



# Predictors of Academic Anxiety among Secondary School Students

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## **Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

**Background:** Academic anxiety is a feeling of worry, tension, or dread that's related to schoolwork, exams, assignments, or subjects. It can also be caused by social pressures from peers or parents, or by feeling uneasy about studying or working in groups. Academic anxiety is a prevalent issue that students must address to achieve academic success. It becomes a critical problem requiring immediate attention when it intensifies to the point where a student can no longer function productively. While feelings of anxiety are not inherently abnormal, they can become so severe in some individuals that they impair day-to-day functioning, potentially leading to the diagnosis of one or more anxiety disorders. This investigation focuses on identifying the factors that trigger academic anxiety among students. The pressure of competition is particularly evident during adolescence, especially when students transition to secondary school. At this stage, streams such as science and non-science are often allocated based on students' preferences and academic performance in previous classes. Science students frequently aspire to pursue engineering or medical courses after secondary schooling, while arts students aim for admission to prestigious colleges and universities. The intense competition for admission to these programs can heighten

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anxiety levels. Recognizing the impact of this issue, the researcher has sought to explore the various factors contributing to academic anxiety among secondary school students and to identify strategies for reducing it to manageable levels.

**Aim:** The study aimed to determine the influence of intelligence, study habits, socio economic status and school environment on academic anxiety of total sample, male & female samples.

**Method & Procedure:** A Descriptive research design was adopted and subsequently stratified random sampling technique was adopted to select 677 students from both science and non-science streams were chosen for the present investigation.

**Results:** The results of the present investigation have revealed that personal factors like intelligence, study habits familial factors like Socio-Economic Status and institutional factors like school environment have a significant impact on academic anxiety among all sampling groups under study.

*Keywords: Academic anxiety; intelligence; predictors; school environment; socio-economic status; study habits.*

## 1. INTRODUCTION

Anxiety is a worldwide phenomenon. It is inbuilt in the mechanism of an individual. It plays a crucial role in human life because all of us are the victims of anxiety in different ways. It is a normal human response to stress. Anxiety is an essential physical response that communicates the need to pay attention to something in the environment (Goodstein & Lanyon, 1975). It has been recognized that anxiety plays a significant role in students learning processes and academic performance (Tobias, 1979). Changing schools, pressure of work, exams and tests can all be difficult events for students. Theorists have left no stone unturned to answer the questions related to anxiety disorders. Freud, (1910) gave the concept of psychoanalysis and concluded that anxiety results from conflict between Id, Ego and Superego. Behaviorists opine that learned behavior from parents, forefathers and ancestors are the reasons of anxiety disorders that occur in later years of life. Still so many researchers are going on to know the exact cause of anxiety disorders among people and most of the researchers agreed that it occurs due to multiple factors and they may be generally associated with personal, familial, institutional and social domains.

Adolescents are the building blocks of a nation. They are the precious resource of any nation. A thorough understanding of adolescents in society depends on information from various perspectives, including education, psychology, biology, history, sociology, and anthropology. WHO, (2002) defines adolescence as age spanning between 10-19 years, youth as those in 15-24 years age group. NYP, (2014a) defines

youth population as those in the age group of 15-29 years. 19% of India's population falls between 15-24 years of age (Census, 2011). Youth in the age group of 15-29 years comprise 27.5% of the population (NYP, 2014b).

Even having such workforce at our disposal, we are far behind other nations in educating them effectively. There are different levels of educating them i.e. elementary, secondary and university. Once out of elementary school, they find their teachers, parents, and peers putting a new emphasis on deadlines, academics and having mastery over a large amount of information. The board exams are fear in itself for those students who are going to appear at this level because on one hand they wish to secure a good percentage for getting admission for further education and on the other hand they also want to prove themselves better in this highly competitive age. While securing good grades and facing competition they come across various emotional and behavioral problems. Adolescents commonly face emotional challenges such as anxiety related to studies, including exams and presentations, general stress, depression, relationship issues, eating disorders, bereavement, parental separation, loneliness, homesickness, low self-esteem, and lack of self-confidence. Additional difficulties include managing transitions, making tough decisions, coping with traumatic experiences like rape, assault, and abuse, dealing with substance or alcohol use, navigating issues around sex and sexuality, self-injury, suicidal thoughts, anger management, worries about appearance, and strained family dynamics (Sodhi, Chabra & Goel, 2012; Pathak et al., 2011; Mohanraj & Subbaiah, 2010).

