



## **The Process of Triangulation of Trait Anxiety, Type of Personality & Adjustment**

**Tanuja Kher**

Assistant Professor,  
Applied Science Department,  
College of Engineering, Pune,

**Dr. Vijay Kulkarni**

Dean, Bharati Vidyapeeth  
Faculty of Arts, Science & Commerce,  
Deemed University, Pune.

### **Abstract**

The current study focuses on the process of triangulation of trait anxiety, type of personality and adjustment among first year engineering students from different colleges of Maharashtra. Trait anxiety represents an anxious tendency. 'A' type personality is known as stress prone personality. Thus students who belong to type A personality with high trait anxiety may develop distress and likely to face poor adjustment. The purpose of this study is to find out relation among these factors. If one get notice the levels of anxiety, stress and type of personality at early stage it will give chance to inculcate proper coping strategies which will be useful throughout the life. The findings of this paper may help in planning programs for mental wellbeing of students

**Keywords- Trait anxiety, type of personality- A and B, adjustment, adolescents**

### **Introduction-**

Anxiety is can be observed very commonly throughout all human cultures. In anxiety a person experiences unpleasant state and may express nervous behavior. Usually two types of anxiety are known. One is for short period or related to an event which is known as a state anxiety. Though it is common severity, duration and frequency of symptoms may vary from person to person. Second type is Trait anxiety related to person's tendency. Trait anxiety refers to the stable tendency to attend, to experience, and report negative emotions such as fears, worries, and anxiety across many situations. Experiencing more frequently state anxiety combined with a general view of the world as being threatening and dangerous is used may develop trait anxiety.

The concept of adjustment means adoption to physical environment as well as social demands, there is an action and reaction chain going on between individual and his environment. There are social pressure and demands of socialization. The process of adjustment becomes still more complicated when his interaction with one situation comes in conflict with the requirement of the other situation. The resulting tension may cause disturbance and may produce uncomfortable symptoms. Type A people generally do multi-tasking, are hardworking and highly motivated towards work. These qualities make them successful. But if these qualities become excessive people may become workaholics and may struggle hard to achieve their goals. In this process they may miss out on enjoying the lighter moments of life. 'A' type personality is not harmful as long as it starts interfering in everyday activities; this is when they need to relax and take things slowly else they have higher chances of suffering from health related issues. Type B individuals are friendly, accepting, patient, at ease and usually described as content. They are not preoccupied with their



achievements and do not get angry or irritable frequently. They are flexible in their approach towards things. However, type B may also sometimes know as under-achievers, due to their easy go attitude. It is necessary for a type B to manage time well and give due importance to work and professional commitments along with family and recreation.

A study was done by Priyanka and Dr. Pradeep at Lovely Professional University, Punjab on 100 students, both male and female. The purpose of the study was to examine the relationship among stress, adjustment and homesickness among students. Findings of the study showed a negative relationship between stress and adjustment. It was also found that homesickness was positively related to stress. It affected negatively in adjustment among students. The results gave evidence to the assumption that in modern times no gender difference as far as stress and adjustment levels are concern.

R. Mayildurai and others studied around three hundred students of various engineering branches from different colleges in Coimbtore district. They found high level of stress in students. Unhappiness about financial conditions of family and influence of parents in choosing career were stressors for students. Shy temperament and not approaching attitudes towards authorities were also responsible factors for stress.

First year engineering students were reported more anxiety and stress than final year students in the study conducted by Priyadarshani and Ansari. The burden of good academic career and of placement developed more stress in male than female students. On anxiety attribute female were higher than male students. These studies throw some light on attributes and relation among them which are studied in the current research paper.

