Stress Anxiety and Depression Among Science and Arts Students

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Abstract:

Objective: *In present days stress, anxiety and depression is commonly found among the students globally. These psychological problems badly affect the health of our students. The cardinal object of the present study was to investigate the effect of gender and faculty on stress, anxiety and depression. Further the study also strived to find the level of stress, anxiety and depression among boys and girls; science and arts students.* ***Method:*** *The present study consisted sample of 260 students divided in two groups (Boys and Girls) each group has 130 students. Further these two groups are equally subdivided into two more faculty wise (Science and Arts) groups with 65 students in each group. Levels of stress, anxiety and depression was measured by Depression Anxiety Stress Scale (DASS) constructed by Lovibond & Lovibond (1995). For data analysis and hypothesis testing mean and ANOVA was applied.* ***Findings:*** *The findings shows that girl students are prone to stress, anxiety and depression than boys as they have high percentage in all three areas (Stress 57.67%, Anxiety 90.77% and Depression 60.77%) than boys (Stress 43.85 %, Anxiety 89.22% and Depression 43.08%). Similarly science students have high level of stress, anxiety and depression (Stress 73.86%, Anxiety 96.14% and Depression 88.46 %) than arts students (Stress 27.69%, Anxiety 73.84% and Depression 15.38%). The results also revealed both gender and faculty have significant effect on stress, anxiety and depression as all obtained "F" ratio's was found significant at 0.05 level of significance. Conclusion: - On the basis of the findings in the present study we may conclude that both gender and faculty are influential factors in stress, anxiety and depression.*

Keywords: *Stress, Anxiety, Depression, Gender and Faculty.*

I. INTRODUCTION

Stress is a negative emotional experience accompanied by predictable biochemical, physiological, cognitive and behavioral changes that are directed either toward altering the stressful event or accommodating to its effect [1]. It is somewhat nonspecific biological, emotional, and behavioral process that occurs when physical or psychological well-being is disturbed or threatened. It typically involves heightened physiological arousal, accompanied by negative emotions including anxiety. Stress occurs when aspects of the environment overwhelm an individual; that is a person feel stressed when too much is expected from him or when an event seems scary or worrisome.

Anxiety is an internalized fear, arousal by an impulse to commit. Anxiety is a danger signal to the ego that dangerous impulse is about to break, in fact it is an unconscious reaction to depressed tendencies characterized by over concern which may turn over to panic or severe fear. Physical and Psychological symptoms include sweating, trembling of lips and hands, rapid breathing, rapid heartbeat, dryness of mouth, frequent urination; tenseness, irritability, imagined danger, sleeplessness, lack of concentration and inability to make decision etc. Anxiety has detrimental effects on students in the classroom. Anxious students are more likely have learning difficulties also problem solving ability and discussion making may suffer as well [2,3].

Depression is a severe mood disorder covered a variety of negative moods and behavioral changes and is the fourth leading cause of social incapacitation in the world. In India about 5% people are living with depression and anxiety disorders. In India psychological problem like depression among students is neglected public health problem as we have just one psychiatrist for four lakh citizens. We have only about 4,000 psychiatrists, 1,000 psychologists and 3,000 social workers for the whole of the country [4].

In present day stress, anxiety and depression are commonly found among college students. In America about 30 % of college students are depressed [5]. College and University days are not only enjoyable but students have tackle lot of problems as well, they have time shortage for preparing exams because of overloaded syllabus, anxiety about getting expected marks in their examinations etc. They always think about their future which arise anxiety later stress than depression even suicidal tendencies among them. About 10% of high school students attempt suicide every year, and it is

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.now the third leading cause of death among adolescents and second among college students [6, 7]. In fact suicide is the leading cause of death; the risk is also higher when depression begins at an early age [8]. It is also found that single best predictor of suicide is the sense of hopelessness which mostly students have. Researchers found that psychological problems like stress anxiety and depression among students have negative impact on their self-esteem, quality of life even in their academic performances. Depression badly affects academic performance [9]. Researchers suggest that college students who have depression are more likely to smoke [10]. Female students with depression are more likely to drink and also experience problems related to alcohol abuse, like engaging in unsafe sex [11].

