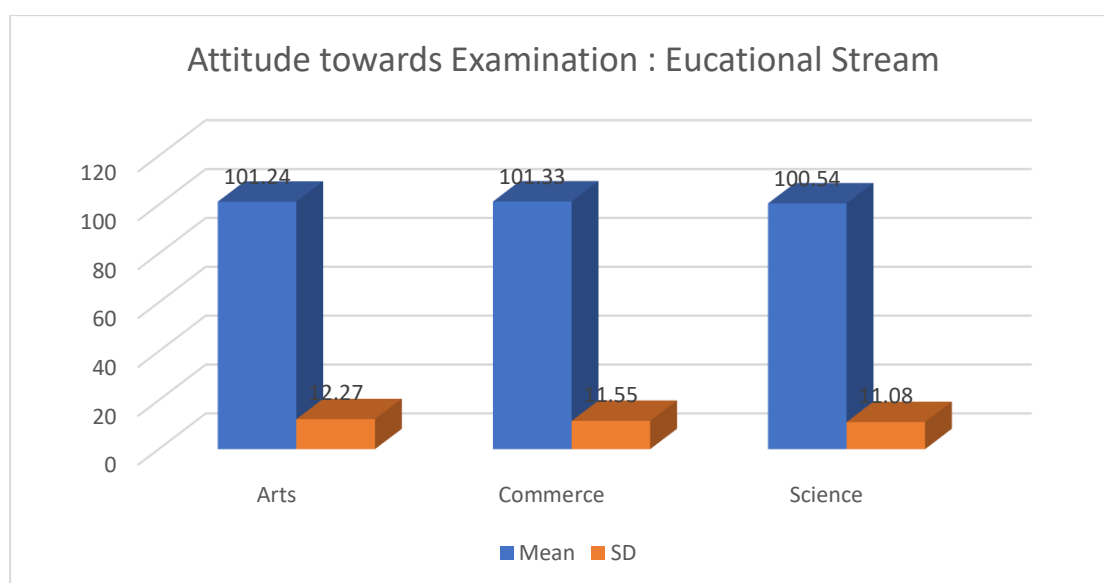
- The mean Attitude towards Examination score among CBSC board student was less than the SSC board students i.e., Attitude towards Examination score of SSC board student is better than the CBSE board students.

4.4.14 Attitude towards Examination of student with respect to Educational Stream.

Table No.4.4.14. Attitude towards Examination– Educational Stream.

Streams	Variables	N	Mean	Median	SD	SEm	Skew	Kurt
Arts	AE	36	102.36	102	15.75	2.62	1.71	5.43
Commerce	AE	76	102.36	103.5	10.71	1.22	-0.23	-0.351
Science	AE	154	100.54	101	11.08	0.89	-0.17	-0.095

Figure No.4.4.14. Attitude towards Examination Educational Stream.



From Table No.4.4.14. and Figure No.4.4.14.

- The mean value and the standard deviation of Attitude towards Examination of student studying in Arts stream was 102.36 and 15.75 respectively. The value of median was 102 which is less than the mean value therefore the distribution was positively skewed indicating that many students from Arts stream had attitude towards examination scores less than the average score of the group. The value of

Kurtosis was 5.43 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.

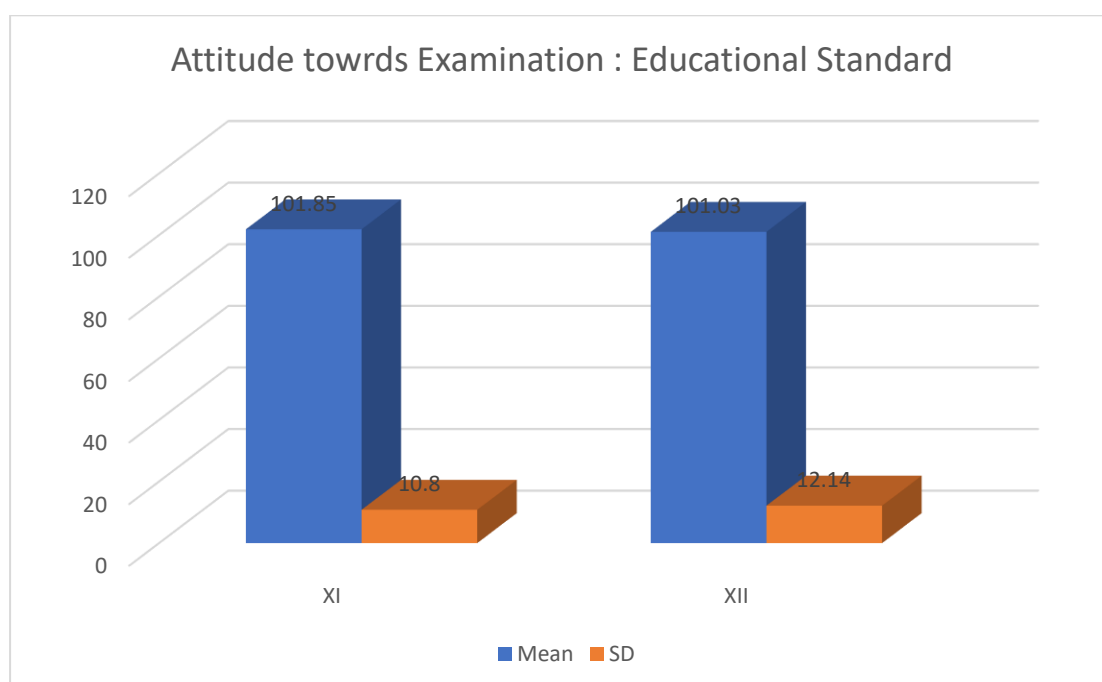
- The mean value and the standard deviation of Attitude towards Examination of student studying in commerce stream was 102.36 and 10.71 respectively. The value of median was 103.5 which is higher than the mean value therefore the distribution was negatively skewed indicating that many students from Attitude towards examination had Spiritual Quotient scores more than the average score of the group. The value of Kurtosis was -1.028 which is more than the normal distribution value 0.263. Thus, the distribution was Platykurtic in nature.
- The mean value and the standard deviation of Attitude towards Examination of student studying in science was 105.54 and 11.08 respectively. The value of median was 101 which is less than the mean value therefore the distribution was positively skewed indicating that many student teachers from science stream had Attitude towards Examination scores less than the average score of the group. The value of Kurtosis was -0.095 which is less than the normal distribution value 0.263. Thus, the distribution was Leptokurtic in nature. 117
- The mean attitude towards examination scores of the student from Arts and Commerce Stream students were same means higher i.e., better than those from Science Stream students.

