Impact of Stress on Academic Achievement among Engineering Students

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ABSTRACT

The present generation faces more stress. The present study is aimed to find the relationship of Stress with Academic achievement among engineering students. The target population of the study comprised of students of few Engineering colleges under VTU (Visvesvaraya Technological University). For the study, a sample of 20 Undergraduate students of the Visvesvaraya Technological University (studying Engineering) was taken. The Cohen Perceived Stress Scale was used to measure the level stress among the students. The in-depth investigation of the findings obtained through this study reveals that the level of stress was found high for both Low and High scorers. The findings of the study will be useful in assisting Educators, Counselors, Psychologists, and Researchers to develop strategies to enhance students' psychological well-being.

Keywords: *Stress, Low and High Achieving Students, University*

Stress is a mechanism of any internal or external demand made upon the body (Dusselier et al., 2005). Stress is considered as a state of individuals that result from their interaction with the environment that is perceived as too demanding and a threat to their well-being. The stressors are not only physical, but may also involve emotions. Many people experience stress as they combine busy lives and the demands of study and or work while trying to also save time for friends and family. For some people, stress becomes almost a way of life. We all experience episodic stress – getting ready for a major exam, completing an important paper, perhaps getting ready for an important interview. However, a continuous “state” of stress should not become a way of life. We know that stress – over a prolonged period of time – can have increase certain health risk, to say nothing of the wear and tear that happens to relationships and general wellbeing.

Failed relationship, family pressures or studies, peer pressure (tough competition). Students pursuing professional courses and female students show higher scores - often related to academic

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goals, performance and exams (Isabella & Manjula, 2011; Jadoon et al, 2010; Ospina et al, 2011; Uras, et al, 2012). Sources of academic stress include: Academic pressures (73%); Not enough time for studies (63%); Future/ career (61%); Finances (41%); Not enough time (other) (40%). Inappropriate academic choices, unrealistic parental expectations, limited opportunities to get admission in to professional courses and good colleges (Das & Majula, 2009; Meghna & Manjula, 2012; Hesi & Manjula, 2011; Saumya & Manjula, 2010; Sahani, 2006).

LITERATURE REVIEW

Stress was found to be a part of students' life and could give impact on how students cope with the demands of academic life. Students reported experiencing academic stress at predictable times each semester with the greatest sources of academic stress resulting from taking and studying for exams, grade competition, and the large amount of content to master in a small amount of time (Rawson, Bloomer, & Kendall, 1999).

One model that is useful to study in understanding stress among students is the person environment model (Misra & McKean, 2000). According to this model, individuals can appraise stressful events as challenging or threatening. When students perceived their education as a challenge, stress can bring them a sense of competence and an increase capacity to learn. However, when education is perceived as a threat, stress can elicit feelings of hopelessness and a foreboding sense of loss, thus leading to lower academic achievement.

Research shows that there exists a relationship between stressful life events and poor academic performance among college students and there is a connection between health-related quality of life and stress (Dusselier et al., 2005; Misra & McKean, 2000). Because stress adversely affects psychological and physical health, undergraduate students reported that stress was the most common health factor impacting their academic performance (Dwyer & Cummings, 2001). Demakis and McAdams (1994) found that undergraduate students who reported heightened levels of stress had significantly more physical health problems and less satisfaction towards academic achievement compared to those reporting lower levels of stress.

The perception of the stress by the students could play significant roles on its seriousness. When stress is perceived negatively or becomes excessive, students experience physical and psychological impairment (Murphy & Archer, 1996). Excessive stress among students was found to reduce effectiveness of their study which contributes to bad habits, and results in negative long-term consequences, including absenteeism, poor academic performance, and school dropout.

Wintre and Yaffe (2000) found that increases in stress during the first year predicted decreased overall adjustment and made the students more vulnerable to many social and psychological problems, thus contributed lower grade point average (GPA) in the final year.

