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RESEARCH ARTICLE

A STUDY ON EXAMINATION STRESS AND ACADEMIC ACHIEVEMENT IN SCIENCE AMONG HIGHER SECONDARY SCHOOL STUDENTS IN VILLUPURAM DISTRICT

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ABSTRACT

The various approaches to Educational thought have been classified as conservative versus liberalistic, traditional versus modern, and so on. What we call as conservative position in education finds its origin in the educational thinking of Plato, a Greek philosopher, and his contemporaries. Many traditional philosophers, who were also the educational thinkers, believed that man is composed of body and soul or mind, of which mind is the knowing aspect of man's nature, while the body is the sensing and feeling aspect of his/her nature. This view asserts that only 'academic subjects' are worthy of the name 'education'; any activities involving the body such as manual skills, crafts, and vocational preparation are not education, but training. This classical view asserts that only the activities of mind designed to develop the rational part of the composed being are truly educative. The classical educationists also believed that human nature is everywhere and at all times essentially the same. Therefore, they held a view that the main purpose of education should be the same throughout the world, from which it follows that the formal curriculum in schools should be essentially the same, allowing some small variations to local needs and differences. This belief accounts for the emphasis placed upon developing the rational powers of man. According to this contention, education – as a formal discipline – needs to be imparted in the same manner to everyone. In such a situation there is a very little scope of variation. The views of some of the classical.

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INTRODUCTION

Education is very important to everyone to lead a successful life. The social and technical change has a great effect on student to life style and this of cause is carried over into their education. The concept of wellness has been defined as harmonies and productive balance physical, mental, and social well being brought about by the acceptance of students own responsibility off developing adhering to a health promotion program (Robert 1982). Instructional environments that place greater demands on student ability will show greater dependence on examination stress and their performance. Education must aim to develop not only organize bodies of factual and skill knowledge in different domains, but must also develop the ability to apply this knowledge in unfamiliar situations. The teacher is an important constituency in the instructional process that can play very important role in reducing stress of the students, a good teacher can fine out desirable and un-desirable character in children. Intelligence of students will be collapsed due to high examination stress. There by their academic may be decreased to through this study it was attempted to predict the favorable conditions conducive to increase academic performance with the held op moderate levels of examinations stress.

Significance of the study: Each student should be motivated towards reducing Examination stress and increasing Academic Achievement. Every student has a unique way of thinking and behaving under stressful conditions. As result the individual therefore becomes a down heated and disappointed student. It is very common in classroom situation that some perform well, where as others perform very bad according to the levels of stress. When stress is reduced amount student as a result the student becomes more intelligent in the subject. He is a efficient and quiet balanced individual for the betterment of the field. In some conditions, the intellectual personnel are being used in different areas of our country.

All the fields need efficient and quit balanced individuals for the betterment of the field, in some conditions, the intellectual capabilities are disturbed. This is due to the effect of stress. When the stress level decreases the normal conditions of brain like concentration memory are affected. Studies prove the stress is the one of the main factor, which influence academic achievement.

Objectives of the Study

1. To find out the relationship between Examination stress and Academic achievement in science
2. To find out the impact of examination stress on their Academic achievement in science.
3. To find out the difference Academic Achievement based on Gender, Type of School Management, and Medium of instruction and Location of Residence.
4. To find out the difference in an examination stress based on Gender, School type, Medium of Instruction, Location of Residence.

Research Questions

- a. What is the relationship between examination stress and academic achievement in science?
- b. What is the difference in Academic Achievement in science of gender, school type medium of instruction and Locality of residence?
- c. How the examination stress of students based on gender, school type, medium of instruction and locality of Residence?

Statement of the Problem

"A Study on Examination stress and Academic Achievement in science among higher secondary School students in Villupuram District"

Stress: Any challenge, change, demand or threat that exceeds the coping abilities of the individual is known as stress. If the strain laced on a material falls within the "Elastic limits" then the material will return to its original condition when the stress is removed. If the strain passes beyond those elastic limits, then some permanent damage will result.