4.4.15. Attitude towards Examination of student with respect to Educational Standard.

Table No. 4.4.15. Attitude towards examination – Educational stream.

Educational Standard	N	Var	Mean	Med.	SD	SEm	Skew	Kurt
XI	88	AE	101.85	101	10.80	1.150	0.33	-0.495
XII	178	AE	101.03	102	12.14	0.910	0.459	3.189

Figure No.4.4.15. Attitude towards Examination -Educational Class.



From Table No.4.4.15. and Figure No 4.4.15.

- The mean value and the standard deviation of the Attitude towards Examination of XI student was 101.85 and 10.8 respectively. The value of median was 101 which is less than the mean value therefore the distribution was positively skewed indicating that many male students had an Attitude towards Examination score less than the average score of the group. The value of Kurtosis was -0.495 which is higher than the normal distribution value 0.263. Thus, the distribution was Platykurtic among XI students.
- The mean value and the standard deviation of the Attitude towards Examination of XII student was 101.03 and 12.14 respectively. The value of median was 102 which is higher than the mean therefore the distribution was negatively skewed indicating that many female students had an Attitude towards Examination score more than the average score of the group. The value of Kurtosis was 3.189 which is less than the normal distribution value 0.263. Thus, the distribution was Platykurtic in case of XII student.
- The mean Attitude towards Examination score among XII student was lower i.e., not better than the XI student.

4 5 Conclusion

The descriptive analysis present the facts or the situation of the representative sample. It demonstrates the result in the form of frequency distribution tables, charts and digrams. A powerful summary provided by descriptive statistics helped the researcher to make comparisons across different units in the study. However, as descriptive analysis has the limitation of generalizing to a particular group of individuals, there arose a need for the researcher to adopt inferential statistical techniques to extend the generalization and reach to conclusions that extend beyond the immediate data alone. Therefore, inferential statistics was used to make judgments of the probability that observed difference between groups is a dependable one or one that might have happened by chance in this study. The next chapter throws light on inferential analysis of data.

CHAPTER 5

INFERENCEAL DATA ANALYSIS

5.1 Introduction

Inferential statistical analysis is an attempt to try to reach conclusions that extends beyond the immediate data alone. Inferential statics is applied to make judgments of probability, that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, inferential statistics is used to make inferential statistics is used to make inferences from data to more generalized conditions.

Inferential statistical of analysis always involves the process of sampling and selection of a small group assumed to be related to the population from which it is drawn. The small group is known as the sample, and the larger group is known as the population. The sole purpose of inferential analysis is to draw valid conclusions about the population based on observation of the sample.

5.2 The Null Hypothesis

One of the most important elements of any study is the formulation of research hypothesis as it directs us towards the intent of the study. They are statements that narrow the purpose statement into specific predictions about the relationship among variables. For the present study, null hypotheses (H_0) were framed. In inferential statistics, the null hypothesis usually refers to a general statement or default position that there is no relationship or no statistical difference between two measured phenomena, or no difference among groups. The researcher tries to disprove, reject or nullify the null hypothesis. Statistical significance is the number, called a p-value, which tells the probability of the result being observed, given that a certain statement (the null hypothesis) is true. If the p-value is sufficiently small, the experimenter can safely assume that the null hypothesis is false.

5.3 Inferential statical Measures

Inferential Statistics are mathematical methods that employ probability theory for deducing (inferring) the properties for a population from the analysis of the properties of a data sample drawn from it. With inferential statistics, we analyse data from a sample to draw conclusions about an unknown population. For instance, we use inferential statistics to try to infer from the sample data what the population might think.

We assess whether the differences of groups (their means) or the relationship among variables is much greater or less than what we would expect for the total population, if we could study the entire population. Therefore, inferential analysis is concerned also with the precision and reliability of the inferences it helps to draw.

One of the simplest inferential tests is used to compare the average performance of two groups on a single measure to see if there is a difference. To compare the average performance between two group, t-test is considered. The 't-test' assesses whether the means of two groups are statistically different from each other. The 't-test' is used to see if there are statically significant differences between the two independent groups on the continuous dependent variables. One of the assumptions of t-test is equal variances among the group of independent variables. This assumption is sometimes referred to as homogeneity of variance. The parametric test used by the researcher is t-test and ANOVA. T-test is based on the assumption of normality i.e., the source of data is considered to be normally distributed. In some cases, the population may not be normally distributed, yet test will be applicable due to the fact that the test mostly deals with samples and the sampling distribution closely approaches normal distribution.

5.4 Setting up the level of Significance

The researcher has to decide about the level of confidence or significance at which the hypotheses are going to be tested. It can be either at 0.05 or 5% level or a more rigid level i.e., 0.01 or 1% level of confidence. When a hypothesis is rejected at 0.05 or 5% level of significance, it is said that the chances are 95 out of 100, that the hypothesis is not true 158 and only 5 chances out of 100 that it is true. When a hypothesis is rejected at 0.01 or 1% level of significance, then the chances are 99 out of 100, that the hypothesis is not true and that only 1 chance out of 100 is true. For this study, the significance levels adopted were 0.01 and 0.05.