Although many researchers in the field of psychology and other behavioral sciences have carried out their extensive research on stress anxiety and depression among students like Manpreet [12] found female students had significantly more anxiety than male students. Similar results have found by Bryme [13], Kulsoom & Afsar [14]. Chandra and Neelakandan [15] also found significant difference in anxiety between psychology and non psychology female college student. Kumar & Bhukar [16] examined that girls have significantly higher level of stress than boys. Findings also indicated that physical education students had better coping strategy than engineering students. Hall *et al*., [17] found high levels of stress and more health problems in females than males. Vivek et al., [18] revealed that there is significant association between stress and the field of education. Findings show statistically significant in stress level among males (20.4%) and females (27.7%). Sanjiv et al., [19] found female students have more depression than the male students. Results also revealed that 10th and 12th class students have also high levels of depression, anxiety and stress then students of 9th and 11th standard. Sulaiman *et al.*, [20] highlights that males and female students experience different level of stress, because females are more emotional than males in reaction to their environment. While as Papazisis [21] found no difference in stress and depression on the basis of gender. Results also showed that 52.4% of students experienced depressive symptoms (among which 34.7% have mild, 12.9% have moderate and 4.7% have severe) also 2nd and 3rd year students' shows high level of stress than 1st and last year students. Bassols *et al.*, [22] undercover that first year students have higher stress symptoms (49.1%) than sixth year students (33.6%). Researchers not only highlighted the gender difference on stress, anxiety and depression but also various others aspects like Swapna et al., [23] revealed that engineering students have high level of stress and anxiety than MBBS students. Devi & Rohan's [24] research showed that 71% among medical students has depression they also found that psychological stress was associated with depression. Kitu & Patil [25] reported 71% of depression among medical students. Yee et al., [26] also researched that pre clinical phase medical students are 1.84 times more likely to develop psychological distress than medical students in clinical phase. Solanky *et al.,* [27] found that medical college students reported 25.9% to 96.8% stress level. Results also revealed that 96.8% stress is because of vast syllabus, time shortage for preparation, examination and also not getting expected marks. A study by Safree et al., [28] demonstrated that there is a significant difference in depression, anxiety, and stress between low and high achieving students. Findings also show that low achieving students reported higher psychological problems than high achieving students. Seligmen and Wuyek [29] highlighted that highly anxious students have lower scores on measures of academic achievement and peer acceptance, while as Andrews and Wilding [30] found that 40% college students had various psychological problems like anxiety, tension and poor concentration. Sherina [31] indicates that depression affects the student's performance. Results revealed that students with high depression level have low academic achievement; also Demakis and McAdams [32] reported that heightened levels of stress had significantly more physical health problems and less satisfaction towards academic achievement. Kumarswamy and Ebigbo [33] found that stress level was more in second year medical students.

Objectives

1. To find the level of stress, anxiety and depression among boys and girls.
2. To find the level of stress, anxiety and depression among science and arts students.
3. To find the effect of gender on stress, anxiety and depression.
4. To find the effect of faculty on stress, anxiety and depression.
5. To find the interactional effect of gender and faculty on stress, anxiety and depression.

Hypotheses

1. Girls have high level of stress, anxiety and depression than boys.
2. Science students have high level of stress, anxiety and depression than arts students.
3. There would be significant effect of gender on stress, anxiety and depression.
4. There would be significant effect of faculty on stress, anxiety and depression.
5. There would be significant interactional effect of gender and faculty on stress, anxiety and depression.

II. METHODOLOGY

Variables:

In the present study investigator find the effect of two experimental variables (gender and faculty) on three criterion variable (stress, anxiety and depression).

Sample:

In this study total number of samples was 260 students divided into two groups 130 boys and 130 girls. Further these two groups were subdivided in two more groups on the basis of faculty (Science and Arts) each group consisted of 65 students; selected through random sampling method.

Tools:

To assess the levels of stress, anxiety and depression among students Depression Anxiety Stress Scale (DASS)

constructed by Lovibond, S.H. & Lovibond, P.F. (1995) was used. The scale consists of 42 items with three sub scales designed to measure the level of depression, anxiety and stress. Each sub scale consists of 14 items with 4 point scale scored as 0, 1, 2, and 3 respectively.

Procedure

The study was conducted in Chidambaram District of Tamil Nadu consist sample of 260 post graduate science and arts students selected through random sampling method. While collecting the data the investigator meets the respondents individually after rapport formulating, the data was collected by distributing the Depression Anxiety Stress Scale (DASS) among students, they were asked to read all the instructions and statements carefully before giving their responses, therefore the data was collected. Then obtained data was systematically analyzed to find the effect of experimental variables (gender and faculty) on criterion variables (stress, anxiety and depression). The obtained raw data of two main variables (gender and faculty) was designed as A and B respectively. The two levels of gender were designed as Boys (A1) and Girls (A2) also two levels of faculty were designed as Science (B1) and Arts (B2) respectively. All obtained scores were arranged in tabular form. 'Mean' and 'Two Way Analysis of Variance' (ANOVA) was applied to find the main as well as interaction effects.