### **Sample-**

For the current research overall 640 students were studied. All of them were from First Year Engineering colleges located in Maharashtra. They are Modern college of Engineering, Pune (MCEP), College of Engineering, Pune (CoEP), Babasheb Ambedkar Technological University (BATU), Institute of Petrochemical Engineering (IOEP). All students were selected who are admitted for first year engineering from various branches. Thus the sample size (N) is MCEP 154, COEP 165, BATU 168 and IOPE 153. One point want to clarify that students who have not completed inventory were deleted from the sample. Thus total sample of 640 students who have filled the inventory completely were chosen for the study purpose

### **Tools-**

- 1) Personality test - type A and B
- 2) Bell's adjustment Inventory – It covers areas for Home & family, Social, Personal & emotional, educational, health adjustment.
- 3) STAI- Trait Anxiety scale

The following table describes raw scores and level of anxiety

Low	Moderate	High
20-30	31- 40	41-80

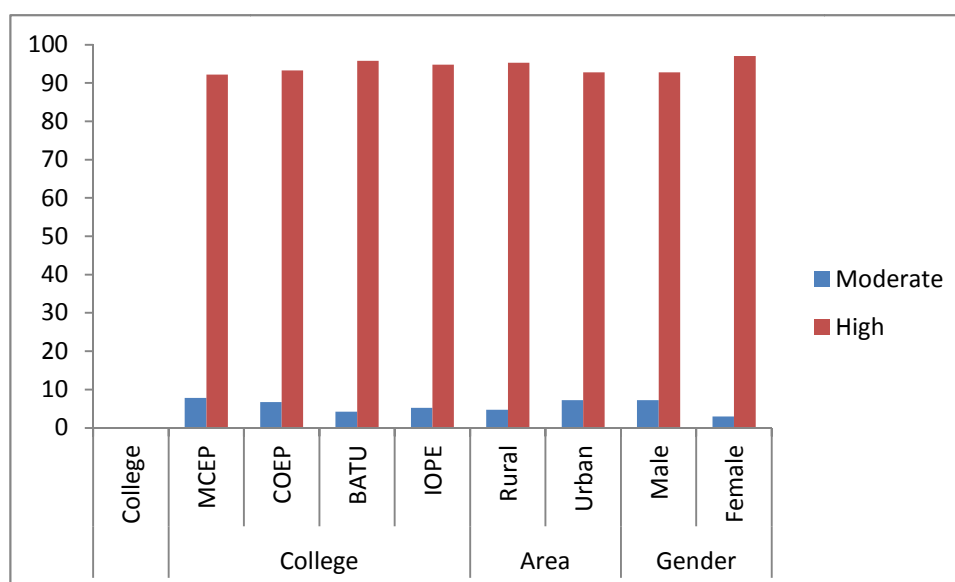
### **Data and analysis-**

Data was collected by using three inventories mentioned in Tools. These inventories were given to students and were asked to record their own perception about the items. The details of data analysis are given in the following tables

Table No. 1

Distribution of respondents for Trait anxiety score college area and gender wise

Trait anxiety score college area and gender wise					
		Moderate		High	
	College	N	%	N	%
College	MCEP	12	7.8	142	92.2
	COEP	11	6.7	154	93.3
	BATU	7	4.2	161	95.8
	IOPE	8	5.2	145	94.8
Area	Rural	15	4.7	306	95.3
	Urban	23	7.2	296	92.8
Gender	Male	32	7.2	411	92.8
	Female	6	3	191	97



The above table gives picture of Trait anxiety score of Students College wise. The table and graph explains very clearly that there is a same trend in all four colleges. In all colleges students who scored high are more than 90%. The same table describes about Trait anxiety scores area wise. It also reflects that the mode of scores is the same in both rural and urban area. In both areas students percentage is more for high level than moderate. In rural area it is 95.3% and in urban area it is 92.8%. The difference is very less between these percentages. The above table also gives idea gender wise trait anxiety score. The data is almost the same reflection of earlier results. According to the data 92.8% boys students were in high level of trait anxiety score and only 7.2% were in moderate level. The same tendency was found in girls students. Their percentage for high level score is 97% and only 3% for moderate level.