5.5 Parametric Statistics

Inferential statistics, also called inductive statistics, fall into one of two categories: tests for difference of means and tests for statistical significance, the latter one further subdivided into parametric and non-parametric. Parametric tests assume that the data are normally, or nearly normally, distributed. Some of the popular parametric tests used are t-test, the analysis of variance and Pearson correlation coefficient. To test the null hypothesis of the present study, the statistical techniques used were:

- Pearson's Product-Moment method – The coefficient of correlation computed by this method is known as the product moment coefficient of correlation or Pearson's correlation coefficient and symbolically represented by r . It is calculated by using the following formulas:

$$r_{XY} = \frac{\sum xy}{N\sigma_x \sigma_y} \quad \text{or} \quad r_{XY} = \frac{\sum xy}{\sqrt{\sum x^2 + \sum y^2}}$$

Where,

r_{XY} = Correlation between X and Y (two sets of scores)

x = deviation of any X-score from the mean in test X

y = deviation of the corresponding Y-score from the mean in test Y

$\sum xy$ = Sum of all the product of deviation (each x deviation multiplied by its corresponding y deviation)

$\sum x^2$ = Sum of the square of x

$\sum y^2$ = Sum of the square of y

In this formula, the basic quantity to determine the degree of correlation or correspondence between the two sets of variables x and y is $\sum xy / \sum x^2 \sum y^2$. The higher the value, the larger will be the degree of correlation. This term $\sum xy / \sum x^2 \sum y^2$ is known as the product moment and the corresponding correlation is called the product moment correlation. This formula was used to find the correlation between the Ecological Footprint of student teachers with their Emotional and Spiritual quotient. The correlation was also studied with reference to the moderator variables.

- ³⁸t-test – t-test is considered an appropriate test for judging the significance of a sample mean or for judging the significance of difference between the means of two samples in case of small sample when population variance is not known. The independent samples t-test is used when two separate sets for independent and identically distributed samples are obtained, one from each of the two populations being compared. The formula for t-test is:

$$Z = \frac{M1 - M2}{\sigma_D} = \frac{\text{Difference between mean}}{\text{Standard error of difference between mean}}$$

³⁸ Kothari C.R. (2004). Research Methodology – Methods and Techniques (2nd Rev. Ed.) pg. 196

Where standard error of difference is calculated with the formula:

$$S_{ED \text{ or } \sigma_D} = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}$$

³⁹We refer to the table of t-distribution which gives the critical values based on the calculated degrees of freedom. Number of degrees of freedom is calculated by using the formula.

$$df = (N_1 + N_2) - 2$$

In the present study, t-test was also used to find the difference in the variables of the study.

- Two-way Analysis of Variance (Two -way ANOVA) is a composite procedure for testing simultaneously the difference between several sample means. It helps us to know whether any of the differences between the given samples are significant. In two-way analysis, total variance is broken into three parts viz. variance due to one variable, variance due to other variable and interaction or residual variance on account of the supposed interaction between variables. Two F-ratios are computed for determining the significance of the difference between group means at a given level of significance.

Interpretation is made by comparing these F-ratios with critical F values read from the table for computed degrees of freedom at a given level of significance. Two-way ANOVA was also used to find the difference between the variables since there were more than two groups.

³⁹ Garrett, H. (2011) *Statistics in Psychology and Education*, New Delhi: Paragon International Publishers.214-215

5.6 Inferential analysis of the present data.

5.6.1. There is no significant correlation between the attitude and academic stress of adolescents towards examinations.

Table 5.6.1. Correlation between academic stress and attitude towards examination.

Var.	N	$\sum xy$	$\sum x^2$	$\sum y^2$	df	r value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
AS	266	-29336	70714.45	-36295	264	-0.57	*S	Rejected
AE								

From table 5.6.1.

- The obtained value of coefficient of correlation 'r' after correlating the Academic stress scores of Secondary students with their Attitude towards Examination was - 0.57.
- The negative value of 'r' indicates a negative correlation between the variables. which means if the Academic Stress of student increases, then their Attitude towards examination decreases and vice-versa.
- The calculated 'r' value was -0.57 therefore the correlation was moderate, substantial but small relationship.
- Since the obtained 'r' value was higher than the table value of 'r' which is 0.181 at 0.01 level of significance, it indicates that the correlation between the Academic Stress and Attitude towards Examination of student is statistically significant and therefore the null hypothesis is rejected at 0.01 as well as 0.01 level of significance

Conclusion: There is a significant correlation between the Academic Stress of student with their Attitude towards Examination

5.6.2. To study the correlation between attitude and academic stress among adolescents towards examinations with respect to Gender.

Table 5.6.2. Correlation between academic stress and attitude towards examination with respect to Gender.

G	Var.	N	ΣXY	ΣX^2	ΣY^2	df	r value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
M	AS	128	-16173.4	38417	20711.9	126	-0.57	S*	Rejected
	AE								
F	AS	138	-13190.3	32292.88	15410.9	136	-0.59	S*	Rejected
	AE								

From table. No.5.6.2

- The obtained value of coefficient of correlation 'r' after correlating the Academic Stress and Attitude towards Examination of male and female students was found to be -0.57 and -0.59 respectively.
- The negative value of 'r' among both the gender indicates a negative correlation between the variables. It means if the Academic Stress of male and female student increases then their negative Attitude towards Examination decreases and vice versa.
- The calculated 'r' value among male student was -0.57 and -0.59 among female students therefore the correlation was moderate, substantial but small relationship.
- The obtained 'r' value among both the genders was higher than the table value of 'r' which is 0.254 in case of male student at 0.01 level of significance and 0.254 in case of female student at 0.01 level of significance. The values indicate a statistically significant correlation between the Academic Stress and Attitude towards Examination of male and female student.
- Therefore, the null hypothesis is rejected at 0.01 level of significance for male and female students.

Conclusion: There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to gender. A better correlation between the variables was found among male student.