Behavioral problems such as tobacco use, frequent smoking, substance abuse, and marijuana use are significantly associated with lower academic performance among adolescents (Mohan et al., 2005; Cox et al., 2007; Mumthas & Muhsina, 2014). Kaur, (2006) highlighted that adolescence is marked by major physiological, cognitive, psychological, and emotional changes. During this phase, many students transition into professional education, encountering new and often intense challenges, including high expectations to achieve good grades and earn degrees (Hirsch & Ellis, 1996). Other stressors, as identified by Kohn & Frazer, (1986), include excessive homework, unclear assignments, and uncomfortable classroom environments. Additionally, academic pressures such as maintaining relationships with faculty, meeting academic requirements, and managing time effectively can contribute to stress (Sagan, Cohen & Lowenthal, 1988). Reddy's, (1989) study on adolescent adjustment and problem areas revealed that academic anxiety and concerns about the future are significant issues. Verma, (1990) further found that academic stress is largely driven by examination systems, homework burdens, and the attitudes of parents and teachers. It is crucial for adolescents to acquire the knowledge and skills necessary for their personal growth and to contribute positively to the socio-economic development of society.

This generation thrives in an environment dominated by relentless competition. The pervasive competitive atmosphere—whether social or academic—drives adolescents to constantly compare themselves to their peers, leading to an ever-changing self-image. Stress is often exacerbated by parental pressure, as parents expect adolescents to excel and stand out among their peers. When adolescents struggle to meet these expectations or are in the process of doing so, they may experience frustration, physical stress, aggression, negative complexes, and even depression. A study by Raakhee & Aparna, (2011) revealed that 56.8% of students suffer from some form of anxiety disorder, with specific breakdowns including 15% experiencing panic disorder, 13% generalized anxiety disorder, 4% separation anxiety, 15.6% social anxiety, and 9.2% school avoidance anxiety. Some students exhibited a combination of one or more anxiety disorders, highlighting the prevalence and complexity of these issues at the secondary school level. Recognizing the critical nature of academic anxiety, this study explores the various factors contributing to it among

secondary school students. The investigation not only identifies these factors but also assesses their impact. Additionally, it includes predictions regarding academic anxiety, aiming to provide insights into its triggers and strategies for addressing them effectively.

## 1.1 Objectives of the Study

1. To find out influence of intelligence, study habits, socio-economic status and school environment on academic anxiety of total sample.
2. To find out the influence of intelligence, study habits, socio-economic status and school environment on academic anxiety of male sample.
3. To find out the influence of intelligence, study habits, socio-economic status and school environment on academic anxiety of female sample.

## 1.2 Hypothesis of the Study

1. There would be no significant influence of intelligence, study habits, socio-economic status and school environment on academic anxiety of total sample.
2. There would be no significant effect of intelligence, study habits, socio-economic status and school environment on academic anxiety of male sample.
3. There would be no significant impact of intelligence, study habits, socio-economic status and school environment on academic anxiety of female sample.

## 2. REVIEW OF RELATED LITERATURE

Analysis of the related research indicates that researchers have taken into consideration a several variables to find out their association with academic anxiety. Prominent among these variables are emotional and social maturity, socio-economic status, intelligence, personality, adjustment, study habits, academic motivation, self-concept, learning style, achievement motivation, adjustment and creativity (Singh, 2010; Kumar, 2013; Raju & Afsaw, 2009; Verma, 1992; Gautam, 2011; Mohanty, 1985; McLaughlin et al, 2011a; Joshi, 2015; Singh, 1986). The Influence of anxiety on the academic achievement of students has also been explored by many researchers at various levels of education (Talwar, 2006; Kaur, 1991; Thilagavathi, 1990). A sizeable number of studies are comparative based on gender, school