Table No.2

**Type of personality and Trait anxiety scores**

Trait anxiety scores			
Trait anxiety score	Moderate	High	Total
A Type personality	2	235	237
	0.8%	99.2%	100.0%
B Type personality	36	367	403
	8.9%	91.1%	100.0%
Total	38	602	640
	5.9%	94.1%	100.0%

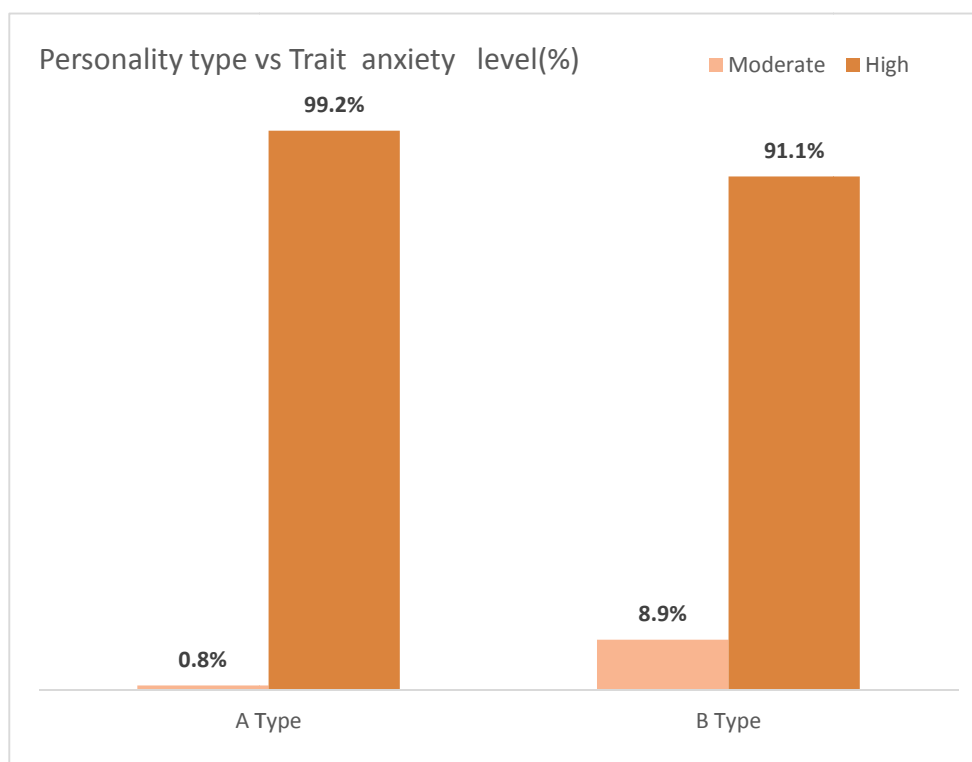


Table 2 explains about type of personality and Trait anxiety score. It clearly expresses that the tendency for both A and B type personality about moderate trait scores is the same. Whereas 91.1% B type students scored high and 8.9% students scored moderate. Thus students belong to A type have more percentage compare to B type students. Difference is of 8%. Thus it shows Personality Type and Trait Anxiety are not independent.

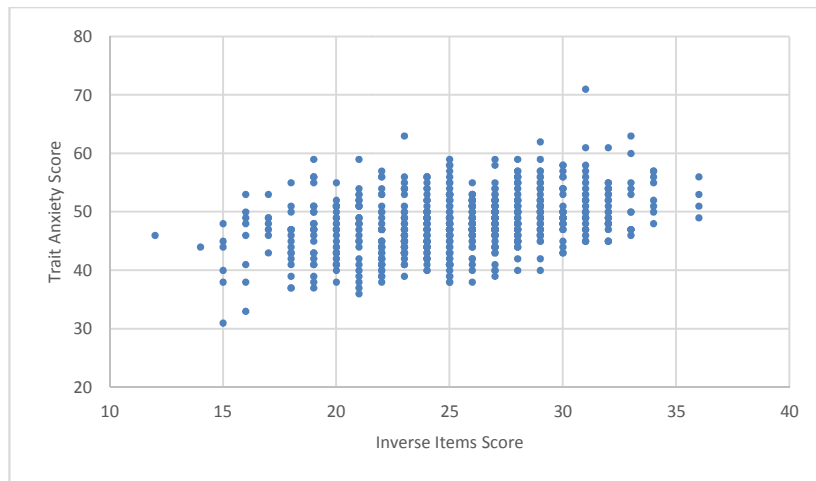
**Influence of inverse and regular items on total Anxiety score**

**Influence of Inverse Items (items that indicate absence of anxiety, but scored in reverse):**

Correlation results:

	Pearson Correlation Coefficient	Sig. (2 – tailed)	N
Trait Anxiety Score	0.37	0.00	640

