A Comparative Study of Stress Level Among Undergraduate Students

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Abstract:

The concept of stress was first used in life sciences by Han Selye in 1936. Stress defined it by referring to a set of circumstances in which an individual could not respond adequately or instrumentally to environmental stimuli or could respond only at the cost of excessive wear and tear on the organism, for example, chronic fatigue, tension, worry, physical damage, nervous- breakdown, or loss of self-esteem. Stress is a relational concept, and involved factors in the environment combined with individual factors. The purpose of present study is to explore the stress level of Arts stream undergraduate students' of University of Allahabad. y,

Objectives:

1) To study the academic stress level of Arts and Science stream undergraduate students.

2) To compare the academic stress level of male and female undergraduate students.

3) To compare the academic stress level of General, OBC, and SC undergraduate students.

Research Hypotheses:

1) There will be significant difference in the stress level of Arts and Science stream undergraduate students.

2) There will be significant difference in the stress level of male and female undergraduate students.

3) There will be significant difference in the stress level of General, OBC, and SC undergraduate students.

Descriptive survey research design method will be used in the present study. Hopkins Symptom Checklist (HSCL) known as Self-report Symptom Inventory (1974) will be used to collect data from students. Population of the study consisted of all the Arts and Science Faculty students of University of Allahabad. 100 B.Sc. 3rd year and 100 BA 3rd year students will be selected randomly as sample respondents. Data will be analyzed by using't' tests, ANOVA and percentage analysis.

I. INTRODUCTION

The concept of stress was first used in life sciences by Han Selye in 1936. Stress defined it by referring to a set of circumstances in which an individual could not respond adequately or instrumentally to environmental stimuli or could respond only at the cost of excessive wear and tear on the organism, for example, chronic fatigue, tension, worry, physical damage, nervous- breakdown, or loss of self-esteem. Stress is a relational concept, and involved factors in the environment combined with individual factors. Stress can come in different ways in an individual's daily life. Stress is also viewed as the body's reaction, both neurologically and physiologically, to adapt to a new condition (Franken, 1994). When there is a change in life, we adjust ourselves to fit in the new condition. For a student, stress may be caused by failure in academic or sports, financial problems, health problems or loss of a family member or close friend. Such events that bring stress are called stressors. A sudden change in life or stressors may affect a person's life style or even his/her physical and mental health. The impact of a stressor leaves on a person depends on how the person takes the tension. If the person takes the event positively by accepting it as a part of challenge in life and find ways to deal with it, the stress will fade away and gone when he/she gets over it. Conversely, the consequence may leave the person a prolonged emotional disturbance.

University provides students' tertiary education and psychosocial development (Tao et. al, 2000). Besides pursuing knowledge in university, a student also gets to socialize with different kinds of people and undergo psychological development. Studies show that entering university may bring strain or stress (Gall, Evans, & Bellerose, 2000). This is because university students face a changing education system, lifestyle, and social environment. University students need to reach certain levels of academic achievement to graduate. The academic achievement is determined by their performance during classroom activities, assignments, presentations and examinations (Ong, Bessie, & Cheong, 2009). Past researches showed that some undergraduate students significantly experience stress (Brown et al.,1999). First-year university students were found to be particularly prone to stress (Towbes & Cohen, 1996; Pancer et al., 2000; Wintre & Yaffe, 2000) and experience high levels of stress (Wintre & Yaffe, 2000) due to the college life transition (Towbes & Cohen, 1996). Many of them face culture shock as university life is different from school life. Failing to cope with the stressors during the transition may cause deterioration of academic performance and increase of psychological distress (Dwyer & Cummings, 2001). The increase in stress during

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the first year predicted the decrease of overall adjustment and lower grade point average (GPA) (Wintre & Yaffe, 2000). Students tend to lose self-confidence having to establish new social relations and at the same time trying to cope with the increasing academic demands (Tao et. al., 2000; Dwyer & Cummings, 2001). A list of ten sources of stress was identified among the medical students and the stressors include tests and examinations, the big range of content to be learnt, lack of time to do revision, poor marks, having self-expectation, insufficient skill in medical practice, fail to follow the reading schedule, heavy workload, having difficulty in understanding the content and fail to provide answers to teachers' questions (Yusoff et al., 2010). Many researches were conducted to assess the relationship between stress and academic achievement of undergraduate students and it is found that stress affects students' academic achievement (Elliot et al., 2005; Choi, Abbott, Arthur & Hill, 2007). Students complained of feeling stressed academically when it comes to facing exams and grade competition and having too much information to study yet insufficient time to master the knowledge (Carveth, Gesse & Moss, 1996). Bennett (2003) reported a similar finding that stress is significantly correlated with poor academic performance in his study of business undergraduates. Elias et al. (2011) found that the undergraduate students have moderate stress levels with a mean stress score of 926.39 and standard deviation of 288.38. Das (1994) found that SC differed significantly from ST and general students on stress, but ST and general students did not differ significantly and ST students were less vulnerable to stress than SC students.