III. RESULTS

The findings of the present study are shown in tables given below

Table No-1: Gender wise mean scores of Stress, Anxiety and Depression

Area	Gender	Sum of Scores	No	Mean
Stress	Girls	2095	130	16.12
	Boys	1733	130	13.33
Anxiety	Girls	2378	130	18.29
	Boys	2065	130	15.88
Depression	Girls	1470	130	11.31
	Boys	1248	130	9.6

Table No-2: Faculty wise mean score of Stress, Anxiety and Depression

Area	Faculty	Sum of Scores	No	Mean
Stress	Science	2431	130	18.7
	Arts	1397	130	10.74
Anxiety	Science	2858	130	21.98
	Arts	1585	130	12.19
Depression	Science	1977	130	15.20
	Arts	741	130	5.7

Table No-3: Percentage of Stress, Anxiety and Depression among Boys and Girls

Area	Gender	Normal	Mild	Moderate	Severe	Very Severe
Stress	Boys	56.15%	16.92%	19.23%	7.70%	0%
	Girls	42.30%	22.30%	23.07%	10.77%	1.53%
Anxiety	Boys	10.77%	16.92%	22.30%	20%	30%
	Girls	9.23%	10.77%	16.15%	23.07%	40.77%
Depression	Boys	56.92%	18.46%	14.61%	7.70%	2.31%
	Girls	39.23%	32.30%	20.77%	5.40%	2.30%

Table No-4: Percentage of Stress, Anxiety and Depression among Science and Arts students

Area	Faculty	Normal	Mild	Moderate	Severe	Very Severe
Stress	Science	26.15%	22.30%	33.10%	16.92%	1.54%
	Arts	72.30%	16.15%	10%	1.54%	0%
Anxiety	Science	3.84%	10%	22.30%	28.46%	35.85%
	Arts	26.15%	20%	23.85%	15.38%	14.61%
Depression	Science	11.54%	40.77%	30.77%	11.54%	5.38%
	Arts	84.61%	9.23%	4.61%	1.54%	0%

Table No-5: ANOVA Summary of Stress

Source of Variance	SS	df	M.S	F
A (Gender)	504	1	504	11.78**
B (Faculty)	4112.14	1	4112.14	96.14**
AB	0.54	1	0.54	0.01 NS
Within Group error	10949.38	256	42.77	-
Total	15566.06	259		

**Significant at 0.01 level =6.64, N.S No significant

Table No-6: ANOVA Summary of Anxiety

Source of Variance	SS	df	M.S	F
A (Gender)	376.8	1	376.8	6.60*
B (Faculty)	6232.8	1	6232.8	109.19**
AB	10.79	1	10.79	0.19 NS
Within Group error	14614.57	256	57.08	-
Total	21234.96	259		

**Significant at 0.01 level =6.64, *Significant at 0.05 level =3.84, N.S No significant

Table No-7: ANOVA Summary of Depression

Source of Variance	SS	df	M.S	F
A (Gender)	189.55	1	189.55	5.57*
B (Faculty)	5875.75	1	5875.75	172.9**
AB	4.98	1	4.98	0.14 NS
Within Group error	8700.17	256	33.98	-
Total	14770.45	259		

**Significant at 0.01 level =6.64, *Significant at 0.05 level =3.84, N.S No significant

IV. DISCUSSION

The results of the present study demonstrated that girls have high levels of stress (S), anxiety (A) and depression (D) than boys; the mean scores of girl students in all three areas *(S=16.13, A=18.29 and D=11.31)* were found more than mean scores of boys *(S=13.33, A= 15.88 and D= 9.6).* Similarly science students have also high levels of stress, anxiety and depression than arts students. The obtained mean scores of science students *(S= 18.7, A= 21.98 and D= 15.20)* are more than the mean scores of arts students *(S= 10.74, A= 12.19 and D=5.7)* respectively. Findings also suggested that among 130 girl students *75 (57.67%)* have stress symptoms, among them *29 (22.30%)* have Mild, *30 (23.07%)* Moderate, *14 (10.77%)* Severe and *2 (1.53%)* students have Very Severe levels of stress. While as among 130 boys *57 (43.85%)* have stress levels, among them *22 (16.92 %)* have Mild, *25 (19.23 %)* Moderate, and *10 (7.70 %)* have Severe level of stress. Results exposed that *116 (90.76%)* girl students have anxiety