type, social strata, medical and engineering college students, students living in orphanages and normal students, backward class and non-backward class etc. (Dhull, 2012a; Swami, 1989; Deb & Walsh, 2010a; Shukla, 2013; Verma, 1990; Matto & Nabi, 2012; Singh & Jha, 2013). Effects of cultural setting, family relations and environmental factors have also been explored by researchers although few (Yadav, 1989; Saxena, 1988; Barinder, 1985a). A Study conducted by Ghadari et. al., (2009) found Indian students more anxiety prone as compared to Iranian post graduate students. Depression, Anxiety and Stress were all significantly higher among board classes i.e. 10th and 12th as compared to class 9th and 11th class (Bhasin, 2010). Academic anxiety has also been studied on a sample of special need's children like visually disabled by Rani, (2015) placed in inclusive and exclusive school settings. Her study revealed that students placed in inclusive and exclusive school settings have same level of academic anxiety. It is clear from the findings of the researches mentioned in this chapter that academic anxiety is prevalent among Indian students and is directly/indirectly related to their academic achievements. Contradictory findings have also been reported by the researchers in regard to the variables like gender, rural & urban, government & private schools, medical and engineering students, P.G. & Ph.D. students etc. (Singh, 2010; Kumaravelan & Selvaraju, 2015; Siddiqui & Rehman, 2014; Deb & Walsh, 2010b; Joshi, 2005; Kaur, 1991; Dhull, 2012b; Geeta, 2011; Jha & Singh, 2013; Smith, 2007; Ghaderi, 2009). Rare attempt has been made by the researchers to study academic anxiety of science & non-science students studying at senior

secondary school stage. However, this stage is crucial which opens the door for professional and university education. Furthermore, no attempt has been made so far to explore the joint effects of intelligence, study habits, Socio-Economic Status and school environment on academic anxiety of secondary school students. Keeping this research gap in mind, the researcher planned and carried out this comprehensive study covering personal (intelligence, study habits) familial (socio-economic status) and institutional factors (school environment) regarding academic anxiety of science and non-science students.

### 3. METHODOLOGY

#### 3.1 Population

The targeted population was senior secondary school students of Jammu division. Thus, all the senior secondary schools as well as students studying at senior secondary stage, both in science and non-science streams constituted the entire population of the study.

#### 3.2 Sample

Subsequently, a stratified random sampling technique was used in order to select 768 students as sample. Out of these ninety one (91) students' response sheets were rejected due to incomplete information given by them. Finally, 677 respondents from both streams (science & non-science) were selected as a sample of the study. A detailed description of the sample is presented in Fig. 1.

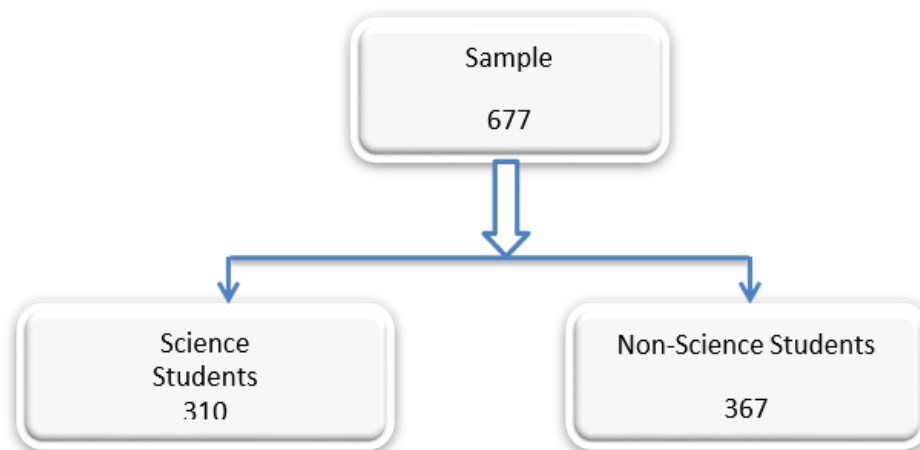


Fig. 1. Showing sampling distribution based on stream

### 3.3 Tools of the Study

**Table 1. Research tools used**

| S. No. | Research Tools                               | Authors   |
|--------|--|---|
| 1.     | Academic Anxiety Scale                       | Prof. M.A Siddqui & Dr. A.U. Rehman (2017)            |
| 2.     | Group Test of Intelligence                   | DR. G.C. Ahuja. (2009).                               |
| 3.     | Study Habits Inventory                       | DR. Lajwanti., N.P.S. Chandel., & A. Paliwal. (2013). |
| 4.     | Socio-Economic Status Scale (Rural & Urban). | Prof. A.K. Kalia., & S. Sahu. (2013).                 |
| 5.     | School Environment Inventory                 | Prof. K.S. Misra. (2012).                             |