Scatter plot for inverse items to trait anxiety score



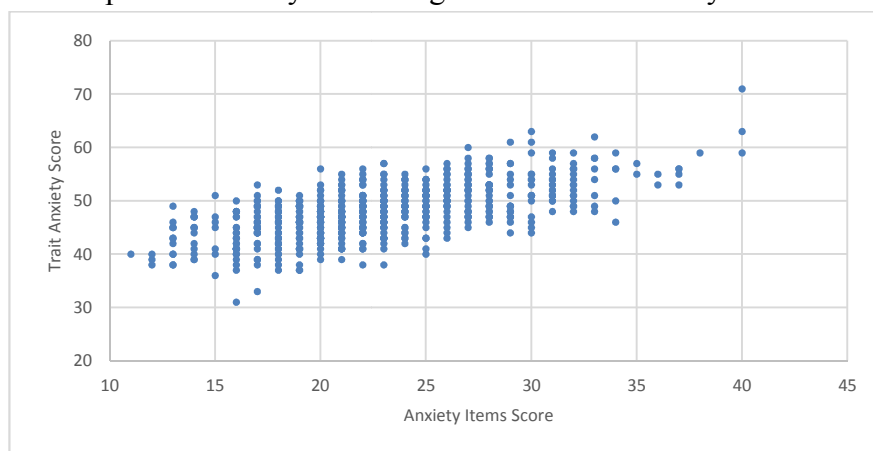
It can be seen that there is a weak correlation between the Total Trait Anxiety Score and the sum of scores for the 9 inverse items. It shows that factors that indicate lesser calmness, peace, contentment etc are having less influence on the total Trait Anxiety score.

**Influence of Anxiety-attributing Items (items that indicate presence of anxiety)**

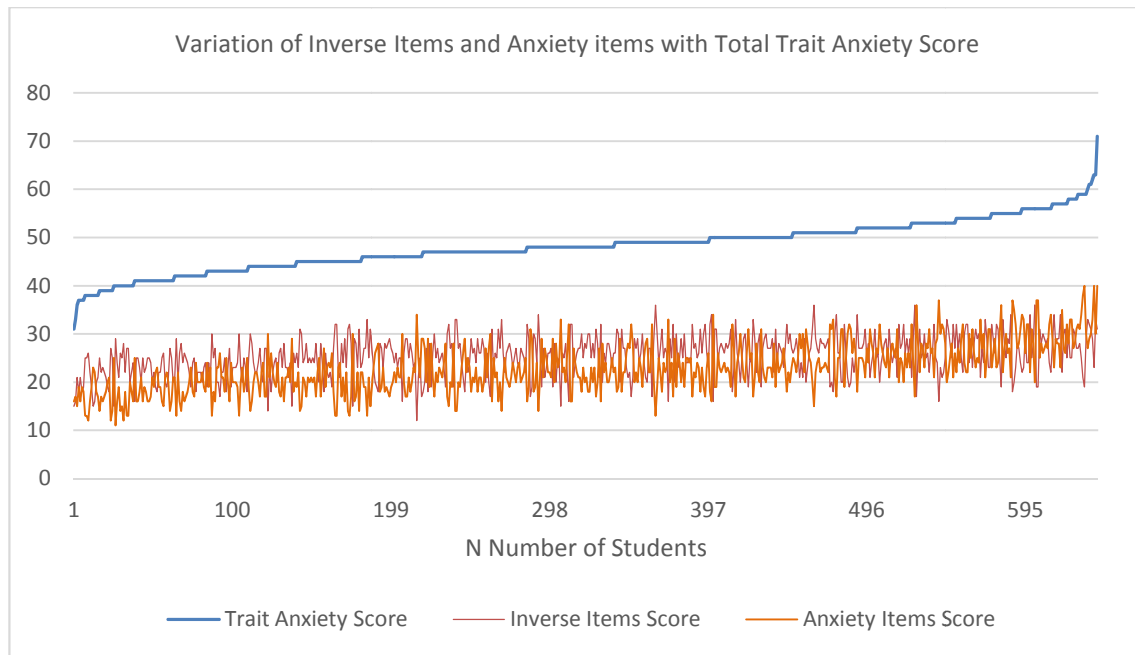
Correlation results:

	Pearson Correlation Coefficient	Sig. (2 – tailed)	N
Trait Anxiety Score	0.65	0.00	640

Scatter plot for anxiety attributing items to total anxiety score



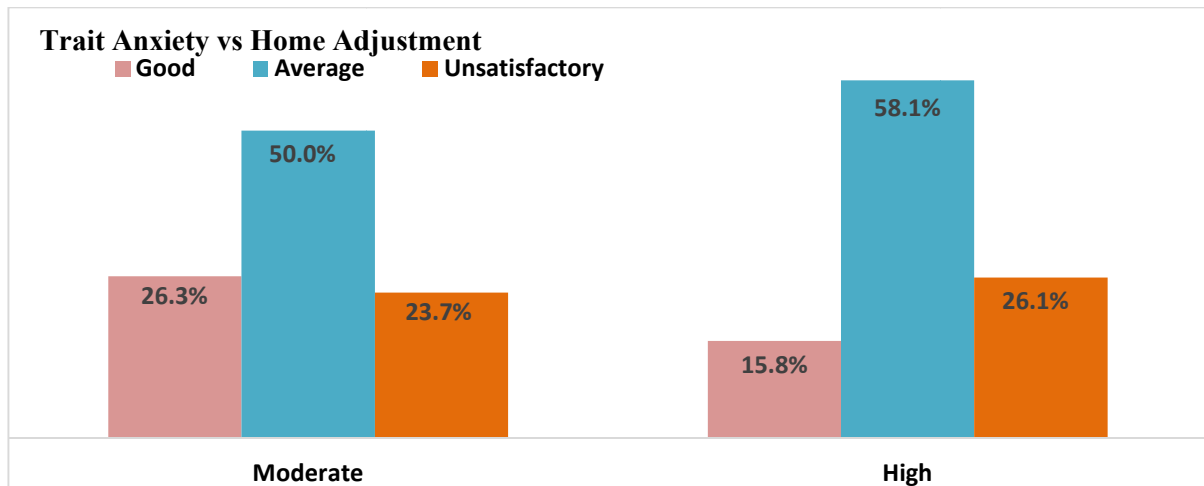
We can immediately visualize the greater influence of 11 anxiety-attributing items to the total Trait anxiety score, and this is confirmed by a strong correlation coefficient of 0.65. A variation line-graph in which we see the variation of the score of inverse items and anxiety-attributing items with ascending Trait Anxiety Score will help us understand the relationships further:



In the above line graph we see fluctuations in the lines for Inverse items scores and Anxiety Items scores – since the number of items are almost equal (9 and 11 items each, respectively), the lines superimpose on each other in the same range between 10 and 40. Wherever the orange line dips, the green line crests and vice-versa, indicating alternating dominance of factors directly attributing to trait-anxiety and factors that indicate absence of rest, calmness etc. Towards the highest Trait Anxiety score we see that the score for Anxiety items contributes in greater proportion as the overall slope in is the same direction, whereas the score of the inverse items have almost no overall slope.

**Table No. 3- Association between Trait anxiety and types of adjustment**

Association among Trait anxiety and types of adjustment					
Trait anxiety	Level	Moderate		High	
Types of adjustment	Category	N	%	N	%
Home	Good	10	26.3	95	15.8
	Average	19	50	350	58.1
	Unsatisfactory	9	23.7	157	26.1
Health	Good	5	13.2	76	12.6
	Average	28	73.7	351	58.3
	Unsatisfactory	5	13.2	175	29.1
Social	Good	19	50	438	72.8
	Average	18	47	154	25.6
	Unsatisfactory	1	2.6	10	1.7
Personal & emotional	Good	12	31.6	86	14.3
	Average	15	39.5	200	33.2
	Unsatisfactory	11	29	316	52.5