5.6.3. To study the correlation between attitude and academic stress among adolescents towards examinations with respect to educational Board

Table 5.6.3. Correlation between academic stress and attitude towards examination with respect to Educational Board.

Edu. Board	Var.	N	$\sum XY$	$\sum X^2$	$\sum Y^2$	df	r value	Lev of sig. *0.01/ **0.05	H ⁰ Accepted/ Rejected
CBSE	AS	61	-8714.36	15323.0	9047.31	59	-0.74	S*	Rejected
	AE								
SSC	AS	205	-20637.2	54713.01	27247.44	203	-0.53	S*	Rejected
	AE								

From table no 5.6.3.

- The obtained value of coefficient of correlation 'r' after correlating the Academic Stress and Attitude towards Examination of CBSE and SSC boards students was found to be -0.74 and -0.53 respectively.
- The negative value of 'r' among both the educational boards indicates a negative correlation between the variables. It means if the Academic Stress of CBSE and SSC student increases then their Attitude towards Examination decreases and vice versa.
- The calculated 'r' value among CBSE students was -0.74 therefore the correlation was high and marked. The calculated 'r' value SSC students were -0.55 therefore the correlation was moderate, substantial but small relationship.
- The obtained 'r' value among both the educational board was higher than the table value of 'r' which is 0.325 in case of CBSE student at 0.01 level of significance and 0.181 in case of SSC student at 0.01 level of significance. The values indicate a

statistically significant correlation between the Academic Stress and Attitude towards Examination of CBSE and SSC board student.

- Therefore, the null hypothesis is rejected at 0.01 level of significance for CBSE student and 0.01 level of significance for SSC student.

Conclusion: There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to educational board. A better correlation between the variables was found among CBSE student.

5.6.4. To study the correlation between attitude and academic stress among adolescents towards examinations with respect to Educational Stream.

Table 5.6.4. Correlation between academic stress and attitude towards examination with respect to Educational Stream

Edu. Stream	Var.	N	$\sum XY$	$\sum X^2$	$\sum Y^2$	df	R value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
Arts	AS	36	-2980	10440.8	8688.31	34	-0.31	NS	Accepted
	AE								
Com.	AS	76	-9185.52	23414	8605.69	74	-0.64	S*	Rejected
	AE								
Sci.	AS	154	-17219.6	35328.7	18786.2	152	-0.66	S*	Rejected
	AE								

- The obtained value of coefficient of correlation 'r' after correlating the Academic Stress and Attitude towards Examination of educational stream Arts, Commerce and Science students was found to be -0.31, -0.64, -0.66 respectively.
- The negative value of 'r' among the educational streams indicates a negative correlation between the variables. It means if the Academic Stress of Arts, Commerce and Science student increases then their Attitude towards Examination decreases and vice versa.
- The calculated 'r' value among Arts student was -0.31 therefore the correlation was low, definite but small. The calculated 'r' value among Commerce student was -

0.64 and -0.66 among science students therefore the correlation was moderate, substantial but small relationship.

- Since the obtained 'r' value in case of student from Arts stream was lower than the table value of 'r' which is -0.31 and 0.413 respectively, the results indicate a statistically insignificant correlation between the variables. Therefore, the hypothesis is accepted at 0.05 level of significance.
- Since the obtained 'r' value in case of student from commerce stream was higher than the table value of 'r' which is -0.64 and 0.302 respectively, the results indicate a statistically significant correlation between the variables. Therefore, the hypothesis is rejected at 0.01 level of significance.
- Since the obtained 'r' value in case of student from science stream was higher than the table value of 'r' which is -0.66 and 0.254 respectively, the results indicate a statistically significant correlation between the variables. Therefore, the hypothesis is rejected at 0.01 level of significance.
- Therefore, the null hypothesis was accepted at 0.01 and 0.05 level of significance for Arts student. The null hypothesis is rejected at 0.01 level of significance for Commerce and Science students.

Conclusion: There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to Commerce and Science educational streams A better correlation between the variables was found among commerce and science student.

5.6.5. Correlation between attitude and academic stress among adolescents towards examinations with respect to Educational Standard.

Table 5.6.5. Academic stress and attitude towards examination: Educational Standard.

Edu Std.	Var	N	$\sum XY$	$\sum X^2$	$\sum Y^2$	df	R value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
XI	AS	88	-9826.5	23093.28	10153.63	86	-0.67	S*	Rejected
	AE								
XII	AS	178	-19504.1	47620.4	26099.8	176	-0.55	S*	Rejected
	AE								

From table no. 5.6.5.

- The obtained value of coefficient of correlation 'r' after correlating the Academic Stress and Attitude towards Examination of XI and XII class students was found to be -0.67 and -0.55 respectively.
- The negative value of 'r' among both the educational Standards indicates a negative correlation between the variables. It means if the Academic Stress of XI and XII student increases then their Attitude towards Examination decreases and vice versa.
- The calculated 'r' value among XI student was -0.67 and -0.55 among XII student therefore the correlation was moderate, substantial but small relationship.
- The obtained 'r' value among both the educational Standard was higher than the table value of 'r' which is 0.283 in case of XI student at 0.01 level of significance and 0.254 in case of XII student at 0.01 level of significance. The values indicate a statistically significant correlation between the Academic Stress and Attitude towards Examination of XI and XII standard student.
- Therefore, the null hypothesis is rejected at 0.01 level of significance for XI student and 0.0 level of significance for XII student.

Conclusion: There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to educational standards.

5.6.6. There is no significant difference in the level of academic stress among adolescents towards examinations with respect to Gender.

Table 5.6.6.t-test value of academic stress -Gender.

Gender	N	Mean	SD	SE _D	df	't' value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
Male	128	77.35	17.39	2.01	264	0.898	NS	Accepted
Female	138	77.60	15.35					

As for the table No.5.6.6.

- The calculated 't' value was 0.898 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a no significant difference in the Academic Stress of male and female students.

- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Academic Stress of male and female student.

5.6.7. There is no significant difference in the level of academic stress among adolescents towards examinations with respect to Educational Board.

Table 5.6.7. t-test value of academic stress: educational board

Edu. Board	N	Mean	SD	SE _D	df	‘t’ value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
CBSE	61	74.55	15.98	2.34	264	0.957	NS	Accepted
SSC	205	78.35	16.37					

As for the table No.5.6.7.

- The calculated 't' value was 0.957 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a No significant difference in the Academic Stress of CBSE board and SSC board students.
- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Academic Stress of Educational board CBSE and SSC students.

5.6.8. There is no significant difference in the level of academic stress among adolescents towards examinations with respect to Educational Stream.

Table 5.6.8. ANOVA result of academic stress with respect to Educational Stream.

Sources of variations	SS	df	MS	F	P-value	F. crit
Between Groups	513.07	2	765.49	2.9100	0.056	3.0301
Within Groups	67001.71	263	263.05			
Total	67514.78	265				

As per the table no. 5.6.8.

- The obtained F value after comparing the scores of academic stresses of student from Arts, Commerce and Science was 2.910 which is less than the critical table value of 3.00.
- Therefore, the hypothesis is accepted at 0.05 level of significance.

Conclusion: There is no significant difference in the Academic stress of student with respect to the level of educational streams.

5.6.9 There is no significant difference in the level of academic stress among adolescents towards examinations with respect to Educational Standard.

Table 5.6.9. t-test value of academic stress: educational standard.

Edu. Std.	N	Mean	SD	SE _D	df	't' value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
XI	88	77.40	16.29	2.126	264	0.1109	NS	Accepted
XII	178	77.52	16.40					

As per the table no. 5.6.9.

- The calculated 't' value was 0.11 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a No significant difference in the Academic Stress of XI and XII students.
- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Academic Stress of XI and XII students.

5.6.10. There is no significant difference in the attitude of adolescents towards examination with respect to Gender.

Table No. 5.6.10. t-test value of attitude towards examination: Gender.

Gender	N	Mean	SD	SE _D	df	't' value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
Male	128	100.48	12.77	1.446	264	0.2629	NS	Accepted
Female	138	102.09	10.61					

As for the table No.5.6.10.

- The calculated 't' value was 0.26 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a no significant difference in the Attitude towards examination of male and female students.
- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Attitude towards Examination of male and female student.

5.6.11. There is no significant difference in the attitude of adolescents towards examinations with respect to Educational Board.

Table 5.6.11. t-test value of attitude towards examination: educational board.

Edu. Board	N	Mean	SD	SE _D	df	't' value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
CBSE	61	101.25	12.28	1.766	264	0.96	NS	Accepted
SSC	205	101.33	11.55					

As for the table No.5.6.11.

- The calculated 't' value was 0.96 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a no significant difference in the Attitude towards examination of CBSE board and SSC board students.
- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Attitude towards Examination of Educational board CBSE and SSC students.

5.6.12. There is no significant difference in the attitude of adolescents towards examinations with respect to Educational Stream.

Table 5.6.12. ANOVA result of attitude towards Examination: Educational Stream.

Sources of variations	SS	df	MS	F	P-value	F. crit
Between Groups	214.92	2	107.46	0.783	0.46	3.03
Within Groups	36080.17	263	137.187			
Total	36295.1	265				

As per the table no. 5.6.12.

- The obtained F value after comparing the scores of attitudes towards examination of student from Arts, Commerce and Science was 0.783 which is less than the critical table value of 3.00.
- Therefore, the hypothesis is accepted at 0.05 level of significance.

Conclusion: There is no significant difference in the Attitude towards Examination of student with respect to the level of educational streams.

5.6.13. There is no significant difference in the attitude of adolescents towards examinations with respect to Educational Standard.

Table No. 5.6.13. t-test value of attitude towards examination: educational standard.

Edu. Std.	N	Mean	SD	SE _D	df	't' value	Level of significance	H ⁰ Accepted/ Rejected
							**0.01/*0.05	
XI	88	101.875	10.80	1.47	264	0.58	*NS	Accepted
XII	178	101.034	12.14					

As per the table no. 5.6.13.

- The calculated 't' value was 0.58 for df 264 which is less than the critical table value of 1.968 at 0.01 level of significance. It indicates there is a No significant difference in the Attitude towards examination of XI and XII students.
- Therefore, the null hypothesis is accepted at 0.01 level of significance.

Conclusion: There is a no significant difference in the Attitude towards Examination of XI and XII students.

5.7 Conclusion

After testing the hypotheses using Pearson's moment, t-test and Two-way ANOVA, the researcher was able to derive the results and make conclusion with respect to the study. The next chapter presents the major findings and interpretations consolidated by the researcher to make meaning from the results of the study.

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 Introduction

Even the most vivid hypothesis , well designed research study and the most prominent generalization and finding are of diminutive value unless they are efficiently communicated to other. Hence, it is very essential to summarize and elaborate on the study and findings.

The key to our successful existence depend on our attitude towards education system and its insinuation in our day to day life. Students play a crucial and active role in education. They involve and interact with students and teachers, participate in classroom discussions, and act in a receptive manner. with changing times, the role of learners in education has got subverted from a facilitator to a task monitor. At the same time there is lots of pressure on the students and this pressure converted into stress. Sometime due to their positive attitude and sometime their negative attitude both ware affects the student performance.

⁴⁰“I didn’t study for the test. Do you think you could send me a picture of the answers”
This one single line has been heard in schools everywhere?

The pressure on students to get good grades leaves a negative effect on students. The pressure starts while they are young and builds up as students get older. Students can only take so much pressure until they go through a burn out. This is what often leads to some students dropping out of high school. The pressure that is put on students to get good grades often leads to depression, anger, and cheating.

