

Academic Achievement of Secondary Stage Students in Relation to Academic Stress and Personality Types

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ABSTRACT

The study was planned to find out the Academic Achievement of Secondary Stage students in relation to Academic Stress and Personality Types. A sample of 300 grade IX students was selected from the Senior Secondary Schools of Chandigarh. The results of AVOVA showed that the students with High Academic Stress exhibit lower Academic Achievement than the students with Low Academic Stress. The Introvert group of students showed lower Academic Achievement than that of Extrovert group of students. The double interaction effect of Academic stress and Personality types was significant on the Academic Achievement of the students. Low Academic Stress group of students with Introversion exhibited higher Academic Achievement than that of the Introverts with High Academic Stress. Low Academic Stress group of students with Introversion revealed higher Academic Achievement than that of High Academic Stress group of students with Extroversion. Low Academic Stress group of students with Extroversion exhibited higher Academic Achievement than that of Introverts with High Academic Stress. Extroverts with Low Academic Stress revealed high Academic Achievement than Extroverts with High Academic Stress. Introverts with High Academic Stress exhibited no differences with the group of Extroverts with High Academic Achievement. Introverts with Low Academic Stress group of students revealed lower Academic Achievement than Extroverts with Low Academic Stress.

Introduction

Academic Achievement is one of the most important goals of education. The success or failure of a student is measured in terms of Academic Achievement. Academic Achievement means the amount of knowledge gained by the students in different subjects of study. It is concerned with the quantity and quality of learning attained in a subject of study or group of subjects after a period of instruction.

The present study deals with the Academic Achievement of the students. The scores obtained by the students in their 8th Class Examination conducted by Central Board of Secondary Education (C.B.S.E.) for the year 2006 have been taken as the level of their Academic Achievement.

Ellis (1999) states that Stress is a feeling of tension that is both emotional and physical and

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it can occur in specific situations. According to Gupta and Khan (1987) Academic stress is a mental distress with respect to some anticipated frustration associated with academic failure or even an awareness of the possibility of such failure.

Endlar et al (1994) found that Academic Stress has become a source of immediate concern; it also contributes to major health hazards, problems both physical and mental stress diseases. Stress makes a significant contribution to the prediction of subsequent school performance and acts as a negative predictor of academic performance of school children.

Personality is a criterion reference for knowing, understanding or evaluating any person. Personality depends on the psychophysical development of a person. It includes a person's nature, character, intelligence, interest, attitude, aptitude, expectation, ideals etc.

Personality of an individual is strongly determined by the genetic factors. But the environmental factors cannot be ignored. The early experience at home, neighbourhood and school lay foundations for the personality. The personality pattern is the specific traits or a group of related or consistent reactions which characterize the individual's typical manner of personal and social adjustment. Each cultural group has established behavioural patterns appropriate for the members of two sexes. Since personality is a product of cultural influences and is shaped by pressures from the social group, the individual normally comes to think of himself as a member of a particular group and his confirming behaviour becomes habitual. Allport (1961) defined personality as "a dynamic organization, inside the person, of psychophysical systems that create the person's characteristic patterns of behaviour, thoughts, and feelings."

Eysenck (1952) describes personality more or less stable and enduring organization of person's character, temperament, intellect and physique, which determines his unique adjustment to his environment.

Achievement in the area of academics is a complex behaviour. It is a resultant of factors interacting with each other. There are many reasons that have been advanced to the enhancement rate of failure and under achievement. The researches carried out during the last few decades by Frenkel (1960), Stagner (1961), Gupta (1978) and some others have shown that student's academic deficiency is not due to a single factor like family environment but a host of other relevant factors such as I.Q., Personality factors, study habits etc. The results also show that higher level of stress is associated with poor academic performance.

Akrun & Ciarrochi(2003) analyses revealed that academic stress was negatively associated with academic performance. Sohali (2013) also concluded that higher level of academic stress is associated with poor performance.

Some authors (Sharma and Bansal (1991-92) as view that academic achievement of extroverts is better than Academic Achievement of introverts but some authors (Paramjeet & Sharma, 2013) view opposite to that. Parmeshs (1976) in a study revealed that personality dimensions did not affect scholastic achievement.

Many studies have been conducted to evaluate Academic Achievement of students in relation to I.Q., Socio-economic status, intelligence, Achievement Motivation etc.