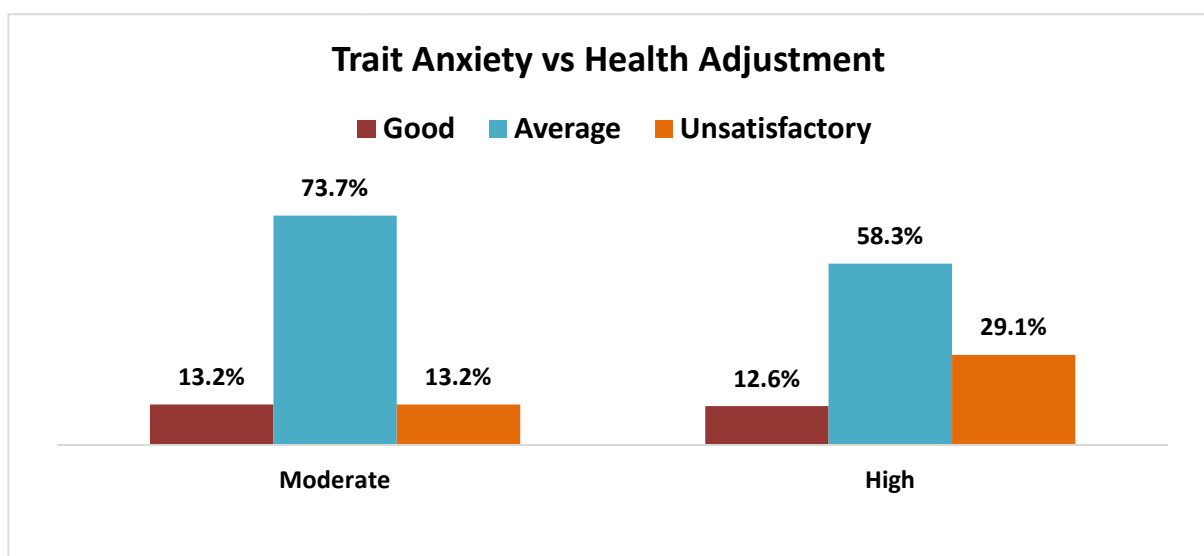


The above table gives the distribution of students' Trait Anxiety levels against their Home Adjustment levels. We can see from the graph that there is very little effect of trait anxiety level on Home Adjustment level. Overall, students are having higher proportion in average home adjustment level, which is total 57.7% of students.

Table 3.1 Chi-Square Tests

Statistic		Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square		2.91	2	0.234
N of Valid Cases		640		

The Chi-Square statistic and its p-value were calculated using PSPP assuming alpha = 0.05. A relationship emerged ( $\chi^2(1, N=640) = 2.91, p=0.23$ ). This implies that there is not enough statistical evidence to prove that a relationship exists between Trait Anxiety and Home Adjustment and hence we can conclude that both are independent of each other.



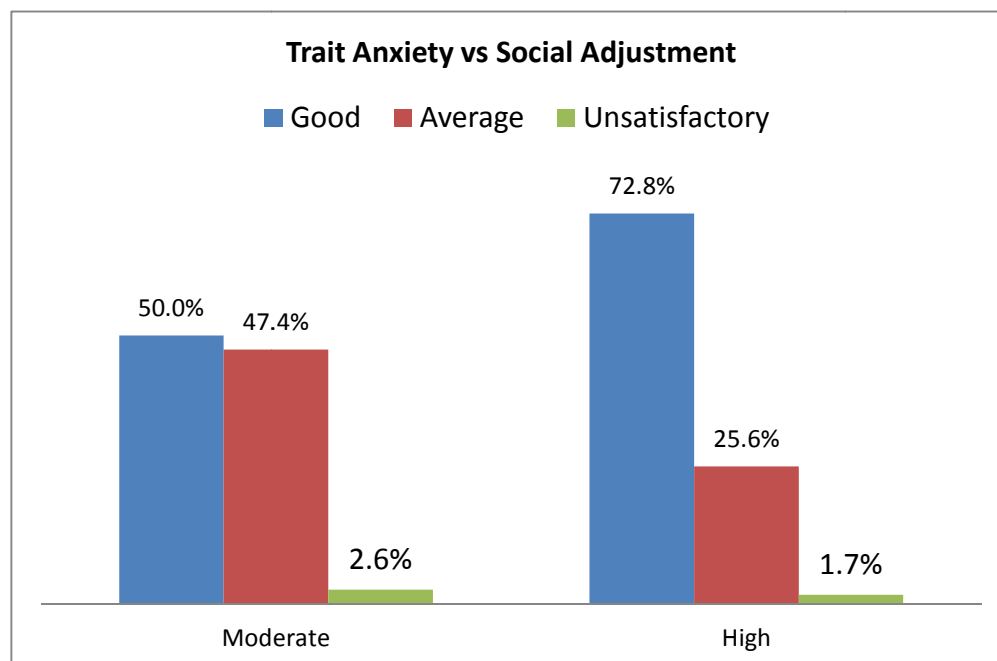
The above table gives the distribution of students' Trait Anxiety levels against their Health Adjustment levels. We can see from the graph that there is a little effect of trait anxiety level