⁴¹Academic pressure has increased over the past few years, there are examinations, assignments and many other activities that a student has to shuffle through. Not only the design but teachers and parents also burden the students with a lot of pressure of getting good grades. These expectations make the students work relentlessly and end up in creating more stress. With academics, the parents and the institutions want the students to participate in extracurricular activities too, the current expectations from the

⁴⁰ <https://www.bartleby.com/essay/The-Pressure-Put-on-Students-to-Get-FK7GMUSVJ>

⁴¹ <https://www.google.com/search>

students are to be an all-rounder. Lack of proper channels for counselling leads to more confusion and the students are unable to choose a career for themselves even after rigorous studying patterns.

To survive in the current competition, educational achievement is necessary and compulsory to all and for good educational achievement and academic stress free and positive environment is also essential. Academic stress is deliberating factor which impact on students' attitude towards examination and also their performance.

6.2 Restating the staement of the problem

A study of academic stress and attitude among adolescence.

6.3 An Overview

I. Data analysis with respect to correlation between academic stress and attitude towrds examination.

Var.	N	$\sum xy$	$\sum x^2$	$\sum y^2$	df	'r' value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
AS	266	-29336	26049	-36295	264	-0.57	*S	Rejected
AE								

II. Correlation: Academic Stress and Attitude towards examination with respect to moderator variables.

Moderator variables		Var.	N	$\sum XY$	$\sum X^2$	$\sum Y^2$	df	'r' value	Level of sig. 0.01*/ 0.05**	H ⁰ A/ R
G	M	AS	128	-16173.4	38417	20711.9	126	-0.57	S*	R
		AE								
	F	AS	138	-13190.3	32292.88	15410.9	136	-0.59	S*	R
		AE								
E. B		AS	61	-8714.3	15323.0	907.31	59	-0.74	S*	R

	CBS E	AE								
	SSC	AS	205	-20637.2	54713.01	27247.44	203	-0.53	S*	R
		AE								
EDU. Strea m	Art.	AS	36	-2980	10440.8	8688.31	34	-0.31	NS	A
		AE								
	Com ·	AS	76	-9185.52	23414	8605.69	74	-0.064	S*	R
		AE								
	Sci	AS	154	-17219.6	35328.7	18786.2	152	-0.66	S*	R
		AE								
Edu. Std.	XI	AS	88	-9826.5	23093.28	10153.63	86	-0.67	S*	R
		AE								
	XII	AS	178	-19504.1	47620.4	26099.8	176	-0.55	S*	R
		AE								

III. Academic Stress with respect to moderator variables.

Moderator variables		N	Mean	SD	SE_D	df	‘t’ value	Level of sig. 0.01*/ 0.05**	H⁰ Accepted/ Rejected
G.	M	128	77.35	17.39	2.01	264	0.898	NS*	Accepted
	F	138	77.60	15.35					
Edu. B.	CBSE	61	74.55	15.98	2.34	264	0.957	S*	Accepted
	SSC	205	78.35	16.37					
Edu. Std.	XI	88	77.40	16.29	2.16	264	0.119	NS*	Accepted
	XII	178	77.52	16.40					

IV. Attitude towards education with respect to modreter variables.

Moderator variables		N	Mean	SD	SE _D	df	't' value	Level of sig. 0.01*/ 0.05**	H ⁰ Accepted/ Rejected
G.	M	128	100.8	12.77	1.446	264	0.262	NS*	Accepted
	F	138	102.0	10.62					
Edu. B.	CBSE	61	101.25	12.28	1.766	264	0.96	NS*	Accepted
	SSC	205	101.33	11.55					
Edu. Std.	XI	88	101.87	10.80	1.47	264	0.58	NS*	Accepted
	XII	178	101.03	12.14					

6.4.Major Findings of the Study

The majour findings of the study are as follows.

- *There is a significant correlation between the Academic Stress of student with their Attitude towards Examination* The correlation was low and definite but small in accordance with the assumptions of the study. Which is when our academic stress decreases, there is an increase in students' attitude towards examination. In other words, academic stress was found to influence students' attitude towards examination. The correlation was found to be moderate, substantial, small but it was statistically significant. The moderate correlation could be because all the students lie in the range of moderate academic stress and attitude towards examination was also found to be in moderate range. The moderate correlation could also be attributed to the influence of other factors like gender, educational board, educational stream, and standards.
- *There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to gender.* The correlation was found to be moderate, substantial, small but it was statistically significant. The male student showed a slightly better correlation as compared to female student. Male student had low mean Academic stress score as compared to their female counter parts indicating that females stress more during exams. This outcome is

in accordance with the study by Graves et.al (2021) on ⁴²“Gender differences in perceived stress and coping among college students”. Their study has found that females students have shown high stress levels as compared to males. However, the findings of the present study were not agreement with findings of earlier studies conducted by the Hitesh Mohan and Zahoor Ahamad (2021). As per their study, both genders have a demand of academic stress for improving the attitude towards examination. The academic stress has an impact on the attitude towards examination

- *There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to Educational Boards.* The correlation was found to be high and marked in CBSE students while moderate and substantial in SSC students yet statically significant. It means if the Academic Stress of CBSE and SSC student increases then their Attitude towards Examination decreases and vice versa. The academic stress of CBSE students was also found to be low. The high correlation and the low academic stress among CBSE students may be due the vast syllabus and the rigorous curriculum they follow which may be instrumental in helping them handle their stress.
- *There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to Educational Stream.* The correlation was found to be moderate, substantial but statically significant. A higher correlation between the variables was found among student whose were in commerce and science stream students as compared to arts stream students. It means that with an increase in stress among commerce and science students, their attitude towards examination decreases. Both Science and Commerce stream puts in more pressure on the students due to its vastness and high applicability in the real life. Even though Arts students had a high mean Academic stress, their stress had a low impact on their attitude towards examination as compared to commerce and science students.
- *There is a significant correlation between the Academic Stress and Attitude towards Examination of student with respect to Educational Standard.* The correlation was found to be moderate, substantial but small relationship yet

⁴² <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0255634>

statically significant. The mean Academic Stress score among XII was slightly higher than the XI students indicating a pressure for future performance at board exams, expectations of parents, peers, schools as well as classes. The students in both the grades show an equal amount of stress however due to less pressure in Grade XI the attitude among them is higher.