II. OBJECTIVES

The purpose of present study is to explore the stress levels of undergraduate students' of University of Allahabad. The main objectives of the study are:

4) To compare the stress level of male and female undergraduate students.
5) To compare the stress level of Arts and Science stream undergraduate students.
6) To compare the stress level of undergraduate students having low and high academic achievement.
7) To compare the stress level of General, OBC, and SC undergraduate students.

III. HYPOTHESES

4) There is no significant difference in the stress level of male and female undergraduate students.
5) There is no significant difference in the stress level of Arts and Science stream undergraduate students.
8) There is no significant difference in the stress level of undergraduate students having low and high academic achievement.
6) There is no significant difference in the stress level of General, OBC, and SC undergraduate students.

IV. RESEARCH METHODOLOGY

Descriptive survey research design method was used in the present study. Hopkins Symptom Checklist (HSCL) known as Self-report Symptom Inventory (1974) was used to collect data from students. Academic achievement was decided by taking average of 1st and 2nd year marks. Population of the study consisted of all the Arts and Science Faculty students of University of Allahabad. 100 B.Sc. 3rd year and 100 BA 3rd year students (50 male and 50 female from each stream) were selected randomly as sample respondents. Data were analyzed by using 't' tests, ANOVA and percentage analysis.

V. DATA COLLECTION

Data were collected from the sample respondents by administrating the HSCL check list.

Analysis and Interpretation of Data

Stress level of the Undergraduate students of AU were determined gender- wise, stream wise, achievement wise and social category-wise. Analyzed data have been presented in the following:

Section-I: A. Stress Level between the Male and Female Undergraduate students:

The present section deals with the analysis of the data regarding stress level between male and female undergraduate students of University of Allahabad. The significance of difference in stress level between male and female students has been shown in the following Table:

Table-1: Mean, S.D. and t-ratio for the stress level of male and female students

Group	N	Mean	S.D.	σD	t-ratio
Male	100	61.43	12.45	1.54	.058
Female	100	61.52	09.12		N.S.

Note: N.S.: Not Significant.

Observation of the Table-1 shows that the calculated t-value is less than the tabulated value of 't'. Therefore the null hypothesis is retained. It means that there is no significance difference in the stress level of male and female undergraduate students of University of Allahabad.

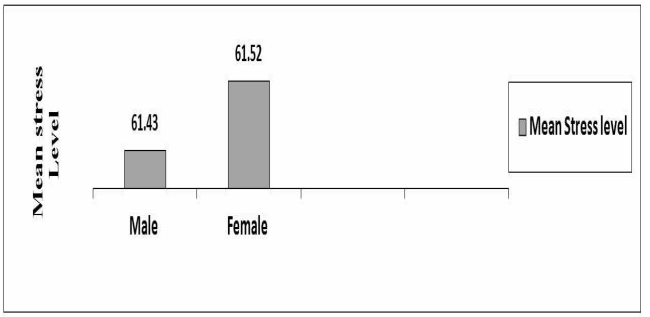

Figure-1: Mean Stress level of Male and Female students

Figure-1, shows that male undergraduate students of AU have 61.43 stress level, while female undergraduate students of AU have 61.52 stress level. Thus it may be concluded that on the criteria of 'stress level' all the students of University of Allahabad are equivalent to each other.

B. Stress Level between the Arts stream Male and Female Undergraduate students:

The significance of difference in stress level between Arts stream male and female students has been shown in the following Table:

Table-2: Mean, S.D. and t-ratio for the stress level of Arts stream male and female students

Group	N	Mean	S.D.	σD	t-ratio
Male	50	55.50	11.58	2.209	1.014
Female	50	57.74	10.49		N.S.

Note: N.S.: Not Significant.

Observation of the Table-2 revealed that the calculated t-value is less than the tabulated value of 't'. Therefore the null hypothesis is retained. It means that there is no significance difference in the stress level of Arts stream male and female undergraduate students of University of Allahabad.

