

A study of academic stress and its effect on self efficacy of the students

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Abstract:

In the recent times academic stress has become a most concerning matter to the educationists as well as to the psychologists. Immense studies have been made by different researchers on the influence of academic stress on different aspects of the development of students. On the other hand self-efficacy of the student is necessary for the academic performance of the students and for social developments also. In the present investigation the researchers have studied whether the academic stress of the male and female students differs significantly and whether the academic stress of the students varies with classes and whether academic stress has relationship with the self-efficacy of the students. For this purpose a sample of 236 students has been taken from different schools of South Dinajpur district comprising male and female students of class VII, VIII and IX. Academic stress of the students are measured by the Scale for Assessing Academic Stress (SAAS) as developed and standardized by Sinha et al.(2001). The self-efficacy of the students are measured by the Self-Efficacy Scale (SES) as developed and standardized by Mathur and Bhatnagar (2012). The significant difference of the academic stress on the male and female students is tested by t test and it is seen that there is no significant difference of the academic stress on male and female students. The significant difference of the academic stress on different classes is tested by F- test (ANOVA) and it is seen that the academic stress depends on classes. Also the Pearson's coefficient of correlation between the academic stress and self-efficacy is calculated and it is -0.70061 and by t test it is seen that the correlation is significant. The regression analysis has also been done to estimate the dependence of self-efficacy on the academic stress.

Keywords: Academic stress, Self-efficacy, SAAS.

Introduction:

Self-efficacy of a student is actually the belief of that student that he or she can perform some behavior or task successfully. This belief of the student influences his course of action he pursues and so it becomes gradually the factor of individual difference of the students. It highly affects the efficiency and competency of the student in coping with the problems of life. Social cognitive theory postulates that the human functioning is the resultant of the interaction of the personal factors and behaviours with the environmental conditions. Self-efficacy is one of such personal factor. It controls the individual's task choice, effort, persistence and achievement. The student with high self efficacy believes that he or she can deal every event and situation effectively and has high confidence of succeeding in any task and overcoming any obstacle. This confidence level of the students continuously supplies power in them to succeed and overcome any situation. So self-efficacy of the students is a very important factor of development in life. On the other hand academic stress is a most commonly used word in India in the last two decades of twentieth century. Information load, high expectations of the family members, unrealistic ambitions, limited opportunities, high competitiveness are the main source of academic stress among the students. Academic stress paves the way of poor academic performance, diminishing peer popularity, depression, attention difficulties, somatic complaints, substance abuse etc, (Sinha, 2000). The stressed children show the sign of emotional disabilities, shyness, aggressive behavior, social phobia and lack of

interest in otherwise enjoyable activities. Academic stress induces anxiety and fear among children which affects the academic performance of the students. It is a regular activity of person to adjust between the internal state and external environment. The failure of a person in this adjustment leads that person to fail everywhere. A stressed person cannot show efficiency in this adjustment and so failure becomes inevitable. The relationship of academic stress, self-efficacy and depression with academic performance of high school students of Iran has been established (Ali Kanekeshi, 2012). Academic stress has negative correlation with academic achievement and mental health of the adolescents (Anjna Agarwal, 2011). It has direct effect on mental health of the students (Rangaswamy, 1995). The presence of academic stress on the students can be identified by the presence of five principal identifying factors. These factors are cognitive indicator, affective indicator, physical indicator, social or interpersonal indicator and motivational indicator. This study is a little step of the investigators to study the academic stress of the students and find its effect on the self-efficacy of the student.

Objectives of the study:

The academic stress highly influences on different developmental aspects of the students. It highly affects the social life, mental health and the educational achievement of the students. So, thorough study of academic stress and its effect on the self-efficacy of the student are needed. The main objectives of this investigation are

1. To study whether there is any significant difference in the academic stress of the male and female students.
2. To study whether there is any significant difference in the academic stress of the students across different classes.
3. To study whether there is any significant correlation between the academic stress and self-efficacy of the students.

Hypotheses:

The following hypotheses are made

H₀₁ : There is no significant difference in the academic stress of the male and female students.

H₀₂: There is no significant difference in the academic stress of the students across different classes.

H₀₃: There is no significant correlation between the academic stress and self-efficacy of the students.

Methodology:

The methodology followed in this study is descriptive correlational and inferential study. For this study a sample of 236 students comprising male and female students of classes VII, VIII and IX is taken by cluster sampling. The academic stress of the students are measured by the Scale for Assessing Academic Stress (SAAS) as developed and standardized by Sinha et al.(2001). The self-efficacy of the students is measured by the Self-Efficacy Scale (SES) as developed and standardized by Mathur and Bhatnagar (2012). The significant difference of the academic stress of the male and female students is tested by t test and the significant difference of the academic stress of the students across different classes is tested by F-test (ANOVA). The Pearson's coefficient of correlation between the academic stress and self-efficacy is calculated and the significance of the coefficient of correlation is tested by t test. The regression analysis is applied to the data to estimate the dependence of the self-efficacy on the academic stress of the students.

Population: All the students of South Dinajpur district comprise the population of the study.