#### 3.3.1 Administration of the tools and collection of data

The investigator selected a representative sample of the population in order to arrive at meaningful generalizations. After seeking permission from the chairperson of the department, the researcher approached Director, JKBOSE and obtained a list of senior secondary schools. Principals of the concerned senior secondary schools were contacted to seek their permission as well. Class teacher's help was obtained in order to strictly follow instructions given in manual of test and scales such as time limit for filling the response sheets. Five research tools were administered namely Academic anxiety scale, Group test of intelligence, Study habits inventory, Socio-economic status scale (Rural & Urban) and School environment inventory. Students were requested to give free and frank responses. They were ensured that their responses would be kept confidential and will be used for research purposes only. In spite of assurance, ninety one respondents (91) did not complete the research tools administered by the investigator. Such sheets were discarded and were not included for scoring purposes.

#### 3.3.2 Scoring of the tools

Researcher applied five research tools including academic anxiety scale. Scoring of the response sheets was carried out strictly following the guidelines incorporated by the authors in the respective manuals of these tools.

#### 3.3.3 Statistical treatment of the data

In the present study, stepwise multiple regression analysis was applied by the researcher for analyzing the data in accordance with the objectives of the study and the variables involved. Analysis was done with the help of SPSS-20 software and all formulas were inbuilt in it by default.

#### 3.3.4 Stepwise multiple regression analysis

In regression analysis predictive model is fitted to the data and that model is used to predict values of the dependent variable from one or more independent variables. Simple regression seeks to predict an outcome variable from a single predictor variable whereas multiple regressions seek to predict an outcome from several predictors. Multiple regression analysis is a method for studying the effects and the magnitudes of the effects of more than one independent variables on dependent variable using principles of correlation and regression (Kerlinger, 2009). There are several approaches to regression analysis i.e. Stepwise, backward and forward approach. Stepwise multiple regression analysis is calculated to find out the separate effects of predictor variables (intelligence, study habits, socio-economic Status and school environment) on criterion variable (academic anxiety).

### 4. INTERPERTATION & DISCUSSIONS OF RESULTS

1. There would be no significant influence of intelligence, study habits, socio-economic status and school environment on academic anxiety of total sample.

The analysis of the Tables 2-4 presented above reveals that study habits, intelligence, school environment and socio-economic status are found to be significant predictors of academic anxiety for total sample. The magnitude of predictability (relationship) as represented by the multiple regression factor  $R^2$  appears to be (0.50) for four predictive variables to one criterion variable (academic anxiety) as shown in Table 2. It is also clear from the same Table 2 that study habits come out to be the most important contributing factor i.e. (41%) for the total sample being significant at 0.01 level ( $F=472.90$ ). The second factor which shares 05% of the variance

in the criterion variable is intelligence which is also significant at 0.01 level of confidence ( $F=62.33$ ). The remaining two variables, school environment and socio-economic status also produced significant variations in criterion variable and contributing (03%) and (01%) respectively ( $F=44.93$  &  $18.08$ ).

The ANOVA Table 3 reveals that the model of prediction in academic anxiety for total sample explains significant variance due to the regression as can be inferred by the F-ratio (173.92) given in the said Table 3. It means that for the total sample, these four predictors can be used to predict their academic anxiety. Moreover, the Table 4 shows that the regression coefficient, Beta ( $\beta$ ) (0.17) for one predictor variable (school environment) is positive and significant indicating that variations due to this predictive variable will cause significant positive change in criterion variable (academic anxiety) but remaining three variables including study habits, intelligence, socio-economic status are negative which means variations due to these predictive variables will cause significant negative changes in criterion variable (academic anxiety) in case of total sample students. Negative value of Beta  $\beta$  is because of the reverse scoring pattern of academic anxiety scale i.e. lower scores obtained by the candidate indicates less academic anxiety and higher scores means severe academic anxiety.

