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Academic Stress and its Sources among University Students

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ABSTRACT

Stress has become part of students' academic life due to the various internal and external expectations placed upon their shoulders. Adolescents are particularly vulnerable to the problems associated with academic stress as transitions occur at an individual and social level. It therefore, becomes imperative to understand the sources and impact of academic stress in order to derive adequate and efficient intervention strategies. The study employed a quantitative research design where participants were screened using Academic Stress Scale (Rajendran& Kaliappan,1991 from four streams namely, commerce, management, humanities, and basic sciences. The five dimensions of sources such as personal inadequacy, fear of failure, interpersonal difficulties with teachers, teacher pupil relationship and inadequate study facilities were further analysed and gender differences were also obtained. Understanding the sources of stress would facilitate the development of effective counselling modules and intervention strategies by school psychologists and counsellors in order to help students alleviate stress.

Keywords: Academic stress, Academic anxiety, Adolescents, Stressors, Sources of stress.

INTRODUCTION

For the longest time, people assumed that the student population was the least affected by any sort of stress or problems. Stress is now understood as a lifestyle crisis(Masih & Gulrez, 2006) affecting any individual regardless of their developmental stage(Banerjee & Chatterjee, 2016). The only task students were expected to undertake was to study and studying was never perceived as stressful. What proved to be stressful was the expectations parents had for their children, which in turn grew into larger burdens that these children could not carry anymore. According to the statistics published by National Crime Records Bureau, there is one student every hour that commits suicide(Saha,2017). The bureau registered 1.8% students who committed suicide due to failing in examinations and an 80% rise in suicide rates during a one-year time frame. A 2012 Lancet report also quoted that the 15-29 age group bracket in India has the highest rate of suicide in the world (as cited in "India has the Highest Suicide Rate", n.d.) and these numbers show no sign of dropping.

Academic stress has been identified as the primary cause of these alarming figures. Lee & Larson (2000) explain this stress as an interaction between environmental stressors, student's appraisal and reactions for the same. It has now become a grave reality that is termed as a

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"career stopper" (Kadapatti & Vijayalaxmi, 2012). It therefore,becomes a significant cause of concern as it is symptomatic of rising mental health concerns in India (Nadamuri & Ch,2011).

Depression, anxiety, behavioural problems, irritability, etc. are few of the many problems reported in students with high academic stress(Deb, Strodl& Sun, 2015;Verma, Sharma & Larson, 2002). Incidences of depression were also found among stressful adolescents as it is linked with inability to concentrate, fear of failure, negative evaluation of future, etc. (Busari, 2012).Adolescents were also reported to be indulging in various risky behaviours such as increased consumption of alcohol and drugs, unprotected sexual activities, physical inactivity, poor eating and sleeping patterns (American College Health Association, 2009; Bennet & Holloway, 2014; King, Vidourek& Singh, 2014). The pressure these students face to perform is so severe resulting in five-fold increase in suicide attempts.

It becomes imperative to also understand that low stress does not necessarily ascertain that students will perform better, but in fact under these circumstances, they would perceive the task as unchallenging and may also get easily bored (Uchil, 2017). Though certain levels of stress push students towards optimum performance, when it is not managed efficiently due to inadequate resources to cope with the stress, it can have dismal consequences for the student as well as the institution.

The stress response elicited by every individual is identical regardless of the trigger causing. For example, marital stress, exam anxiety, work stress, etc. would elicit identical physiological responses from the body. This happens primarily due to the adreno-medullary system, which is part of the sympathetic division of our nervous system and the adrenocortical axis (Bourne & Yaroush, 2003) resulting in the "fight or flight" reaction. Some of the physiological changes that can be observed in the body are changes in heart rate(HR), blood pressure (BP), respiratory rate, increased blood flow towards skeletal muscles, etc.

While the stress response may be identical, the sources of stress reported by individuals vary. These differences would be seen in the causes, sources and consequences of stressors. Some of the common stressors reported in an academic setting include excessive assignments, poor time management and social skills, peer competition, etc. (Fairbrother & Warn, 2003). These results are consistent with studies conducted in India as well as reported by Sreeramareddy, Shankar, Binu, Mukopadhyay, Ray & Menezes (2007).

Other individual specific factors include problems in financial management, changes in living atmosphere, difficulties managing personal and academic life, etc. (Byron, Brun & Ivers, 2008; Chernomas & Shapiro, 2013; Goff, 2011; Jimenez, Navia-Osorio & Diaz, 2010; Moscaritolo, 2009).