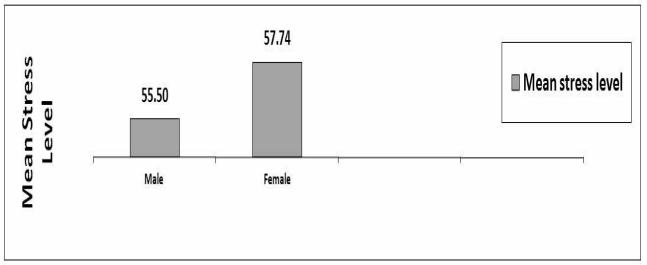

Figure-2: Mean Stress level of Arts stream Male and Female students

Figure-2 shows that Arts stream male undergraduate students of AU have 55.50 stress level, while female undergraduate students of AU have 57.74 stress level. Thus it may be say that on the criteria of 'stress level' Arts stream female students have more stress than male students.

C. Stress Level between the Science stream Male and Female Undergraduate students:

The significance of difference in stress level between Science stream male and female students has been shown in the Table-3:

Observation of the Table-3 revealed that the calculated t-value is less than the tabulated value of 't'. Therefore the null hypothesis is retained. It means that there is no significance difference in the stress level Science stream male and female undergraduate students of University of Allahabad.

Table-3: Mean, S.D. and t-ratio for the stress level of Science stream male and female students

Group	N	Mean	S.D.	σD	t-ratio
Male	50	67.36	10.36	1.651	1.248
Female	50	65.30	05.39		N.S.

Note: N.S.: Not Significant.

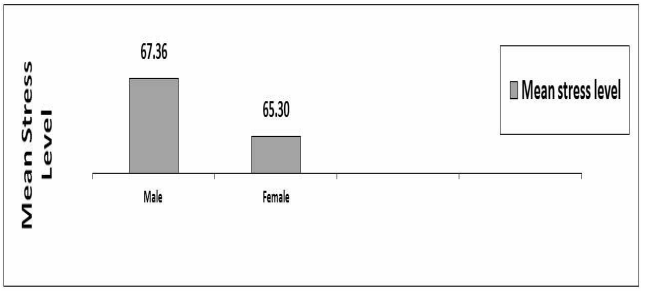

Figure-3: Mean Stress level of Science stream Male and Female students

Figure-3, shows that Science stream male undergraduate students of AU have 67.36 stress level, while female undergraduate students of AU have 65.30 stress level. Thus it may be say that on the criteria of 'stress level' Science stream male students have more stress than female students.

Section-II: Stress Level between the Arts and Science stream Undergraduate students:

The present section deals with the analysis of the data regarding stress level between Arts and Science stream undergraduate students of University of Allahabad. The significance of difference in stress level between Arts and Science stream students has been shown in the following Table:

Table-4: Mean, S.D. and t-ratio for the stress level of Arts and Science stream students

Group	N	Mean	S.D.	σD	t-ratio
Arts	100	56.62	11.05	1.38	7.034
Science	100	66.33	08.28		**

Note: **: Significant at .01 level of significance.

Observation of the Table-4 shows that the calculated t-value is greater than the tabulated value of 't' (2.60). Therefore the null hypothesis is rejected. It means that Arts and Science stream undergraduate students of University of Allahabad differ significantly at .01 level of significance on stress level.

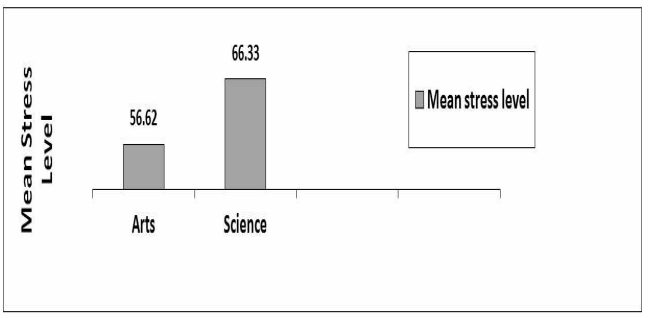

Figure-4: Mean Stress level of Arts and Science stream students

Figure-4, shows that Arts stream undergraduate students of AU have 56.62 stress level, while Science stream undergraduate students of AU have 66.33 stress level. Thus it may be concluded that on the criteria of 'stress level' Arts and Science stream students differ significantly. Science stream students have high stress level than Arts stream students.

Section-III: Stress Level between the Undergraduate students having Low and High Academic achievement:

The present section deals with the analysis of the data regarding stress level between Undergraduate students having Low and High Academic achievement. The significance of difference in stress level of students having Low and High Academic achievement has been shown in the following Table:

Table-5: Mean, S.D. and t-ratio for the stress level of students having Low and High Academic achievement

Group	N	Mean	S.D.	σD	t-ratio
Low Achievement (<60%)	102	59.69	13.08	1.522	2.399 *
High Achievement (>60%)	98	63.34	07.62		

Note: *: Significant at .05 level of significance.