It can be inferred that out of four independent variables, the contribution of study habits in influencing the academic anxiety is found to be highest being (41%) for the total sample of this study. The other three variables i.e. intelligence, socio-economic status and school environment are also found influencing the academic anxiety but less in magnitude as compared to the study habits. Their collective contribution is (09%) and the socio-economic status being the least contributing factor i.e. only (01%). The highest contribution of the study habits i.e. (41%) in

influencing the academic anxiety of senior secondary school students is really surprising as compared to other three independent variables (intelligence, socio-economic status and school environment) whose collective contribution is just (09%). Similar findings were reported by Raju & Asfaw, (2009) that study habits were the significant predictor of academic anxiety among students. However, Deb & Walsh, (2010c) found that adolescents belonging to the middle socioeconomic group suffered more from anxiety than those from both high and low socioeconomic groups. Similarly, in a study conducted by McLaughlin, et.al. (2011b) revealed that childhood socio-economic status predicted severity of mental disorders. This may be due to the fact that students who develop the habit of comprehension i.e. the ability to know and grasps ideas and abstract principles, shows commitment and enthusiasm towards learning, demonstrate task orientation, interact well in their classroom with the teachers & students in a bit to enhance learning and remove difficulties, engage in drilling the learning materials through revision and practice, write and record study material or content for comprehension and future study as well as use all the modern learning resources to enhance the learning are expected to perform better in their academic tasks and do not exhibit the symptoms of severe academic anxiety. Thus, good study habits also help the students to feel at ease and get rid-off the academic pressures which are supposed to be the highest at senior secondary stage of education. The contribution of intelligence (05%) seems to be quite justifiable as intelligent students think rationally, act purposefully and deal effectively with their environment. These qualities of intelligent students help them to deal academic difficulties in a better manner as compared to others. The influence of socio-economic status on academic anxiety is also on expected line as the family factors are crucial and play an important role in inducing or decreasing the academic anxiety. Hence, hypothesis is rejected.

**Table 2. Regression analysis among criterion (academic anxiety) and predictive variables for total sample students**

| Predictive Variables   | R    | R <sup>2</sup> | R <sup>2</sup> Change | F-change |
|--|------|----------------|-----------------------|----------|
| Study Habits   | 0.64 | 0.41           | 0.41                  | 472.90** |
| Study Habits & Intelligence  | 0.68 | 0.46           | 0.05                  | 62.33**  |
| Study Habits, Intelligence & School Environment                        | 0.70 | 0.49           | 0.03                  | 44.93**  |
| Study Habits, Intelligence, School Environment & Socio-Economic Status | 0.71 | 0.50           | 0.01                  | 18.08**  |

\*\*Significant at 0.01 level

**Table 3. Summary of ANOVA for regression**

| Source of Variation | Sum of Squares | 'df' | Mean Square | F-ratio  |
|---------------------|----------------|------|-------------|----------|
| Regression          | 63841.82       | 4    | 15960.45    | 173.92** |
| Residual            | 61668.46       | 672  | 91.76       | -        |
| Total               | 125510.29      | 676  | -           | -        |

\*\*Significant at 0.01 level

**Table 4. Regression coefficients**

| Predictive Variables  | Unstandardised Coefficients |            | Standardised Coefficients | t-value  |
|-----------------------|-----------------------------|------------|---------------------------|----------|
|                       | B                           | Std. Error | Beta ( $\beta$ )          |          |
| (Constant)            | 150.39                      | 5.31       | -                         | 28.27**  |
| Study Habits          | -0.53                       | 0.03       | -0.49                     | -15.97** |
| Intelligence          | -0.18                       | 0.03       | -0.16                     | -5.42**  |
| School Environment    | 0.07                        | 0.01       | 0.17                      | 5.81**   |
| Socio-Economic Status | -0.10                       | 0.02       | -0.13                     | -4.25**  |

\*\*Significant at 0.01 level

**Table 5. Regression analysis among criterion (academic anxiety) and predictive variables for male students sample**

| Predictive Variables                            | R    | R <sup>2</sup> | R <sup>2</sup> Change | F-change |
|---|------|----------------|-----------------------|----------|
| Study Habits                                    | 0.74 | 0.55           | 0.55                  | 440.26** |
| Study Habits & School Environment               | 0.75 | 0.56           | 0.01                  | 8.51**   |
| Study Habits, School Environment & Intelligence | 0.75 | 0.57           | 0.01                  | 5.97**   |

\*\*Significant at 0.01 level

**Table 6. Summary of ANOVA for regression**

| Model      | Sum of Squares | 'df' | Mean Square | F-ratio  |
|------------|----------------|------|-------------|----------|
| Regression | 41461.86       | 1    | 41461.86    | 440.26** |
| Residual   | 33526.19       | 356  | 94.17       | -        |
| Total      | 74988.05       | 357  | -           | -        |

