

Impact of Depression on Academic Achievement among Engineering Students

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ABSTRACT

The main aim of the present study was to find out the effects of depression on Engineering students academic performance. 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 Beck's Depression Inventory was used to measure the level Depression among the students. The in-depth investigation of the findings obtained through this study reveals that there exists a relation between Depression and Academic score of students. The findings of the study will be useful in assisting Educators, Counsellors, Psychologists, and Researchers to develop strategies to enhance students' psychological well-being.

Keywords: Beck, Depression, Low and High Achieving Students, University

Depression is a condition in which one feels blue or sad. But these feelings are usually for a short period of time. Depression interferes with daily life activities of an individual. It is a common but serious illness (National Institute of Mental Health, 2011). It is a major cause of disability across the regions and it causes fatigue, suicide, decreased ability to do work and attend school (Institute for Health Metrics and Evaluation, 2013). Depression disrupts a person's thinking processes, emotional reactions and day-by-day behaviors (Williams, 1984; Farby, 1980). There are many factors that contribute to depression such as loneliness, lack of social support from family, peers, neighbors', financial strain, stress due to studies etc.

India is on the verge of becoming the suicide capital of the world with over 90 percent of deaths caused due to various types of depression including bipolar depressive disorder, doctors said on Thursday. 350,000,000 numbers of people globally are affected by some form of depression. 11% percentage of adolescents has a depressive disorder by the age of 18. 70% percentages of women are more likely than men to experience depression in their lifetime. 16,000,000 is the

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Impact of Depression on Academic Achievement among Engineering Students

estimated number of adults who had at least one major depressive episode in 2012. This made up approximately 6.9 percent of all adults in the country.

30% of college students, reported feeling depressed, which disrupted their ability to function in school. 80% percentage of Indians with major depression doesn't seek treatment for the mental illness. The highest reported in 18-25 yrs old age are: Depression & Anxiety (38-49%); Suicidal ideation (10-21%); Alcohol abuse (20-30%); Self injury and eating disorders; others (OCD, borderline personality, dysthymia). About 64% dropped out of college due to Mental illness (ACHA, 2007; APA, 2010; Blanco et al, 2008; CDC, 2002; NAMI, 2012). In India- 45% of suicides involve 15- 29 yrs old; 5.3% involves graduates and post graduates (NCRB, 2007).

For every one person succeeding 10 would have attempted 2nd Leading cause of death of young people in India (Aaron et al., 2004). 90%- diagnosable psychiatric illness, usually depression & hopelessness- strongest predictors of suicide (Ang & Huan, 2006; APA, 2004). In 2006, 16 students in a day - committed suicide across India due to exam stress (TOI, March, 2008).

Speaking ahead of World Mental Health Day on October 10, the doctors also said that in the last few decades, the number of suicides have tripled and has been the highest in the age group of 15-24 years.

LITERATURE REVIEW

Holmbeck and Hill (1988) surveyed college students and confirmed through their study that adolescents frequently fight with their parents. Thus the paper confirms that adolescents are difficult to handle. They are much more emotionally volatile and vulnerable with frequent mood disruptions/ mood swings and risky behaviours. At times they engage in activities that are not only harmful to themselves, society as well as people around them. Adolescents suffer from various psychological distortments, substance abuse and family problems which affects their academic performance.

A depressed mood is the experience of unhappiness or distress. Depression may involve feelings of being sad, weak, disappointed, frustrated, despairing, helpless, and hopeless (Sarason & Sarason 2002). Many depressed individuals may be unable to perform well in academic life because they do not have courage in what they are doing. They may feel that they are not reaching the standard of performance set for them. As a result they continuously feel disappointed and despairing. They perceive things negatively and consider themselves as failures. This condition can definitely contribute to many serious problems in their academic life such as poor grades.

Literatures have shown that performance in school, college, or university was found to be affected by many symptoms of depression, such as difficulties in concentration, lack of interest

Impact of Depression on Academic Achievement among Engineering Students

and motivation, preoccupations, fatigability, and poor attendance (Fine & Carlson, 1992). Surtees, Wainright, and Pharoah (2002), in their survey, found these conditions reduced the likelihood of achieving a first-class degree among first-year students, although this relationship disappeared when adjustment was made for other factors such as homesickness.

Many clinical descriptive reports suggested that depression may be a contributing factor to poor academic performance (Fine & Carlson, 1994). Because of this, several approaches have been conducted to investigate the relationship between depression and academic achievement. For example, Stark and Brookman (1994) obtained teachers' and parents' global ratings of students' academic performance and ratings of severity of students' depressive symptoms. The former was an instrument used to measure student's academic performance and study habit, while ratings of severity of students' depressive symptoms were used to measure the depression level of the students. The result of the studies showed that there was an inverse relationship between academic achievement and depression.

This notion was then supported by Zaid, Chan, and Ho (2007). The study on emotional disorders among medical students in one of the Malaysian private colleges found that students who experienced depression had a lower academic performance. Another study by Sherina, Lekhraj, and Nadarajan (2003) yielded that 41.9% students in one of the Malaysian public institutions were found to have depression. Some reported that their academic performance was affected by depression. This shows that depression affects the performance of the students i.e. the higher the depression, the lower is the academic achievement of the students. Based on the above findings, it can be said that depression does affect academic achievement of the students. This means the higher the depression level of the students, the lower is their academic performance.

Objective of the Study

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

Hypothesis

1. The following hypotheses are formulated and tested:
2. The Null Hypotheses is as follows.
3. There is no effect of Depression on Academic achievement.
4. The alternative hypotheses are as follows:
5. There is significant effect of Depression 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

Impact of Depression on Academic Achievement among Engineering Students

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 Beck's Depression Inventory questionnaire to gather information regarding levels of Depression.