Dimensions of Stress: All three dimensions of stress {physiological, psychological and behavioral} are important to the understanding of job stress and coping strategies in modern organizations.

Definition of Stress: Although there are numerous definitions and much debate about the meaning of job stress. Ivancevich and Matteson define stress simply as "the interaction of the individual with the environment, "but then they go on to give a more detailed working definition, as follows, "an adaptive response, mediated by individual differences and/or psychological processes, i.e., a consequence of any external action, situation, or event that places excessive psychological and/or physical.

Stress symptoms among children

1. Aggressive behavior and negative approach
2. Poor self-confidence and self-esteem.
3. Poor communication.
4. Lack of interest in anything
5. Mood swings
6. Depression etc

Examination Stress: Stress is used to denote pressure or distress this strain or stress during examination is called as examination stress. It is not necessarily bad, damaging or unhealthy stress during examination is not an event or circumstance. The same examination situation provokes different response in different students and even in the same student depending on his or her state of mind.

Stress and Examination: All the other extreme, the examination situation may impose demands beyond that individual's capacity to meet them even given the resources available in that situation. These demands could be for productivity on a job resolving issue of great complexity, or for resolution of conflicting expectations. Obviously the degree of stress is a function of the ability of a given individual to meet these demands in the situations. The poor fit between the perform and the examination situation can also occur if the student motives are not satisfied by (Coxtom 1978 stress London Macmillan).

Academic Achievement in Science: Academic achievement of the pupils in the higher secondary levels is influenced by number of factors such as examination stress, achievement motive and socio-economic status etc. it is assumed that environment factors do play a large role in the child academic careers on an equal footing due to their differential socialization experiences in the home environment. One of the main objectives or a major objective in the educational field is to achieve knowledge skill and the ability to adjust with the environment successfully. All aspire for better living conditions irrespective of their capacities and strive to achieve something great. For school children most probably parent's teachers set certain goals and standards to be achieved in order to enable their easy transition from one role to another. Success or failure in ones attempt to secure good grades reflects the kind of emotional responses one would exhibit or would receive from others. Hence the student community places much importance upon meritorious achievements in their studies. This especially true for adolescent pupils who have to be architects or better society.

Research Design: The present study entitled "A study on Examination Stress and Academic Achievement in science among higher secondary school students in Villupuram District" has been designed as a Descriptive study. Best 1983. States that, descriptive research sometimes known as non-experimental research deals the relationship between variables, the testing of hypotheses and

development of generalization, principles of theories and have Universal validity. It is concerned with functional relationship. Therefore, the present study fits into the definition since it is essential to study the relationship between examination stress and academic achievement in computer science of student.

Hypotheses of the Study

1. There is no significant relationship between examination stress and the Academic Achievement in science of higher secondary school students.
2. There is no significant difference in the examination stress of higher secondary school students with respect to the Gender.
3. There is no significant difference in the examination stress of higher secondary school students with respect to the type of school
4. There is no significant difference in the examination stress of higher secondary school students with respect to the Medium of Instruction.
5. There is no significant difference in the examination stress of higher secondary school students with respect to the Location of Residence.

REVIEW OF RELATED LITERATURE

Studies Related to examination stress

Stress and Environment: A number of researchers have investigated originally based on stress by looking at the effects of person and environment interactions. Schnall (1992) described five environmental categories such as relationship at work organizational structure, climate and factors intrinsic to the job, role in the organization. These categories are used to describe the stress influences inducers in the work environment and the debilitating effects of these stressful conditions.