\*\*Significant at 0.01 level

**Table 7. Regression coefficients**

| Predictive Variables | Unstandardized Coefficients |            | Standardized Coefficients | t-value  |
|----------------------|-----------------------------|------------|---------------------------|----------|
|                      | B                           | Std. Error | Beta ( $\beta$ )          |          |
| (Constant)           | 183.76                      | 7.95       | -                         | 23.11**  |
| Study Habits         | -0.82                       | 0.05       | -0.66                     | -16.41** |
| School Environment   | 0.04                        | 0.01       | 0.10                      | 2.67**   |
| Intelligence         | -0.12                       | 0.04       | -0.09                     | -2.44**  |

\*\*Significant at 0.01 level

- There would be no significant effect of intelligence, study habits, socio-economic status and school environment on academic anxiety of male sample.

The analysis of the Tables 5-7 presented above reveals that study habits, school environment and intelligence are found to be significant predictors of academic anxiety for total male senior secondary students selected as sample of

the study. This contribution is (55%) as can be explained based on value of  $R^2$  change=0.55 being significant at 0.01 of confidence ( $F=440.26$ ). The other two variables i.e. school environment and intelligence each shared (01%) variance in predicting academic anxiety among total male sample. The contribution of these two variables although very low as compared to study habits but is statistically significant. Socio-economic status was excluded from the model of

prediction in predicting academic anxiety, showing that it did not contribute significantly in predicting academic anxiety of total male students" sample. Present results are in consonance with the findings reported by Barinder (1985b) that socioeconomic status did not play any role in case of boys neither on their general anxiety nor on their test anxiety but there was a significant difference on general anxiety and test anxiety of very high socio economic status girls and average socioeconomic status girls. The lower socioeconomic status score of girls the higher was their test anxiety.

The ANOVA Table 6 reveals that the model of prediction in academic anxiety for total male sample explains significant variance due to the regression as can be inferred by the F-ratio (440.26) given in the said Table 6. It means that for the total male sample, these three predictor variables can be used to predict their academic anxiety. Moreover, the Table 6 shows that the regression co-efficient (0.10) for one predictor (school environment) was significant and positive indicating that variations due to this predictive variable will cause significant positive change in academic anxiety and the regression co-efficient for other two variables including study habits (-0.82) and intelligence (-0.12) were negative which means variations due to these predictive variable will cause significant negative changes in academic anxiety of male students. Negative value of Beta ( $\beta$ ) is because of the reverse scoring pattern of academic anxiety scale i.e. lower scores obtained by the candidate indicates less academic anxiety and higher scores means higher academic anxiety. It may be concluded that study habits is an important single factor responsible in influencing the academic anxiety among senior secondary school male students. One thing is clearer that socio-economic status has no role to play in affecting the academic anxiety in case of male sample.

In case of the male students" sample, also the study habit has been found most important contributing factor (55%) in influencing the academic anxiety. As has been explained previously that study habits help the learner to overcome all the problems and difficulties which a learner encounters in highly competitive environment at senior secondary school stage. Further, socio-economic status has not produced any variance in academic anxiety scores in case of male sample indicating no role of socio-economic status in academic anxiety. The influence of intelligence is observed comparatively low i.e. 01% only against 05% for total sample may be because of the low scores obtained by male students on the intelligent test as compared to female students. Here too the contribution of school environment although significant but very low in terms of percentage. It may be because of the little emphasis paid by the male students towards school environment. So, hypothesis no. 2 stands partially rejected. The assumption in partially rejecting a null hypothesis is if a researcher had kept two or more than two predictor variables in consideration while framing a null hypothesis. One or more than one is significantly influencing the criterion variable but third one is not significantly influencing the criterion variable, than null hypothesis will be partially rejected. Here effect of intelligence, study habits, socio-economic status and school environment on academic anxiety of total male sample was kept in consideration but effect of intelligence, study habits and school environment on academic anxiety is significant and socio-economic status was excluded from the model of prediction, so hypothesis no. 2 is partially rejected.

3. There would be no significant impact of intelligence, study habits, socio-economic status and school environment on academic anxiety of female sample.