In this study an attempt has been made to study the Academic Achievement in relation to Academic Stress and Personality Types because no study has been conducted on the variables

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of Academic Stress and Personality Types taken together to investigate its impact on Academic Achievement of secondary stage students studying through Central Board of Secondary Education (C.B.S.E.) in Chandigarh.

Statement of the Problem

Academic Achievement of Secondary Stage Students in relation to Academic Stress and Personality Types.

Delimitations

The following are the delimitations of the study:

1. The study was delimited to Class IX students (session 2005-2006) of Senior Secondary schools affiliated to CBSE of Chandigarh.
2. The investigation was conducted on three variables – Academic Achievement, Academic Stress and Personality.
3. The sample for the study was restricted to 300 Class IX students.
4. The study was analyzed according to statistical considerations of ANOVA.

Objectives

1. To compare the Academic Achievement of high and low groups of Academic Stress of Secondary Stage students.
2. To find out the difference in the Academic Achievement of Introverts and Extroverts.
3. To find out the interaction effect of the variables of Academic Stress and Personality Types on the Academic Achievement of Secondary Stage students.

Hypotheses of the Study

1. The Academic Achievement of high group of Academic Stress will be less than low group of Academic Stress of Secondary Stage Students.
2. There exist no significant difference in the Academic Achievement of Introverts and Extroverts.
3. The interaction effect of Academic Stress and Personality Types will be significant upon Academic Achievement.

Method

‘Descriptive Survey Method of Research’ was adopted to conduct the present Study.

Design

The present study was conducted on 2×2 factorial design, as the purpose of the study was to examine the effects of Academic Stress and Personality Types on Academic Achievement of Secondary school students. Academic Stress and Personality Types were independent variables, whereas Academic Achievement was the dependent variable of the study.

Each of the Independent factors was varied at two levels. The two levels of the factors of Academic Stress (AS) were High Academic Stress (AS₁) and Low Academic Stress (AS₂).

The levels of Personality Types (P) were Introverts (P₁) and Extroverts (P₂).

Sample

All students of Grade IX in Government Senior Secondary Schools of Chandigarh formed the population for the present study. The sample was randomly drawn from Senior Secondary schools of Chandigarh. The students of 9th class were taken up for the study. A sample pool of 300 students was taken up for the study from following Senior Secondary schools. Multistage Sampling was done for the collection of the data. In the first stage five schools were randomly selected out of Senior Secondary schools of Chandigarh. Also, the intact sections of 9th class of the schools were randomly selected.

In the second stage, the tool of Academic Stress was administered and high and low groups of students were formed on the basis of Kelley's (1939) consideration of taking up 27% top and 27% bottom students as constituting the High Academic Stress and Low Academic Stress groups respectively.

In the third stage the Personality Test M.P.I. was given to the students and the groups of Introverts and Extroverts was formed out of the above two groups on the basis of the following criteria:

- Below mean -0.5σ - Introverts
- Above mean $+ 0.5 \sigma$ - Extroverts

Tools Used

1. Scale of Academic Stress taken from Bisht Battery of Stress Scale developed by Abha Bisht (1987).
2. Personality Inventory developed from Maudsley Personality Inventory by Eysenck (1966).
3. The Academic Achievement of the students was measured by the result of the 8th class examination of C.B.S.E. held in March 2006.

Statistical Techniques

1. Calculation of Mean and S.D.
2. Two way Analysis of variance (ANOVA).
3. Calculation of t-ratios for the significant F-ratios.

Analyses of Results

Multiple comparisons between the levels of two variables of Academic Stress and Personality Types based on their total Academic Achievement

Table below shows the summary of 2×2 Analysis of Variance.

Table-1: Summary of ANOVA

Source of Variation	Levels of Variables	Mean	SD	SS	df	MS	F-ratio
Academic Stress (AS)	High (AS ₁)	344.5	39.06	48133.341	1	48133.341	35.423**
	Low (AS ₂)	403.2	41.17				
Personality Types (P)	Introvert (P ₁)	366.57	47.02	6137.512	1	6137.512	4.517*
	Extrovert (P ₂)	388.46	50.61				
Interaction AS × P				6329.512	1	6329.512	4.658*

*Significance at .05 level of confidence

**Significance at .01 level of confidence

The results of table 1 are interpreted as follows:

- High Academic Stress group of students has lower Academic Achievement than that of Low Academic Stress group of students.
- Introvert students has lower Academic Achievement than that of Extrovert group of students.
- The F-ratio for the interaction (AS × P) is significant at 0.05 level of confidence. This shows that difference exist among the Four treatment groups based on (AS × P) interaction.