Stress and daily life: This study describes and within the cognitive phenomenological theory of psychological stress developed by Lazarus and his colleagues the coping strategies used by 9th, 9th grade at adolescents in specific stressful events in their daily lives. The result of the study indicates the most frequency reported hassles and uplifts are consistent with the age and development levels of his sample. The concerns are primarily frequent chronic mirror events associated with activities of daily living. Hassles and uplifts were positively correlated adolescents each other as well as with symptomatology and coping strategies and higher levels of symptomatology than male adolescents.

Stress and emotional performance of individuals: A literature search conducted by the researcher substantiated the existences of the problem postulated in this study that stress and its effects are related to mental, physical and emotional performance with an individual and that no differences occur between the sexes in this respect.

Stress and gender: A sample population of male and females were selected from region and seven of the American society for training and development as subjects for his study. The stress categories of male and females as measured by the Tennessee scale revised and compared by inferential statistics showed statistically significant between the male and females with in this sample.

Life events and stress: The use of life event to study stress has been researched since 1967. Most of the research focuses on adults. There has been a limited number of studies on adolescents and most have used adults to predict adolescent responses. This study focuses on what life events adolescents identify as stressful to them grade and sex were the independent variables, the population of the study was 935 students from 9-12 public school, adolescent males ranked the 53 life events as stressful similarly to adolescent magnitude of stress varied significantly on particular life event by grade level and sex.

Harrington card ann 1967 conducted this study: Many identifiable stressors can be associated with commencing and completing graduate studies recent research has focused on the relationship between stressful life events and both physical and Emotional symptomatology.

Studies related to achievement: Ghetya, S.M. {2021} examined the effectiveness of sex, and method of teaching on academic achievement for science teaching, the sample comprised of 88 boys of Masun Vidhayalaya and 113 girls of kadavibai viram Vidhayalaya from Rajkhat City. An objective test was constructed to measure the effect of independent variable on dependent variable. Findings revealed that boys and girls were same towards academic achievements. Methods of teaching were effective on academic achievements.

METHODOLOGY OF THE STUDY

Tests to Measure the examination stress: Though many tests are available to assess the stress of individuals, the investigation has chosen a standardized questionnaire of examination stress, which was constructed by Saraladevi K for measuring examination stress of students. All the items in the questionnaire were thoroughly analyzed and framed on the basis of analyzing individual self concept, parental nature, Study habits, emotionally and physical health. There were 44 items, four-point scale of always, sometimes, occasionally, not at all had been provided for each item?

The subject responded to each item by a tick mark {√} in one of the four columns provided after each statement. Subjects were required to respond to all items. They did not have option to leave any item unanswered. Student's aggregate marks are obtained from the concern class teachers all the 300 students academic achievement in science scores were converted into percentage and analyzed for the students.

Pilot study: Pilot study was carried out to know suitability of the time required to administer the test of examination stress and to establish the reliability and validity of the tools. 30 students were selected for the pilot study the tools were given based on data reliability and validity of the examination stress questionnaire was calculated for the present study.

Personal data sheet: To collect the information on selected variables like, gender, Type of school, Nature of School, qualification of parents, Medium of Instruction, Location of Residence, Type of Family. Personal Data Sheet was prepared by the investigator and was distributed among students. Ten minutes have taken to fill personal data sheet. Personal data sheet is given in Appendix –A.

Collection of Data: The tool was administered to the XII standard students during regular class hours with the permission from the respective head of the institution. The willingness and co-operation of the respective class teachers were also sought. The students to fill up the questionnaire used an entire period of 40 minutes. The investigator collected the data's personally from the selected 300 students. Proper instructions were given to the students before starting to fill the questionnaire. Each student was provided with a set of questionnaire containing examination stress scale. Students were requested to make their responses provided in the statements in the questionnaire, the investigator read out each statement loudly using that the students have responded particular item, the investigator passed on to the next, Students were requested no to omit any of the items. Finally the filled in questionnaires were collected from the students. After collecting date from 300 students from selected schools, the date was quantified as per the scoring procedure and analyzed using suitable statistical computations like mean, standard deviation, correlation coefficient, test of significance and chi-square test. Further, Analyses, Interpretation and discussion are given in the next chapter.