Sample: For this study a sample of 236 students of classes VII, VIII and IX were taken from two randomly selected secondary schools of South Dinajpur district by cluster sampling. The sample consists of 115

male and 121 female students and it contains 85 students of class VII, 81 students of class VIII and 70 students of class IX. The demography of the sample is given below:

	VII	VIII	IX	Total
Male	41	40	34	115
Female	44	41	36	121
Total	85	81	70	236

Tools:

In this study two tools have been used, one is the Scale for Assessing Academic Stress (SAAS) and the other is Self-Efficacy Scale (SES). The Scale for Assessing Academic Stress (SAAS) is developed and standardized by Sinha et al.(2001). This scale contains 30 items based on the five principle identifying indicators namely cognitive indicator, affective indicator, physical indicator, social or interpersonal indicator and motivational indicator. There are seven items on cognitive indicator, six items on affective indicator, five items on physical indicator, five items on social and interpersonal indicator and seven items on motivational indicator. It is a self reporting measure developed to measure the academic stress in terms of their presence or absence in the student. The respondent have to answer one out of two alternatives 'yes' or 'no'. All 'yes' answers will be awarded 1 mark and all 'no' answers will be awarded 0 mark. Total of the scores thus obtained gives the measurement of academic stress. On the other hand the Self-Efficacy Scale (SES) is developed and standardized by Mathur and Bhatnagar (2012). This test consists of 22 items based on eight dimensions namely Self Regulatory Skills, Self Influence, Self Confidence, Social - Achievement, Self, Self Evaluation, Self Esteem, and Self Cognition. The number of items in each of the above dimensions is respectively 2, 3, 3, 3, 3, 3, 2, 3. This is a Likert scale type test. The total score as obtained by a student is the measure of the self-efficacy of that student.

Data Analysis:

The study shows that the mean academic stress score of all the students taken together is 21.05932 and S.D is 3.258488. The mean of the academic stress of the male students is 21.36522 with S.D 3.290951 and that of the female students is 20.7686 with S. D 3.213929. When class-wise result is studied it is seen that the mean academic stress score of the students of class VII is 20.45882 with S.D 3.213929 , that of the class VIII students is 21.14815 with S.D 3.146868 and that of the class IX students is 21.68571 with S.D 3.141784. The results are shown in the following table.

Table 1: Showing mean and S.D of the academic stress scores.

Groups	Mean	S.D
All students taken together	21.05932	3.258488
Male only	21.36522	3.290951
Female only	20.7686	3.213929
All class VII students	20.45882	3.386081
All class VIII students	21.14815	3.146868
All class IX students	21.68571	3.141784

The above table shows that the mean academic stress score of the male students is slightly greater than that of the female students. Moreover it is also seen that the mean academic stress scores increase with the class. The mean self efficacy score of all the students taken together is 60.88559 with S.D 13.00571. The mean self efficacy score of the male students only is 60.95652 with S.D 13.14921 and that of the female students is 60.81818 with S.D 12.9222. The mean self efficacy score of the class VII students is 58.68235 with S.D 12.43767, that of the class VIII students is 61.14815 with S.D 12.93939 and that of the class IX students is 63.25714 with S.D 13.4861. The results are shown in the following table.

Table 2 : Showing mean and S.D of the self-efficacy scores.

Groups	Mean	S.D
All students taken together	60.88559	13.00571
Male only	60.95652	13.14921
Female only	60.81818	12.9222
All class VII students	58.68235	12.43767

All class VIII students	61.14815	12.93939
All class IX students	63.25714	13.4861

To test the null hypothesis H_{01} t-test is used. The t value as obtained to test this hypothesis is 1.402904 and the degree of freedom is 234. The critical value of t for 234 degree of freedom and 1% level of significance is 2.597002. Thus $t = 1.402904 < 2.597002$. Therefore H_{01} is accepted at 1% level of significance, that is, there is no significant difference between the mean academic stress scores of male and female students. To test the null hypothesis H_{02} F-test (ANOVA) is used. The F value as obtained to test this hypothesis is 2.809472 and the degree of freedom is (2, 233). The critical value of F for (2, 233) degree of freedom and 1% level of significance is 4.697401. Thus $F = 2.809472 < 4.697401$. Therefore H_{02} is accepted at 1% level of significance, that is, there is no significant difference between the mean academic stress scores of the students across different classes. The Pearson's coefficient of correlation between the academic stress score and self-efficacy score is calculated and it is -0.70061. To test the significance of this correlation again t-test is used. The t value for the coefficient of correlation is -15.0197 and the degree of freedom is 234. Since $|t| = 15.0197 > 2.59700248$ (the critical value of t at 1% level of confidence), so H_{03} is rejected, that is the coefficient of correlation is significant at 1% level of confidence.

The regression analysis of the data is done taking self-efficacy as the dependent variable and academic stress as the independent variable to observe the dependence of self-efficacy on academic stress and the following results are observed:

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	119.775	3.967		30.191	.000
	Academic Stress	-2.796	.186	-.701	15.020	.000
a. Dependent Variable: Self-efficacy						

Thus the regression equation of self-efficacy on academic stress is

$$y = -2.796x + 119.775$$

where y denotes self-efficacy score and x denotes academic stress score.

Conclusion:

The result of the data analysis reveals that there is no significant difference in the academic stress of the male and female students at 1% level of significance and there is no significant difference in the academic stress of the students across different classes at 1% level of significance. Pearson's coefficient of correlation between the academic stress and self-efficacy of the students is calculated and it is -0.70061. The significance of this coefficient of correlation is tested by t- test and it is seen that the coefficient of correlation is significant at 1% level of significance. The equation of regression shows that the constant term has a large contribution of 119.775 on the value of y and the regression coefficient is negative and it is -2.796.

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