Observation of the Table-5 shows that the calculated t-value is greater than the tabulated value of 't' (1.97). Therefore the null hypothesis is rejected. It means that students having Low and High academic achievement differ significantly at .05 level of significance on stress level.

Figure-5: Mean Stress level of students having Low and High Academic achievement

Figure-5, shows that undergraduate students of AU having low academic achievement have 59.69 stress level, while undergraduate students of AU having high academic achievement have 63.34 stress level. Thus it may be concluded that on the criteria of 'stress level' students having Low and High academic achievement differ significantly on stress level and students having high achievement are high in stress level than students having low achievement.

Section-IV: Stress level between the General, OBC and SC category Undergraduate students:

The present section deals with the analysis of the data stress level between General, OBC and SC category undergraduate students of University of Allahabad. The significance of difference in the stress level between General, OBC and SC category Undergraduate students is given in following table:

Table-6: Stress level of General, OBC and SC social category undergraduate students of Allahabad University

Source	df	SS	MS	F-ratio
Between Groups	2	1149.47	574.74	**5.048** **
Within Groups	197	22428.41	113.85	
Total	199			

Note: *: Significant at .01 level of Significance.

Observation of the table-6 indicates that the calculated F-value is greater than the tabulated F-value [F.¬01(2,197)=4.71]. Therefore on the basis of significant F-ratio value we can say that there is significance difference in the stress level of General, OBC and SC undergraduate students of University of Allahabad.

Table-7: t-Test followed by Significant F-Ratio

S.N.	Group	n	M	σD	t-ratio
1.	General	63	62.92	1.65	**2.44** *
	OBC	90	58.90		
2.	General	63	62.92	2.02	**0.77** **N.S.**
	SC	47	64.47		
3.	OBC	90	58.90	2.07	**2.70** **
	SC	47	64.47		

Note: **: Significant at .01 level., *: Significant at .05 level., N.S.: Not Significant.

Observation of the table-7 shows that the calculated t-value is greater than the tabulated value of t' in first and third case while less than tabulated value in second case. Therefore the null hypothesis is rejected in first and third case while in second case null hypothesis is retained. It means that there is significant difference in the stress level of General and OBC category as well as OBC and SC category undergraduate students of University of Allahabad. But there is no significance difference in the environmental attitude of General and SC undergraduate students of University of Allahabad.

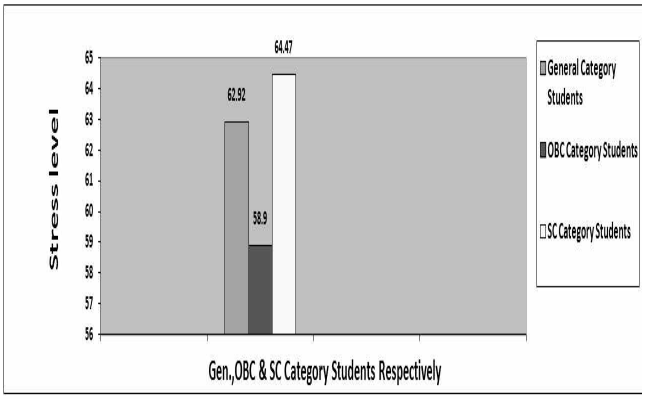

Figure-6: Mean Stress level of General, OBC and SC category students

Figure-6, shows that General undergraduate students of AU have 62.92 stress level, OBC undergraduate students of AU have 58.90, while SC undergraduate students of AU have 64.47 stress level. Thus it may be concluded that on the criteria of 'stress level' all category students of University of Allahabad are not equivalent to each other. General and SC category students have high level of stress than OBC category students.

VI. MAJOR FINDINGS OF THE STUDY

- There is no significance difference in the stress level of male and female undergraduate students of University of Allahabad.
- There is no significance difference in the stress level of Arts stream male and female undergraduate students of University of Allahabad.
- There is no significance difference in the stress level Science stream male and female undergraduate students of University of Allahabad.
- Art and Science stream undergraduate students of University of Allahabad differ significantly at .01 level of significance on stress level. Science stream students have high stress level than Arts stream students.
- Students having Low and High academic achievement differ significantly at .05 level of significance on stress level. Students having high achievement are high in stress level than students having low achievement.
- There is significance difference in the stress level of General, OBC and SC undergraduate students of University of Allahabad. General and SC category students have high level of stress than OBC category students.

VII. CONCLUSION

It may be conclude that Eustress i.e. Positive stress is necessary and Distress i.e. negative stress should be avoided. As it is clear that threshold level of positive stress increases academic achievement. So undergraduate students of Allahabad University are suggested to increase the eustress, and decrease their distress. Positive Stress increases the performance and achievement of students while, Negative Stress decreases the efficiency and achievement of students.

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