on Health Adjustment level. Overall, students are having higher proportion in average home adjustment level, which is total 59.2% of students. Out of the students having moderate trait anxiety 13.2% have good health adjustment, 73.7% have average health adjustment while 13.2% have unsatisfactory health adjustment, showing bias toward the average level. In comparison, out of the students having High trait anxiety 12.6% have good health adjustment, only 58.3% have average health adjustment while 29.1% have unsatisfactory health adjustment. We can use chi-square test to find out whether this effect of trait anxiety level is statistically significant or not.

Table 3.2 Chi-Square Tests

Statistic	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.65	2	0.098
N of Valid Cases	640		

The Chi-Square statistic and its p-value were calculated using PSPP assuming alpha = 0.05. A relationship emerged ( $\chi^2(1, N=640) = 2.91, p=0.09$ ). This implies that there is not enough statistical evidence to prove that a relationship exists between Trait Anxiety and Health Adjustment and hence we can conclude that both are independent of each other.



In contrast with the previous comparisons with Home and Health Adjustments, here we can clearly distinguish the trend between Moderate and High Anxiety levels. Surprisingly a negative association is being drawn between good social adjustment and high trait anxiety. 72.8% of students having high trait anxiety, an overwhelming majority, displayed good social adjustment levels while only 1.7% of these students displayed unsatisfactory social adjustment levels. In students having moderate trait anxiety the distribution was split between good and average social adjustment levels at 50% and 47.4% respectively.

Table 3.3 Chi-Square Tests





Statistic	Value	df	Asymptotic (2-sided)	Significance
Pearson Chi-Square	9.1*	2	0.011	
N of Valid Cases	640			

\* 1 cells (16.7%) have expected count less than 5. The minimum expected count is .65.

The Chi-Square statistic and its p-value were calculated using PSPP assuming  $\alpha = 0.05$ . A relationship emerged ( $\chi^2(1, N=640) = 9.1, p=0.01$ ). This implies that there is enough statistical evidence to prove that a relationship exists between Trait Anxiety and Social Adjustment. Since the above cross tabulation involves ordinal variables, we have attempted Chi-square test with Kendall's tau-c and Goodman-Kruskal's Gamma to test strength of association. We are also checking directional association with Somers' d.

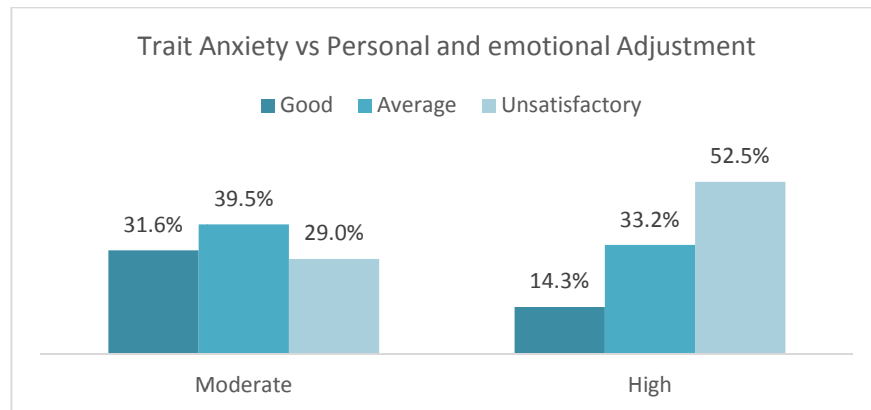
Table 3.4 Symmetric measures.

Category	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Ordinal by Kendall's	-0.050	0.020	-2.520	
Ordinal tau-c				
Gamma	-0.44	0.13	-2.52	
N of Valid Cases	640			

Table 3.5 Directional measures.