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Social situation is another important factor in causing psychological problems. A more recent study showed that that social situation of the students could activate stress (Dusselier et al., 2005). It was found that timid individuals feel and sense stress more compared to their outgoing friends. There is a possibility that the students will not become active in their academic life. The same study showed that stress together with sleep loss and substance abuse will lead to college depression.

The findings highlighted in the previous research found that stress influences academic achievement. The presence of stress could affect students' performance in their academic life. Thus, the higher the stress level, the lower the academic achievement.

Objective of the Study

1. The objective of the study is to find the relationship of Stress with the academic achievements of students.

Hypothesis

The following hypotheses are formulated and tested:

The Null Hypotheses is as follows:

2. There is no effect of Stress on Academic achievement.
3. The alternative hypotheses are as follows:
4. There is significant effect of Stress on Academic achievement.

RESEARCH METHODOLOGY

The sample of this study consisted of 20 Engineering students of the VTU University, out of which 15 were considerable. They were selected using random sampling technique. For the purpose of the study, the participants were divided into two groups, low and high achieving groups. Low achieving group refers to students who obtained percentage below 60%, and high achieving group refers to students who obtained percentage of 60% and above. The study used Cohen Perceived Stress Scale questionnaire to gather information regarding levels of stress.

TESTING OF HYPOTHESIS

Descriptive statistics used in this quantitative research work were percentages, means, and standard deviations. For the analysis, Independent sample t-tests were used to measure differences between low and high achieving groups in their stress levels. The hypothesis has been formulated as the initial step. A test statistic must be defined to test the validity of the hypothesis.

The test statistic is computed from sample information. Here, t- test is chosen as statistical test and a standard value of Significance level (0.05). A decision rule is used to accept or reject the null hypothesis.

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Two types of analyses were performed to identify the differences in stress level between high and low achieving students. First, the means and standard deviations were obtained to determine the extent to which these two groups reported experiencing stress. Second, t-tests were conducted to evaluate whether the differences in levels of stress between low and high were significant or not. The result of the same has been tabulated as shown below.

Table 1: Mean, Standard Deviation, T-test and p values of Measurements

Measurements	Low Achieving students (3)			High Achieving students (12)			Level of Significance = 0.05	
	Mean	SD	DF	Mean	SD	DF	T test	p value
Stress	21.67	7.37	2	21.75	6.8	11	0.019	0.492

Figure 2: Relationship between Stress and Academic Performance

The analysis shows that the mean score for Stress of low achieving students was 21.67 (SD = 7.37) and the mean score for high achieving students was 21.75 (SD = 6.8). Independent sample t-test yielded no significant difference in Stress between the low-and high-achieving group, $t(15) = 0.019$. Since $p > 0.05$, the null hypothesis is failed to reject. In other words, there is no effect of Stress on student's academic performance. The results of the test showed that both high scorers and low scorers have high stress (See Figure 2).

DISCUSSION

The present study was conducted to examine the effect of stress between low-and high-achieving students. 20 undergraduate students, both males and females, were selected as participants in this study. By having knowledge and understanding on this research study, it could help many, such as educators, counselors, and psychologist to design and develop proper intervention program to reduce psychological problems among students. The students themselves could benefit from the study. Information and ideas gained from this research could help them to face, manage, and

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handle the psychological problems. Therefore, enhancing knowledge and strategies in controlling psychological problems among students may help to increase their academic achievement.

CONCLUSION

The present generation faces more stress. In an attempt to understand the relationship between stress and academic performance, the stress level of students is measured. Specifically, students are divided into low-achieving group and high-achieving groups and their stress level is compared. The findings of the present study indicated that both low and high scorers reported higher level of stress. This finding of the study can help to design programmes and strategies to boost students' performance in academic life.

Acknowledgments

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interests

The author declared no conflict of interests.

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How to cite this article: Sindhu P (2016), Impact of Stress on Academic Achievement among Engineering Students, International Journal of Indian Psychology, Volume 4, Issue 1, No. 81, ISSN:2348-5396 (e), ISSN:2349-3429 (p), DIP:18.01.122/20160401, ISBN:978-1-365-59365-9