The educational system also plays an enabling role subsequently leading to increased stress levels experienced by students. Some of the sources include overcrowded lecture halls, semester grading system, inadequate resources and facilities (Awing& Agolla, 2008), vastness of syllabus (Agrawal &Chahar, 2007; Sreeramareddy *et al*., 2007), long hours and expectations of rote learning (Deb *et al*., 2015). Parents and institutions relentlessly instill the fear of failure which affects their self-esteem and confidence. Ang & Huan (2006) reported increased expectations as one of the factors responsible for increased stress levels.

Thus, as the sources of stress vary despite identical stress responses elicited by the body, understanding the former will help develop tailor made interventions targeted to reduce stress levels of students, which will in turn contribute towards holistic well-being of the individual.

METHOD

The main objective of the study was to find if there exists academic stress among students. Further, this study was also conducted to understand if there gender wise and stream wise differences in academic stress reported by the participants. Differences in gender and stream were also noted in the different dimensions or sources of stress as assessed by the Academic Stress Scale. It was hypothesized that there exists significant gender differences and stream wise differences in academic

stress. It was also hypothesized that the sources of stress will also significantly vary among gender and the different streams.

Participants for the study were selected from a general pool of students using random sampling technique where the classes were chosen based on names picked out from a fish bowl. Informed consent form and demographic profile sheet were given to all the participants and the objectives of the study were explained. Academic Stress Scale developed by Rajendran and Kaliappan(1991) was used to understand the sources of stress. This questionnaire was selected on the basis of previous results obtained during the pilot study of this project. It measures the sources of stress primarily on four dimensions namely, personal inadequacy, fear of failure, teacher pupil relationship, interpersonal difficulties, and inadequate study facilities. The approximate administration time was around 25 minutes. Incomplete forms and questionnaire were not included in the study. Results were then analyzed using SPSS v.21.

RESULTS AND DISCUSSION

The main objectives of the study were to understand the level of academic stress faced by students and the different sources that contributed to the same. Gender differences and stream wise differences in total academic stress were also analysed. Data was collected from four academic streams namely, commerce, humanities, science, and management. The students who responded to the questionnaire were currently in their final year of undergraduate programme. The obtained data was subjected to appropriate statistical analysis and the results are discussed in this session.

The total number of participants who were subjected to the analysis procedures were 336. The mean of the sample on the total academic stress score was 53.46(SD=25.70) as reflected in table 1. Using the mean as cut-off for preliminary analysis and interpretation, it was found that 48.80% of students fall under the category of having average to high stress levels.

The second major objective was to find if there are any significant gender differences in the total academic score obtained by the participants. The total number of male and females were 162 and 174 with a mean score of 53.01(SD=26.75) and 53.87(SD=24.75) respectively. According to the independent samples t- test results indicated in

Table 1: Showing mean and standard deviation of sample on academic stress

N	Mean	Std. deviation
336	53.46	25.70

Table 2: Showing results of independent samples t test of the two groups, males and females

Gender	N	Mean	Std.Deviation	Sig
Males	162	53.01	26.75	.317
Females	174	53.87	24.75	

Multivariate analysis

Gender	Value	Sig
Wilk's Lambda	.954	.008*

*p<0.05

Tests of Between Subjects Effects

	Variable levels	F	Sig
Gender	Personal inadequacy	.491	.484
	Fear of failure	5.207	.023*
	Interpersonal difficulties	3.240	.073
	Teacher pupil relationship	.015	.902
	Inadequate study facilities	.006	.940

*p<0.05

table 2, there exists no significant difference in total academic stress experienced by males and females.

To understand if there are significant differences in dimensions of academic stress experienced by males and females, the data was subjected to multivariate test and the results are presented in table 3.

The results presented in table 3.a. and 3.b. indicate that the scores obtained on the dimensions of academic stress differed significantly (.954, $p<0.05$) across the two groups, males and females. Further analysis also revealed that it was the fear of failure dimension that differed significantly $F=5.207$, $p<0.05$, with females reported to have higher scores (Mean=12.29, SD=7.39) than males (Mean=10.53, SD=6.70).

The third major objective was to find whether there exist significant stream wise differences in academic stress. The data was subjected to ANOVA test and results are presented in table 4.

It can be observed from table 4.a., 4.b., and 4.c. that there was a significant difference in academic stress $F=4.926$, $p<0.05$ across the four streams with the Commerce stream reporting the highest stress (Mean=61.24, SD=21.34) in comparison to the Management stream (Mean=57.64, SD=24.27) and Science stream(Mean=49.26, SD=28.57). It can be seen that the Humanities stream has reported the least academic stress (Mean=47.97, SD=25.28) in comparison to the others.

Post-hoc analysis was also conducted to understand which of the streams significantly varied in total academic stress in comparison with the others. Results indicate that the Humanities stream significantly differed in stress scores between Commerce and Management, $p<0.05$. There were no significant differences found in stress score reported by Humanities stream and Science Stream. Results indicated significant difference in stress scores between Commerce stream and Science stream as well, $p<0.05$.