Nature and selection of the sample: The subjects selected for this study was using random sample technique. Representative sample of 300 students were selected from Government, Government Aided and private School in Villupuram District.

Statistical treatment of data: The variable used for analysis and interpretation of the data includes; Examination Stress, Gender, Type of school Management, CHI-SQUARE TEST Chi-square distribution is a sample distribution, quite different from sample distribution like Binomial Distribution, Normal distribution, F-distribution etc.

Test of Significance ('t' Test): When we take a number of samples of small size from a proportion, with a mean and standard deviation then the sample means will form a sample distribution of means around the population mean.

Analysis and interpretation of data

Descriptive Analysis: Three hundred students drawn from XII standard of higher secondary school science students of Villupuram District constituted the sample. The variables in the present investigation are examination stress and achievement in science with reference to seven personal of school, Type of gender, Type of school, medium of instruction, and Location of resident. The dependent variable is achievement in science and the independent variable in examination stress. After data was collected, it was classified according to the two above mentioned variables. Variables wise mean and standard deviations were calculated for examinations stress and achievement in science which are presented in the table.

Table 1. Showing the mean and standard deviation of the variables examination stress and academic achievement

Sl.No.	Variables	N	Mean	S.D.
1	Examination Stress	300	52.58	13.47
2	Achievement in science	300	53.67	11.24

The comparisons of the means and standard deviation presented in the Table 2, 3, 4., Shows that there are difference in means of the two variables under consideration namely, Examination stress and academic achievement in science.

Table 2. Showing the mean and standard deviation of the variables examination stress and academic achievement gender wise

Gender	N	Examination Stress		Academic Achievement	
		Mean	S.D.	Mean	S.D.
Boys	140	50.81	12.94	53.68	11.67
Girls	160	53.26	15.46	55.85	12.24

Table 3. Showing the mean and standard deviation of the variables examination stress and academic achievement-type of school management wise

Type of School	N	Examination Stress		Academic Achievement	
		Mean	S.D.	Mean	S.D.
Government	100	55.21	14.12	55.91	10.75
Aided	100	46.35	14.68	55.78	8.36
Private	100	39.48	12.98	49.11	15.85

Table 4. Showing the mean and standard deviation of the variables examination stress and academic achievement- medium of instruction wise

Medium of instruction	N	Examination Stress		Academic Achievement	
		Mean	S.D.	Mean	S.D.
English	200	54.81	14.26	53.87	13.89
Tamil	100	56.24	16.84	57.12	10.54

Table 5. Showing the mean and standard deviation of the variables examination stress and academic achievement- locality wise

Locality	N	Examination Stress		Academic Achievement	
		Mean	S.D.	Mean	S.D.
Rural	50	55.47	14.34	53.42	11.64
Urban	150	53.31	14.61	54.81	10.82
Semi-urban	100	51.67	14.66	55.53	14.27

Table 6. Showing the distribution of sample score wise

Sl. No	Variables	Mean	S.D.	High	Moderate	Low
1	Examination Stress	53.27	14.84	Above 71	Between 39 and 71	Below 39
2	Academic Achievement in science	54.61	12.72	Above 70	Between 42 and 70	Below 42

The analysis of high, moderate and low Examination stress and achievement in computer science were done by calculating the mean and standard deviation from the total scores of 300 XII standard students and then by using the formula.

Mean + 1 Standard deviation = High level
Mean - 1 Standard deviation = low level

In between mean + 1 Standard Deviation and mean - 1 Standard Deviation = Moderate level.

The sample was classified with high, moderate and low for examination stress and achievement in Computer science utilizing the respective mean and standard deviation values.