- *There is no significant difference in the Academic stress of male and female student.* No significance difference was found to exist in the mean of Academic Stress scores with respect to gender which was also seen in the study by Dr. P. Suresh Prabhu on “A Study on Academic Stress among Higher Secondary Students” in (2015). His study indicates there is no significant mean difference between male and female students with respect to academic stress. Academic stress among both the gender is equal.
- *There is no significant difference in the Academic stress of educational board CBSE and SSC student.* The result is a subset of the main findings that the entire sample of students having an average level of academic stress. No difference was found to exist in the mean of Academic score of students of CBSE and SSC. There could be other factors which may have an impact on the Academic stress of the students.
- *There is no significant difference in the Academic stress of students with respect to the level to the educational stream.* No difference was found to exist in the mean of academic stress of student for arts, commerce, science. The result is subset of the main findings of the entire sample of the students having a moderate level of Academic stress. Similar study was found in the research study by Dr. P. Suresh Prabhu on “A Study on Academic Stress among Higher Secondary Students” (2015). His study indicated Science and Arts students do not differ significantly in their academic stress scores. Similar findings was found by Sweta Sonali (2018) on “A Comparative Study of Academic Stress Among Senior Secondary Students Enrolled in Different Streams” there was no significant difference found between academic stress of students enrolled in science and commerce stream. In a similar study conducted by Bataineh (2013), there was no significant difference found amongst the students from different of specializations or different stream at the university level. The result was also

found to be a subset of the main findings of the sample of students having average level of academic stress

- *There is no significant difference in the Academic stress of Educational Standard.* The mean academic stress score among XII student was higher than the XI student. There is no significant difference in the academic stress of XI and XII which coincides with the finding of Ramesh Chandra and Sudhir Sen (2021) in their study on “*Academic stress, self-efficacy and Anxiety Mathematics of higher secondary students in west Bengal, India*”. The reason could be pressure of board exams.
- *There is no significant difference in the Attitude towards examination of male and female students.* No significant difference was found to exist in the mean score of Attitude towards examination of male and female. The result is a projection of the main findings of the sample of students having average level of attitude towards examination.
- *There is no significant difference in the Attitude towards examination of educational board.* No difference was found to exist in the mean of attitude towards examination of student of CBSE and SSC board students. The result highlights the outcome of the entire sample that had a moderate level of Attitude towards Examination. Now a days all schools and boards are preparing their students for competitive exams that may be the reason why there is no significant difference found.
- *There is no significant difference in the Attitude towards examination of students with respect to the level of educational stream.* No difference was found to exist in the mean of attitude towards examination of student of arts, commerce, science students. The result is sub set of the main findings of the entire sample of the students that had a moderate level of Attitude towards Examination. Other reason can be all the three groups focused on their goals and clear on their future aspirations.
- *There is no significant difference in the Attitude towards examination of educational standard.* The value of mean of Attitude towards Examination of XI class and XII class was found to be same indicating that students in both the standards are focussed on their future goals. XII is an important year in the career of every child and the preparation begins from grade XI.

6.5 Recommendations

In the present situation educational institutions, family, peer group play a vital role in the development of an individual. At the same time teachers are also a changing agent of the society who can bring change into the life of our students.

A significant correlation found between academic stress and attitude towards examination of student. Therefore in order to enhance the overall growth and development of the school student can help in following ways.

Following are some of the recommendations to entire educational system, which includes the school teachers, student, parents and educational institutions.

- Teacher can become a changing agent and a guidance worker especially when students are face problem in their attitude towards examination due to their Academic stress.
- There should be counseling sessions for the secondary school student for facing the problem in their attitude towards examination due to their academic stress. If the academic stress increases then the attitude towards examination decrease also it affects all the dimensions of student life and behaviour.
- Parents are most important element of student life with the active involvement of parents thoughts in students Academic stress and the attitude toward examination can be reduced and controlled.
- Peer group like the positive competition for the students to get and achieve their desired goals and objectives academically.

So, it may be concluded that if students are highly motivated by parent peers, and teacher to achieve their goals of education keeping in mind the various of their life Academic stress of students can help to change their attitude towards examination.

6.6. Suggestions for the further Research

From the findings of the above study and the information collected for the present research, the researcher would like to give few suggestions.

Presently there are many studies conducted on academic stress still some more topics that can taken up for further research are.

- The present study limited to the 11th and 11th students , similarly the studies may be conducted for the 9th and 10th also. Their result could be providing better understnading of their current standing.
- The present study was limited to the CBSE and SSC board students, similar correlational studies may conducted for the IGSC, IB, ICSE.
- The studies could be carried out verious dimenssions of students life that affects academic stress and aatitude towards examination of students.
- The studies could be carried out Acdemic stress and attitude towards examination of D.Ed students and B.Ed. students.
- The present study limited to the 11th and 12th students , similarly the studies may be conducted for the Higher secondary students. Their result could be providing better understnading of their current standing.
- The studies could be carried out to the private and government college. Their result could be compared for a better understanding of their current standing.

6.7 Conclusion

Academic stress is mental distress with respect to some anticipated frustration associated with academic failure or even unawareness the possibility of such failure. Students have to face many academic demands, for example, school examination, recitations in the class, showing progress in school subjects, understanding what the teacher is teaching, competing with other classmates, fulfilling teachers and parents' academic expectations. These demands may tax or exceed available resources of the students. As a consequence, they are subjected under stress, since the demand is related to achievement of an academic goal. So, academic related to the achievement of an academic goal.