To understand if there are stream differences in the dimensions of stress, the data was subjected to multivariate tests and the results are presented in table 5.

Results presented in table 5.a. and 5.b. indicate that there were significant stream differences (Value=4.084, $p<0.1$)across the different dimensions of stress as assessed by the questionnaire. Further analysis indicate that the significant differences were shown in the dimensions personal inadequacy, interpersonal difficulties, teacher pupil relationship and inadequate study facilities. Fear of failure was the only dimension that did not show any significant difference across streams which is in contrast to the gender wise differences where it was observed that fear of failure was the only significant dimension that varied with respect to gender.

Descriptive statistics of academic stress score across different streams

Stream	N	Mean	Std. deviation
Humanities	93	47.97	25.28
Commerce	55	61.24	21.34
Management	104	57.64	24.27
Science	84	49.26	28.57

ANOVA

Academic Stress	F	Sig
Between groups	4.926	.002*

*p<0.01

Post-hoc analysis Tukey test for Multiple comparisons across different streams

Stream	Comparison	Sig
Humanities	Commerce	.012*
	Management	.038*
	Science	.986
Commerce	Management	.829
	Science	.033*
Management	Science	.109

*p<0.05

Results presented in table 5.c. denote that there exist significant significant stream wise differences in the different dimensions of academic stress. The Humanities stream(Mean=10.92,

Multivariate analysis

Gender	Wilk's Lambda	Value	Sig
		4.084	.000*

p<0.01

Tests of Between Subjects Effects

	Variable levels	F	Sig
Stream	Personal inadequacy	2.751	.043*
	Fear of failure	1.370	.252
	Interpersonal difficulties	10.425	.000*
	Teacher pupil relationship	7.036	.000*
	Inadequate study facilities	5.998	.001*

p<0.01

Post-hoc analysis of differences in dimension of academic stress across different streams

Variable	Stream	Comparison	Sig
Personal inadequacy	Humanities	Commerce	.023*
		Management	.475
		Science	.510
	Commerce	Management	.332
		Science	.381
	Management	Science	1.00
Fear of failure	Humanities	Commerce	.304
		Management	.999
		Science	.924
	Commerce	Management	.239
		Science	.652
	Management	Science	.873
Interpersonal difficulties	Humanities	Commerce	.087
		Management	.001*
		Science	.479
	Commerce	Management	.875
		Science	.002*
	Management	Science	.000*
Teacher pupil relationship	Humanities	Commerce	.153
		Management	.005*
		Science	.868
	Commerce	Management	.897
		Science	.034*
	Management	Science	.000*
Inadequate study facilities	Humanities	Commerce	.003*
		Management	.002*
		Science	.322
	Commerce	Management	.973
		Science	.224
	Management	Science	.287

*p<0.05

SD=6.51) differed significantly on the dimension personal inadequacy with Commerce stream(Mean=14.02, SD=5.71), interpersonal difficulties(Mean=7.62, SD=5.30) with Management stream(Mean=10.43, SD=5.42), teacher pupil relationship(Mean=10.39, SD=6.56) with Management stream(Mean=13.30, SD=6.06) and inadequate study facilities (Mean=8.08, SD=5.18) with Commerce (Mean=11.44, SD=4.64) and Management streams (Mean=11.03, SD=6.06), $p<0.05$.

The Commerce stream differed significantly on the dimension interpersonal difficulties (Mean=9.76, SD=4.97) with Science stream (Mean=6.47, SD=5.46) and teacher pupil relationship (Mean=12.58, SD=5.36) with Science stream(Mean=9.67, SD=6.17), $p<0.05$.

Along with significant differences in dimensions with Humanities stream, the Management stream differed significantly in the dimension interpersonal difficulties (Mean=10.43, SD=5.42) with Science stream (Mean=6.47, SD=5.46) and teacher pupil relationship (Mean= 13.30, SD=6.06) with Science stream (Mean=9.67, SD=6.17), $p<0.05$.

Prevalence of academic stress is not a stream specific situation. High stress levels were reported in medical and engineering students highlighting the need for medical attention and interventions (Behere, Yadav & Behere, 2011).

CONCLUSION

Academic stress has become a pervasive problem across countries, cultures, and ethnic groups (Wong, Wong & Scott, 2006). 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. Stream wise differences in the experience of stress were also highlighted. Management of the condition thus becomes fundamental at every level namely, personal, social and institutional. Techniques like biofeedback, yoga, life-skills training, mindfulness meditation, psychotherapy have been found to be effective in reducing stress among students Understanding the source from the different spheres will enable professionals in the field to tailor-make intervention for students combining the most effective strategies. Improving the holistic well-being of the student would eventually be productive not only the individual but, for the overall productivity of the institutions as well.

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