**Table 8. Regression analysis among criterion (academic anxiety) and predictive variables for female students sample**

| Predictive Variables  | R    | R2   | R <sup>2</sup> Change | F-change |
|---|------|------|-----------------------|----------|
| <b>Study Habits</b>   | 0.54 | 0.29 | 0.29                  | 131.02** |
| <b>Study Habits &amp; Socio-Economic Status</b>                                   | 0.67 | 0.45 | 0.16                  | 91.27**  |
| <b>Study Habits, Socio-Economic Status &amp; School Environment</b>               | 0.70 | 0.49 | 0.04                  | 24.24**  |
| <b>Study Habits, Socio-Economic Status, School Environment &amp; Intelligence</b> | 0.71 | 0.51 | 0.02                  | 15.58**  |

\*\*Significant at 0.01 level



**Table 9. Summary of ANOVA for regression**

| Model      | Sum of Squares | 'df' | Mean Square | F-value |
|------------|----------------|------|-------------|---------|
| Regression | 25957.62       | 4    | 6489.40     | 83.14** |
| Residual   | 24508.81       | 314  | 78.05       | -       |
| Total      | 50466.43       | 318  | -           | -       |

\*\*Significant at 0.01 level

**Table 10. Regression coefficients**

| Predictive Variables  | Unstandardized Coefficients |            | Standardized Coefficients | t-value |
|-----------------------|-----------------------------|------------|---------------------------|---------|
|                       | B                           | Std. Error | Beta ( $\beta$ )          |         |
| (Constant)            | 133.52                      | 6.75       | -                         | 19.77** |
| Study Habits          | -0.37                       | 0.03       | -0.39                     | -9.52** |
| Socio-Economic Status | -0.20                       | 0.03       | -0.28                     | -6.30** |
| School Environment    | 0.07                        | 0.01       | 0.20                      | 4.76**  |
| Intelligence          | -0.16                       | 0.04       | -0.16                     | -3.94** |

\*\*Significant at 0.01 level

The evaluation of the Tables 8-10 reveals that study habits, socio-economic status, school environment and intelligence are found to be significant predictors of academic anxiety for total female sample. The extent of predictability (relationship) as represented by the multiple regression factor  $R^2$  appears to be (0.51) of four predictive variables to one criterion variable (academic anxiety) as shown in Table 8. It means these predictive variables are very important in exercising their influence on the academic anxiety of the total female students" sample. It is also obvious from the values of  $R^2$  change presented in Table 8 for all the four independent variables ( $R^2=0.29$  for study habits,  $R^2=0.16$  for socio-economic status,  $R^2=0.04$  for school environment and  $R^2 = 0.02$  for intelligence). The individual contribution of the study habits in influencing the academic anxiety is the highest being 29% followed by socio-economic status 16%, school environment 04% and intelligence being the lowest i.e. 0.2%. All these values are significant at 0.01 level as can be seen from their F-values given in the same Table 9.

The ANOVA Table 9 reveals that the model of prediction in academic anxiety for total female sample explains significant variance due to the regression as shown by the F-ratio (83.14) which is significant at 0.01 level of confidence. It means that for the total female sample these four predictors can be used to predict their academic anxiety. Moreover, the Table 10 shows that the regression co-efficient (0.20) for one predictor (school environment) is significant and positive indicating that variations due to this predictive variable will cause significant positive change in academic anxiety of female sample but remaining three variables including study habits

(-0.39) intelligence (-0.16) and socio-economic status (-0.28) are negative which means variations due to these predictive variable will cause significant negative changes in academic anxiety of total female sample. Negative value of Beta  $\beta$  is because of the reverse scoring pattern of academic anxiety scale i.e. lower scores obtained by the candidate indicates less academic anxiety and higher scores means severe academic anxiety.

## 5. CONCLUSION

Striking results have been observed in case of female sample regarding the contribution of four independent variables on academic anxiety. Here too study habits contributed the most (29%) again highlights the importance of organized study habits in dealing academic difficulties which if left unresolved leads to anxiety and creates troubles for the academic achievement of the students. In case of female sample, socio-economic status emerged as significant predictive variable sharing 16% variance in criterion variable. It is quite obvious that female students belonging to better socio-economic status are expected to enjoy safe, secure and positive environment and avail resources needed for education. The family is really an important element in guiding the child and providing resources leading to lower their academic anxiety. This seems to be logical reason for this result. Hence, hypothesis no. 3 stands rejected.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image

generators have been used during writing or editing of this manuscript.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

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