Based on the findings of the present study, it is concluded that the Academic Stress has a significant negative effect on higher secondary students' attitude towards examination. This finding is consistent that high level of Exam Stress led to low level of Attitude towards Examination in students and vice versa. It means that the Academic Stress of secondary students increases with decreases in their Attitude towards Examination. Most of the students have low and moderate level of Examination Stress only few students have higher Examination Stress. Regarding the Academic Stress many students fall under low level of Academic Stress.

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APPENDICES

Appendix A - List of Colleges

1. C.K.T. Junior college of art commerce and Science, (New Panvel).
2. M.N.R. Junior college of science and Commerce, (Kamothe, New Mumbai).
3. S.T J. Junior college of science art and commerce, (Kalmboli, New Mumbai).

Appendix B - List of Experts

- Dr. Amit Gosar.
Research Guide, Sikkim Manipal University.
- Dr. Bhavna Dave.
Assistant Professor, Pillai college of education and research, Khanda colony, New Panvel.
- Dr. Saramma Mathew
Associate Professor, Pillai college of education and research, Khanda colony, New Panvel.
- Dr. Pratima Pradhan.
Assistant Professor, FM University, Balasore, Odisha.
- Prof. Namrata Saxena
Assistant Professor, Pillai college of education and research, Khanda colony, New Panvel.

Appendix C - Tools of the study

Tool 1: Attitude towards Examination

Instructions: Read the condition and put a tick mark based on how often you have experienced the given condition. (Never =N, rarely = R, sometimes = S, often = O, always = A)

Sr. No.	Statements	A	V	S	R	N
1.	I feel examinations make me sick.					
2.	I feel I will go blank when I get my question paper in my hand.					
3.	I think the exam timetable makes me get anxious.					
4.	I feel my palpitation increases when the exam dates are announced.					
5.	I feel I will not be able to pass the examinations.					
6.	I feel I get nervous during exam.					
7.	I think I overeat or avoid eating during exam.					
8.	I think written exams are better than oral exams.					
9.	I feel oral exams/viva are not my cup of tea.					
10.	I wish all exams should be converted into orals.					
11.	I feel oral exams make me fumble as it will be difficult to express answers.					
12.	I think due to lack of time or planning. I am unable to complete my written exam					
13.	I think all topics need not be covered before exams.					
14.	I feel selective study during exams is better.					
15.	I feel if I go through previous question papers and study accordingly, I will get good grades.					

16.	I think study timetable should be meticulously planned and executed before exams.					
17.	I think I get time to revise before exam.					
18.	I think I get easily distracted while I am studying for my exams					
19.	Last minute studies are more effective.					
20.	I feel I am satisfied with my performance in exams, so I don't think about result.					
21.	I feel exams are important to succeed in life.					
22.	I feel happy to get passing marks in exams.					
23.	I think if I work harder, I can get better percent than my previous exams.					
24.	I feel referring to extra reading materials will help me with exams.					
25.	I feel exams keep me motivated.					
26.	I think I study hard for my exam but I cannot cope up with difficult questions.					
27.	I think put in extra effort to learn topics which I feel are difficult.					
28.	I feel I lose my marks in exam due to over confidence.					
29.	I feel I want to give exams but due to family issue I can't give my exams.					
30.	I think I can't give my exams well due to financial condition of family					

Appendix C - Tool 2: Academic Stress.

Tool 2

Instructions: Read the statements and put a tick mark on the given option that best suits you. There are no right or wrong answers.

(Always = A; Very often = V, sometimes = S; Rarely = R; Never = N)

Sr. No.	Condition	N	R	S	O	A
1.	I fall sick during the examination period.					
2.	My hands tremble /shake while writing exam.					
3.	I experience dry mouth during oral exams.					
4.	I tend to bite my fingernails in the examination hall.					
5.	I find difficulty in writing answer during an exam.					
6.	I am unable to cope with my studies.					
7.	I feel overwhelmed by the demands of school/ home/ tutorials.					
8.	I forgot to complete my project and assignment.					
9.	I have loss of sleep when the submission deadline approaches.					
10.	I am unable to meet deadline for project submission.					
11.	I struggle to complete book on time.					
12.	I have sufficient time for my hobbies.					
13.	I take initiative to take part in co-curricular activity.					
14.	I have inferiority complex in academics.					
15.	I feel nervous before exam dates.					
16.	I get headache while studying.					

17.	I make mistakes on easy questions or put answer in the wrong places.					
18.	I can't pay attention in the class for a long time.					
19.	I study for a class in which I am scared of the teacher.					
20.	I am worried about the course completion more than the knowledge gained in each subject.					
21.	I get butterflies in stomach on seeing the exam paper.					
22.	I feel nervous when my teacher asks the question and look at me.					
23.	I have difficulty in coping with additional subject.					
24.	I struggle to complete my homework on time.					
25.	I am worried because of high expectation of my parents.					
26.	I unable to concentrate during lecture because of peer student's behaviour					
27.	I find my lesson meaningful and interesting.					
28.	I enjoy attending seminars or educational programmes arranged by the school.					
29.	I do not score well even after putting in efforts.					
30.	I feel tensed thinking about the course content for academic year.					
31.	I have time to revise lesson at home.					
32.	I feel board when I have participated in co-curricular activity.					

Appendix D - Letter of Permission



PCERP/M.Ed./406/2021

Date: _____

To
The Principal

Sub: Request for Data Collection

Sir/Madam,

_____ is currently doing his/her M.Ed. from
our college. As part fulfillment of the syllabus she/he has to conduct an educational
research. The topic of the research is _____

I humbly request you to permit our student to collect the data from your esteemed
institution (i.e. from teachers/students).

Kindly give permission for the data collection.

Thank you,

Yours truly,


Dr. (Ms.) Sally Enos
PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
Pillai College of Education & Research
Dr Pillai Teacher Training & Research Centre
Plot No. 1, Sector-8, Khanda Colony,
New Panvel-410 206.