Table 7. Showing the distribution of samples according to the levels of examination stress

Sl. No.	Levels of Examination Stress	Number of Students	Percentage
1	High	2	0.6%
2	Moderate	256	85.4%
3	Low	42	14.0%

After analyzing the examination stress of 300 X standard students. It is found that (2) of them are in highly examination stress level (0.6%), (256) of them are in moderate examination stress (85.4%), (42) of them are in Low examination stress Level (14%) as given in the Table-7

Table 8. Showing the distribution of samples according to the levels of academic achievement

Sl. No.	Levels of Academic Achievement	Number of Students	Percentage
1	High	100	33.33%
2	Moderate	95	31.7%
3	Low	105	35.0%

After analyzing the Academic Achievement in science of 300 XII standard students. It is found that (100) of them are in highly Academic Achievement level (33.33%), (95) of them are in moderate Academic Achievement (31.7%), (105) of them are in Low Academic Achievement Level (35.0%) as given in the Table 8.

Table 9. Showing the details of chi-square test for the variable examination stress of x standard students- type of school wise

Category	Sub-category	Examination stress			Total
		Low	Moderate	High	
Type of school	Government	12	80	8	100
	Aided	10	85	5	100
	Private	18	72	10	100
	Total	40	237	23	300

Chi-square values are 7.586 with 4 degrees of freedom. Since the calculated value (7.586) is lesser than the table value (9.49 and 13.28) at 0.01 and 0.05 levels of significance, the null hypothesis is accepted. Thus there is no significant association in the examination stress of XII standard students with respect to type of school management.

DISCUSSION OF THE RESULTS

Gender: The acceptance of the null hypothesis that there is no significant difference in examination stress of boys and girls on

contrary with the findings of the Villupuram District School Students who found that there is significant difference between boys and girls in examination stress. The chi-square analysis established that there is no significant association between gender and examination stress of XII standard students. The mean scores of examination stress of female students is higher than male students. The difference between the mean scores of male and female students of examination stress is 3.39.

Medium of Instruction: The mean score of students who are studying in Tamil medium is higher than the students who are studying in English medium. The difference between the two groups is found to be 9.33.

Type of school Management: The mean score of students studying in government school is higher than students studying in other two types of school. The difference is found to be 7.29.

Location of Residence: The mean scores of students studying in rural residence environment are higher than students studying in other two type of location of residence. The difference is found to be 2.77.

Academic Achievement: The acceptance of null hypothesis states there is no significant difference between Academic Achievement and gender. This finding coincides with the study of Sinha Nirjharini (1991).

CONCLUSION

The chapter has done a detailed analysis of hypothesis formulated. For statistical techniques Descriptive analysis, Correlation and Chi-square have been used.

Major Findings of the study

1. There is no significant relationship between examination stresses and Academic Achievement in science of XII standard students.
2. There is no significant difference in the examination stress of XII standard students with respect to the Gender.
3. There is no significant difference in the examination stress of XII standard students with respect to the type of school
4. There is no significant difference in the examination stress of XII standard with respect to the Medium of Instruction.
5. There is no significant difference in the examination stress of XII standard with respect to the Location of Residence
6. There is no significant difference in the Academic Achievement in science of XII standard with respect to the Gender.

Recommendations

1. Home atmosphere could be modified in such a way to have less stress and develop good study habits.
2. Parents are advised to guide their children properly for the all round development for the children
3. Allotting separate room, good economic conditions, properly study method and controlling the visitors time are to be encouraged.
4. Holiday helps in reducing stress and during which parents should be that it is spent for constructive purpose.

Suggestions for Further study

1. A study of school admission stress for parents in rural and urban areas.
2. Socio economic levels and low parental stress varied can be studied.
3. Studies of school admission and school admission stress can be compared

4. The effect of personality on examination stress among teachers trainees.

CONCLUSION

The purpose of the present study was study the relationship between examination stress and academic achievement with reference to some selected variables. This study indicated significant relationship among the variables. The study may be found to be useful in the field of education. The findings of this study may serve as a data base for the further study.

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