Category	Statistic	Type	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Ordinal by Somers'	d	Symmetric	-0.1		-2.52	0.012
Ordinal		Trait Anxiety				
Ordinal		Dependent	-0.06	0.02	-2.52	0.012
		Social				
		Adjustment				
		Dependent	-0.23	0.08	-2.52	0.012

We have also obtained negative but weak values of Kendall's tau-c as -0.05 and Gamma as -0.44, indicating, that higher trait anxiety level can indicate tendency towards better Social Adjustment. Somers' D coefficient of -0.23 considering social adjustment as dependent variable suggests that extent of social adjustment can be predicted from ascending trait anxiety level by reducing prediction errors by 23%.



In this cross-table also we can clearly distinguish the trend between Moderate and High Anxiety levels. A positive association is being drawn between unsatisfactory personal and emotional adjustment and high trait anxiety. 52.5% of students having high trait anxiety displayed unsatisfactory personal and emotional adjustment levels while only 14.3% of these students displayed good personal and emotional adjustment levels. In students having moderate trait anxiety the distribution was split almost uniformly between all three personal and emotional adjustment levels.

Table 3.6 Chi-square tests.

Statistic	Value	df	Asymp. Sig. (2-tailed)
Pearson Chi-Square	11.27	2	0.004
N of Valid Cases	640		

The Chi-Square statistic and its p-value were calculated using PSPP assuming alpha = 0.05. A relationship emerged ( $\chi^2(1, N=640) = 11.27, p=0.004$ ). This implies that there is enough statistical evidence to prove that a relationship exists between Trait Anxiety and Personal and Emotional Adjustment. Since the above cross tabulation involves ordinal variables, we have attempted Chi-square test with Kendall's tau-c and Goodman-Kruskal's Gamma to test strength of association. We are also checking directional association with Somers'd.

Table 3.8 Symmetric measures.

Category	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Ordinal by Ordinal Kendall's tau-c	0.060	0.020	2.930	
Ordinal by Ordinal Gamma	0.42	0.12	2.93	
N of Valid Cases	640			

Table 3.9 Directional measures.

Category	Statistic	Type	Value	Asymp. Std. Error	Approx. T	Approx. Sig.
Ordinal by Ordinal	Somers'd	Symmetric	0.09		2.93	0.003
		Trait Anxiety Dependent	0.05	0.02	2.93	0.003
		Personal and emotional Adjustment Dependent	0.28	0.09	2.93	0.003



We have also obtained weak value of Kendall's tau-c as 0.06 and Gamma as 0.42, indicating, that higher trait anxiety level can indicate tendency towards worse Personal and Emotional Adjustment. Somers' D coefficient of 0.28 considering Personal and Emotional adjustment as dependent variable suggests that extent of Personal and Emotional adjustment can be predicted from descending trait anxiety level by reducing prediction errors by 28%.

### **Discussion-**

Table No 1 describes about the level of trait anxiety among colleges, area and gender wise differences. Results clearly indicate that the trend is almost the same. Another aspect was studied in this paper was relationship between Type of personality and trait anxiety score. Type A personality is considered as stress prone, the results supports it. Students belongs to type A scored high compared to B Type personality, it is by 8%. A type person is more ambitious, hard worker and does multitasking. Students those who strongly possess these characteristics may have shown higher trait anxiety. Other variable considered with trait anxiety was adjustment. Four kinds of adjustment were measured. They were home, health, social and emotional or personal adjustment. The results clearly indicate that among four kinds of adjustment emotional or personal adjustment and trait anxiety has a significant correlation. High trait anxiety affected emotional or personal adjustment negatively. No correlation was found among trait anxiety and adjustment in home and health areas. Surprisingly trait anxiety and social adjustment found negatively correlated. One of the reasons may be that students may have limited social interactions. Many times informal talks with friends or closed one may be stress relieving.

### **Conclusion-**

The results indicate that variables like college, area and gender are not correlated with trait anxiety. Students belong to Type A personality showed more trait anxiety than B Type. Trait anxiety had negative effect on emotional or personal adjustment. These two points are of concern for future planning of stress management strategies.

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