Impact of Gender, Intelligence and Stress on Academic Achivement of Secondary School Students

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Abstract

In today's world exams are important aspects of lives of the children are tested throughout the year. They have significant implications in shaping young people's future. The children are expected to achieve due to high expectations and pressures from school and parents. This performance depends upon the children ability to grasp and pressure mounted on them by the parents.

INTRODUCTION

This pressure is a significant issue for the students. Students in the pressure have lower levels threshold of anxiety when evaluated. Thus students perceived such expectations and experiences as stressful. In literature stress is body's nonspecific response mechanism towards demands or strain made on itself or the environment (Selye, 1974 and Rosenham and Seligman, 1989). It is a process by which we perceived and cope with environmental threats and challenges (Myers, 2005). Stress can be defined in Webster new world dictionary as 'a condition typical characterized by symptoms of metal and physical tension or strain, as depression or hypertension, that can result from a reaction to a situation in which a person feels threatened, pressured, etc'. An individual can be stressed in daily life in a different way, and stress can be viewed as the bodies' reaction both neurologically and physiologically to adapt to the new condition (Yakushko, Watson and Thompson, 2008).

Keeping the foresaid observations in mind the study was taken up with the following objectives.

OBJECTIVES

1)   To study the influence of gender on academic achievement of Secondary school students.

2)   To study the influence of intelligence and gender on academic achievement of Secondary school students.

3)   To examine the impact of stress on academic achievement of Secondary school students.

HYPOTHESES

1.   There would be significant impact of gender on academic achievement of Secondary school students.

2.   There would be significant impact of intelligence on academic achievement of Secondary school students.

3.   There would be significant impact of stress on academic achievement of Secondary school students.

4.   There would be significant interaction effect among gender, intelligence and stress on academic achievement of Secondary school students.

SAMPLE

The present study is descriptive in nature. It is conducted in Vijayapura District, Karnataka. The sample comprises of 400 students (male=200 and female=200) from Secondary schools of Vijayapura District. Purposive sample was used to collect the sample of the study.

TOOLS

The measure the intelligence of the subjects, the Standard Progressive Matrices and prepared and standardized by Raven, J.C. (1972) with Indian norms was adopted.

Stress was assessed by a 40 item rating scale which was originally developed by Kim (1970) was used in the present study. The scale was adapted to Indian conditions by Rajendranand Kaliappan (1990)

ACADEMIC ACHIEVEMENT

Academic Achievement: Marks obtained by students in their (end exams) annual examinations were collected from the school records.

PROCEDURE

The investigator obtained formal permission from the school headmasters to obtain the IX class marks of X class students from the school records and approached the office staff.

The data was collected in three phases in the first phase the children were met personally and were explained the need for such study and informed that the data provided by them would be exclusively used for research purpose only.

In the second session they were given RPM and based on their scores they were divided into two groups. Those students who obtained 75 percentile and above were grouped as having high intelligence and those who got below 50 percentile points were grouped as having low intelligence.

In the third phase they were given stress inventory based on their scores they were classified as having low stress and high stress.

STATISTICAL ANALYSIS

The obtained data are analyzed quantitatively by using descriptive statistics, such as Mean and Standard Deviation and Inferential Statistics such Analysis of Variance (ANOVA) wherever necessary to test the hypotheses and the results are presented in following pages.

RESULTS AND DISCUSSION

Table 2: Means and S.Ds Academic Achievement Scores.

		LOW INTELLIGENCE		HIGH INTELLIGENCE	
		LOW STRESS	HIGH STRESS	LOW STRESS	HIGH STRESS
BOYS	MEAN	61.59	58.06	68.43	64.55
	S.D.	13.79	14.31	12.51	12.56
GIRLS	MEAN	66.81	66.73	79.18	69.50
	S.D.	10.23	10.61	13.07	12.85

Grand Means

Boys=63.16   Low Intelligence=63.30   Low Stress=69.00
Girls=70.55   High Intelligence=70.41   High Stress=64.71

A close observation of table-clearly shows that Secondary school girls with high intelligence with low stress are obtained a high mean of (79.18) compared to Secondary school boys with low intelligence with high stress (58.06). This indicates that Secondary school girls with high intelligence with low stress are better achievement compared to Secondary school boys with high intelligence with high stress.

There are mean differences among the eight groups of subjects with regard to academic achievement. However in order to test whether there are any significant differences among the eight groups of subjects in their disciplinary self-efficacy, data are further subjected to analysis to variance and the results are presented in table-3.

Table-3: Summary of Analysis of Variance in relation to Academic Achievement

Source	Type of III Sum of Squares	df	<Mean Square	F value
Gender (A)	5225.781	1	5225.781	28.355**
Intelligence (B)	4830.793	1	4830.793	26.212**
Stress (C)	1662.771	1	1662.771	9.022**
Gender x Intelligence	17.183	1	17.183	0.092@
Gender x Stress	25.558	1	25.558	0.138@
Intelligence x Stress	569.146	1	569.146	3.087@'
Gender x Intelligence x Stress	451.544	1	451.544	2.449@
Error	72241.899	392	184.291	-
Corrected Total	85169.189	399	-	-

 ** - Indicates Significant at 0.01 level @ - Indicates Not Significant

The "F" value of 28.355 for the variable gender is significant at 0.01 level, indicating that gender would significantly influence the academic achievement of Secondary school students. It means that there is a significant impact of gender on academic achievement of Secondary school students. Secondary school girls are better in achievement (70.55) compared to Secondary school boys (63.16). Thus the hypothesis-1 "*There would be significant impact of gender on academic achievement of Secondary school students*" is accepted as warranted by the results. The finding of the present study inline with earlier findings of Brunie et al. (2006)

and Joshi and Srivastava (2009) who also found significant difference between male and females with regard to academic achievement.

The "F" value of 26.212 for the variable intelligence is significant at 0.01 level, indicating that intelligence would significantly influence the achievement of Secondary school students. It means that there is significant difference between high and low intelligent students in academic achievement. High intelligence of Secondary school students has better academic achievement (70.41) compared to Secondary school students with low intelligence (63.30). Thus the hypothesis-2 "***There would be significant impact of intelligence on academic achievement of Secondary school students***" is accepted as warranted by the results. The findings of the present study consistent with earlier studies of RadhaRani.R (1992) and Chandra.R and Azimuddin.S (2013) found that there is a significant influence of intelligence on academic achievement of students.

The "F" value of 9.022 for the variable stress is significant at 0.01 level, indicating that academic achievement of Secondary school students would significantly influenced by stress. It means that there is a significant difference between high and low stress category students on achievement. Secondary school students with better academic achievement (69.50) compared to Secondary school students with high stress (64.71). Thus the hypothesis-

CONCLUSION

Based on the results discussed above it can be concluded as follows:

1.   Secondary school girls had higher academic achievement compared to Secondary school boys.

2.   Secondary school students with high intelligence have better academic achievement than the Secondary school students with low intelligence.

3.   Secondary school students with low stress have better academic achievement than the Secondary school students with high stress.

4.   There is interaction effect among gender, intelligence and stress on academic achievement of Secondary school students.

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