Table-2: Mean, Sd and t-ratios of multiple comparison between academic stress and personality types based on their academic

Variables	Levels of variables of interaction	Mean	SD	t-ratio
Low Academic Stress Introvert (AS ₂ P ₁)	(AS ₂ P ₁)	383	46.78	2.298*
High Academic Stress Introvert (AS ₁ P ₁)	(AS ₁ P ₁)	344.67	39.05	
Low Academic Stress Introvert (AS ₂ P ₁)	(AS ₂ P ₁)	383	46.78	2.283*
High Academic Stress Extrovert (AS ₁ P ₂)	(AS ₁ P ₂)	344.33	40.8	
Low Academic Stress Extrovert (AS ₂ P ₂)	(AS ₂ P ₂)	426.29	13.4	7.352**
High Academic Stress Introvert (AS ₁ P ₁)	(AS ₁ P ₁)	344.67	39.05	
Low Academic Stress Extrovert (AS ₂ P ₂)	(AS ₂ P ₂)	426.29	13.4	7.103**
High Academic Stress Extrovert (AS ₁ P ₂)	(AS ₁ P ₂)	344.33	40.8	
High Academic Stress Introvert (AS ₁ P ₁)	(AS ₁ P ₁)	344.67	39.05	0.02
High Academic Stress Extrovert (AS ₁ P ₂)	(AS ₁ P ₂)	344.33	40.8	
Low Academic Stress Introvert (AS ₂ P ₁)	(AS ₂ P ₁)	383	46.78	7.103**
Low Academic Stress Extrovert (AS ₂ P ₂)	(AS ₂ P ₂)	426.29	13.4	

The results of table 2 are interpreted as follows:

- Low Academic Stress Group of students with introversion exhibits higher Academic Achievement than High Academic Stress of students with Introversion since the t-ratio (2.298) is significant at 0.05 level of confidence.

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- Low Academic Stress group of students with introversion reveals higher Academic Achievement than high Academic Stress group of students with extroversion, since the t-ratio (2.283) is significant at 0.05 level of confidence.
- Low Academic Stress group of students with extroversion exhibits higher Academic Achievement than introverts with high Academic Stress, since the t-ratio (7.352) is significant at 0.01 level of confidence.
- Extroverts with Low Academic Stress reveals high Academic Achievement than extroverts with high Academic Stress, since the t-ratio (7.103) is significant at 0.01 level of confidence.
- Introverts with high Academic Stress exhibit no differences with the group of Extroverts with high Academic Stress on Academic Achievement, since t-ratio (0.02) is not significant.
- Introverts with Low Academic Stress group of students reveal lower Academic Achievement than Extroverts with Low Academic Stress, since the t-ratio (7.103) is significant at 0.01 level of confidence.

The following conclusions are drawn on the basis of analysis and interpretation of data.

1. High Academic Stress group of students exhibits lower Academic Achievement than that of Low Academic Stress group of students.
2. The Introvert group of students shows lower Academic Achievement than that of Extrovert group of students.
3. The double interaction effect of Academic stress and Personality types is significant on Academic Achievement of the students.

Analysis in terms of t-ratios for the AS X P interaction shows that:

- Low Academic Stress group of students with Introversion exhibits higher Academic Achievement than that of the Introverts with High Academic Stress.
- Low Academic Stress group of students with Introversion reveals higher Academic Achievement than that of High Academic Stress group of students with Extroversion.
- Low Academic Stress group of students with Extroversion exhibits higher Academic Achievement than that of Introverts with High Academic Stress.
- Extroverts with Low Academic Stress reveal high Academic Achievement than Extroverts with High Academic Stress.
- Introverts with High Academic Stress exhibit no differences with the group of Extroverts with High Academic Achievement
- Introverts with Low Academic Stress group of students reveal lower Academic Achievement than Extroverts with Low Academic Stress.

Educational Implications

The study has educational implications for teachers and the students as follows:

- The highly significant effect of Academic Stress on Academic Achievement suggests that the teachers should encourage the students with High Academic Stress for ensuring

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higher Academic Performance.

- The findings of the present study are not only useful to researchers in terms of further research but they will also have applications to the classroom practices, organizational management in schools and personality development. It may also help to the teachers, parents, guidance workers to identify the low achievers, diagnose their problems and providing guidance to improve their performance.
- The teachers can focus on Introverts to ensure their high Academic Achievement.
- The teachers can guide and motivate students who have high Academic Achievement to help other students of their class.

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