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 depression levels. The hypothesis has been formulated as the initial step. A test statistic must be defined to test the validity of the hypothesis.

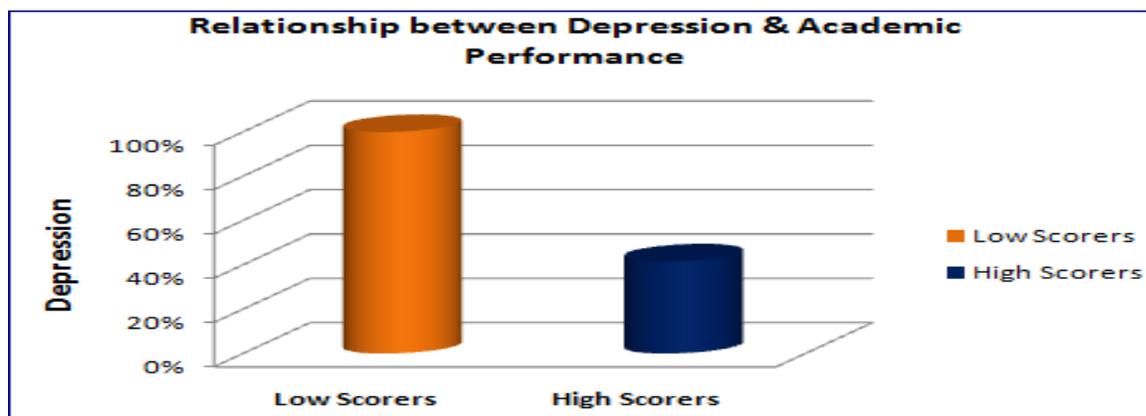
The test statistic is computed from sample information. Here, t- test is chosen as statistical test and a standard value of Significance level (0.05). A decision rule is used to accept or reject the null hypothesis.

Two types of analyses were performed to identify the differences in Depression 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 depression. Second, t-tests were conducted to evaluate whether the differences in levels of depression 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

	Low Achieving students (3)			High Achieving students (12)			Level of Significance = 0.05	
Measurements	Mean	SD	DF	Mean	SD	DF	T test	p value
Depression	26.67	11.93	2	11.83	8.86	11	2.45	0.014

Figure 2: Relationship between Depression and Academic Performance



Impact of Depression on Academic Achievement among Engineering Students

The analysis shows that the mean score for Depression of low achieving students was 26.67 (SD = 11.93) and the mean score for high achieving students was 11.83 (SD = 8.86). Independent sample t-test yielded a significant difference in Depression between the low-and high-achieving group, $t(15) = 2.45$. Since $p \leq 0.05$, the null hypothesis is rejected. In other words, there is effect of Depression on student's academic performance. The results of the test showed that all low scorers had depression and only 40% of high scorers had depression. This result indicates that low achievers have higher level of depression compared to high scorers (See Figure 2).

DISCUSSION

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

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Conflict of Interests

The author declared no conflict of interests.

REFERENCES

- Al-Qaisy, L. M. The relation of depression and anxiety in academic achievement among group of university students. *International Journal of Psychology and Counseling*, 3(5), 96-100 (2011)

Impact of Depression on Academic Achievement among Engineering Students

- Depression in adults. (2009). NICE Clinical Guideline
- Depression; survey shows increase of depression in college students. *Science Letter*, 406(2004).
- Differences in Psychological Problems between Low and High Achieving Students by Md Aris Safree Md Yasin 1 and Mariam Adawiah Dzulkifli 2, *The Journal of Behavioral Science* 2009. Vol.4 No.1. 49-58.
- Effects of Depression on Students' Academic Performance by Shumaila Khurshid¹, Qaisara Parveen¹, M. Imran Yousuf¹ & Abid Ghafoor Chaudhry², ISSN 1013-5316; CODEN: SINTE 8.
- Evaluating the Relationship between Gender, Age, Depression and Academic Performance among Adolescents by Busari, A.O, in *Scholarly Journal of Education* Vol. 1(1), pp. 6-12, April 2012.
- Field, T., "Adolescent depression and risk factors. *Adolescence*," 36:491-498(2001).
- Greenberg P, Stiglin L, Finkelstein S, Berndt ER. The economic burden of depression in 1990. *J Clin Psychiatry* 1993; 54(11): 405-418.
- Heiligenstein, E., & Guenther, G. Depression and academic impairment in college students. *Journal of American College Health*, 45(2), 59-64(1996).
- Isen, A. M. Positive affect as a source of human strength. In LG Aspinnall and Staudinger U (Eds.), *A psychology of human strengths: Fundamental questions and future directions for a positive psychology* (pp. 179-195). Washington, DC: American Psychological Association (2003).
- Laurence, B. Williams, C. and Eiland, D. (2009) The Prevalence and Socio-demographic Correlations of Depression, Anxiety, and Stress among a group of university students. *Journal of American Health*. 58.94-105.
- Owens, M., Stevenson, J., & Hadwin, A. J. Anxiety and depression in academic performance: An exploration of the mediating factors of worry and working memory. *School Psychology International*, 33(4), 433-444 (2012).
- The Impact of Depression on the Academic Productivity of University Students by Alketa Hysenbegasi,¹ Steven L. Hass,² Clayton R. Rowland³, in *The Journal of Mental Health Policy and Economics J Ment Health Policy Econ* 8, 145-151 (2005)
- Psychological factors affecting student's academic performance in higher education among students, by Riya Bhattacharya 1 , Dr. Bani Bhattacharya 2 *INTERNATIONAL JOURNAL FOR RESEARCH & DEVELOPMENT IN TECHNOLOGY*, Volume-4, Issue-1, July- 2015, ISSN (O) :- 2349-3585.

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