symptoms, among them *14 (10.77%)* have Mild, *21 (16.15%)* Moderate, *30 (23.07%)* Severe and *53 (40.7%)* have Very Severe levels of anxiety. Similarly *116 (89.22%)* boys have anxiety symptoms among them *22 (16.92%)* have Mild, *29 (22.30%)* Moderate, *26 (20%)* Severe and *39 (30%)* have Very Severe level of anxiety. Further results also divulge that girl students have also high levels of depression than boys, out of 130 girls *79 (60.77%)* shows symptoms of depression, among them *42 (32.30%)* have Mild, *27 (20.77%)* Moderate, *7 (5.40%)* Severe and *3 (2.30%)* students have Very Severe level of depression, simultaneously *56 (43.08%)* boys have depression, among them *24 (18.46%)* have Mild, *19 (14.61%)* Moderate, *10 (7.70%)* Severe and *3 (2.3%)* students have Very Severe level of depression. Thus on the basis of our findings we can say that girls have high level of stress, anxiety and depression than boys thus our first hypothesis is accepted.

Our second hypothesis is also accepted as our findings shows that science students have high levels of anxiety, stress and depression than arts students. The obtained results revealed that *96 (73.86)* science students shows stress symptoms among *[29 (22.30%)* Mild, *43 (33.10%)* Moderate, *22(16.92%)* Severe, and *2(1.54%)* have very Severe level of stress] While as only *36 (27.69)* arts students have symptoms of stress among *[21 (16.15%)* Mild, *13 (10%)* Moderate, and *2(1.54%)* have Severe level of stress]. Science students have also high level of anxiety than arts students, *95 (96.14%)* of science students shows anxiety symptoms among them *[13(10%)* Mild, *29 (22.30%)* Moderate, 37 (28.46%) Severe, and *46 (35.38%)* have very Severe level of anxiety]. While talking about depression *115 (88.4 6%)* science students shows depression symptoms, *53 (40.77%)* shows Mild level of depression, *40 (30.77%)* Moderate, *15 (11.54%)* Severe, and *7 (5.38%)* have very Severe level of depression, which is more than depression level of arts students; only *20 (15.38%)* of arts students shows depression symptoms among them only *12 (9.23%)* have Mild, *6 (4.61%)* Moderate, and *2 (1.54%)* have Severe level of depression respectively. These findings are also supported by various previous researchers like Sulaiman et al., [20], Manpreet [12], Kulsoom & Afsar [14], Bryme [13], and Kumar & Bhukar [16].

A close look at the ANOVA table indicates that gender and faculty are influential factors of, stress, anxiety and depression as obtained "F" ratio of both gender (G) and faculty (F) in respect to [Stress (G=*11.78, df 1/156*) and (F=*96.14, df 1/156*), Anxiety (G=*6.60, df 1/156*) and (F=*109.99, df 1/156*), and Depression (G=*5.57 df 1/156*) and (F=*172.9.14, df 1/156)*] are found significant at 0.05 level of significance. Thus our 3rd hypothesis is accepted. Findings also shows that there is no interactional effect of gender and faculty on stress, anxiety and depression as the "F" ratios *[(0.01, df 1/156)*, *(0.09, df 1/156)*, and *0.14, df 1/156]* of interactional effect was found insignificant at 0.05 level of significance though our 4th hypothesis is rejected.

V. CONCLUSIONS

On the basis of our findings it may be concluded that girls and science students are prone to stress, anxiety and depression. Girl students have high percentage in all three areas (Stress *57.67%,* Anxiety *90.77%* and Depression *60.77%*) than boys (Stress *43.85 %*, Anxiety *89.22%* and Depression *43.08%*). Similarly science students have high level of stress, anxiety and depression (Stress *73.86%,* Anxiety *96.14%* and Depression *88.46 %*) than arts students (Stress *27.69%*, Anxiety *73.84%* and Depression *15.38%)*. In present days stress, anxiety and depression is commonly found among the students globally, these psychological problems not only affect the student's academic performance but also the whole nation as our students are the feature of our nation if they have some problem it means our future is not secure. Thus researchers should come forward to highlight the causes, consequences and treatment of these problems. Government should come forward to provide platform to NGO's, psychologists, psychiatrists and mental health professionals, so they can help the student community, Also psychological counselling services should provide to students from primary level by establishing counselling centers in schools, colleges and also in Universities. So students can learn how to deal with the stressors throughout the life. Thus they can live happy and prosperous life.

VI. REFERENCES

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