

Impact of Anxiety on the Academic Achievement of Students Having Different Mental Abilities at University level in Bahawalpur (Southern Punjab) Pakistan

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ABSTRACT

This paper is based on a study that was designed to study the "Impact of Anxiety on the Academic Achievement of Students at University level in Bahawalpur, Pakistan." Being a descriptive study, survey method was adopted for data collection to find out the results. For sample size out of 200 students 97 students were selected by stratified sampling. The researcher made three groups of all the students and three groups of male and female students. In this research questionnaire (Otis self-administering test of mental ability) and anxiety measurement scale was selected as an instrument for the purpose of data collection. Data was analyzed by using the formula of regression to see the impact of anxiety on the academic achievements of students and formula of co-relation was applied to see the relationship of anxiety and academic achievements of students in SPSS software. The in depth investigation of the findings obtained through this analyzed data reveals that anxiety had its impact on academic achievement of students. The results show that when anxiety increases, academic achievement decreases both in male and female students. It is also noteworthy in the results that there is more impact of anxiety on female students as compared to male students.

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Keywords:

Anxiety; Academic Achievement; University Students; Pakistan

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Introduction

It is a fact that a nation's progress depends upon its students' academic achievements and development. That's why every nation emphasizes students' academic achievements. The academic achievements of the students are badly affected due to increase in anxiety in the society. There is no denying to the fact that anxiety has increased in the society it not only affects education but also students' personalities which linger throughout their lives.

Today, anxiety is a common phenomenon of everyday's life. It plays a crucial role in human life because all of us are the victims of anxiety in different ways. Generally, anxiety can either be a trait anxiety or a state anxiety. Trait anxiety is a stable characteristic or trait of the person. State anxiety is one which is aroused by some temporary condition of the environment such as examination, accident, punishment etc. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environment of the academic institutions including teachers, certain subjects like Mathematics, English etc (Rohen Meetei, 2012).

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Teachers' guidance tracks the attitudes, goals, aspirations and values of students towards the right direction. Some people believe that anxiety is most often present as a self-protection mechanism that surfaces in response to threatening situations.

In behavioural terms Sarason (1980) defined anxiety as a conditioned response to a perceived threatening stimulus which could be learned or inherited. In a similar way, May (1977) viewed anxiety as a maladjusted behaviour. Benjamin (1987 .p.78) noted that anxiety can interface with attention, learning and testing. The idea that anxiety may interface with a student's ability to demonstrate what they have learned is not new. Anxiety can also interface with learning in that anxious students are more easily distracted by irrelevant or incidental aspects of the task at hand, having trouble in focusing on significant details.

Some people view the behaviour of anxious students who perceive the classroom experience to be threatening perhaps because of history and expectation of failure or because they anticipate negative consequences if they attempt to achieve. Some research has reported that highly anxious students often indulge in daydreaming. These behaviours make us think about ways of protecting ourselves from a perceived threat but each interface with our productivity and achievements. The relationship between anxiety and academic achievements is complex. Although high levels of anxiety may approve performance on simple well practiced task, yet it seems to interface with academic performance on new or difficult assignments. In general anxiety that is too high can block learning and teachers with high anxious students may need to concentrate on building relationship that allow the students to feel not threatened in that environment.

It has been recognized that anxiety plays significant role in students' learning and academic performance (Tobias, 1979). Reilly and Lewis (1991, p.104) say that anxiety is hampering for young people's academic achievements. Changing schools, Parents divorcing or pressure of work, exams and test can all be difficult events for students. Anxiety is strongly linked with emotional depression.

According to Science Daily (June 26, 2009), the effect of anxiety on academic achievement is not always obvious but new research by the Economic and Social Research Council suggests that there may be hidden costs. The research found that anxious individuals find it harder to avoid distractions and take more time to turn their attention from one task to the next than their less anxious fellow students. This research was conducted by Eysenck (2009). These findings have clear practical implications in the classroom. "A lot of the negative effects of anxiety appears to be caused by difficulties with controlling attention. This suggests that training techniques designed to enhance attentional control - the ability to ignore distractions and to switch attention from one task to another - could help anxious students to achieve their academic potential," he explains. In addition, the study showed that anxious individuals often perform at a comparable level to non-anxious ones but only do so at a greater cost in terms of effort or perhaps long term stress. This shows that it is important that teachers focus not only on whether a student's academic performance seems to be satisfactory but also on how much effort the student had to put in to achieve that level. Anxious students may be trying desperately hard just to keep up and this could be at great psychological cost.

Ormord (2000, p.492) has view about the relationship between anxiety and academic achievements is that anxiety and academic achievements has been a difficult relationship to clearly elucidate. Academic achievements are related scholastic aptitude, it seems reasonable to suggest that more able students can spend their time in more non-academic activities. Another research conducted by Davis (2004) found that test- anxiety decreases attention span, memory and concentration, then leads to low academic performance. Masson, Hoyois, Pcadot, Nahama, Petit and Ansseau (2004) found that high school students with high test-anxiety had a poor school performance. Eysenck (2001) found that test-anxiety creates irrelevant thoughts, preoccupation, and decreased attention and concentration thus, leads to academic difficulties. When attention and concentration are impaired, this will disrupt memory and as a consequence will lead to low academic achievement (Chen, Li, 2000 and Sanders, 2001, cited in Needham, 2006).

The result of this study may also provide information to teachers and students about the anxiety and its impact on academic achievements of students. It may help teachers to guide and motivate students according to their requirements and background.

Objectives of the study

The objectives of the study were:

To review the symptoms of anxiety in students

To evaluate the impacts of anxiety on the academic achievements of students

To differentiate the impacts of anxiety on the academic achievements of male and female students

To give suggestions to overcome anxiety and increase academic achievements (Body text starts here)

Methodology

Gay (1997, p.19) has defined Descriptive Research as, "The research which investigates the present problems is known as descriptive research." As this study was descriptive in nature, survey technique was used.

Population

The population of this study consisted of 200 students of the Islamia University of Bahawalpur, both male and female students were included.

Sample

97 students were selected as sample by stratified sampling whose IQ level was 90-104. Three groups of male and female students were selected by using proportional, disproportional, and inversely proportional for each following layer respectively for the study. The detail of sample is given below:

Table 1. Distribution of Sample

	Group	Numbers of Students	Intelligence Level IQ
Overall	1	36	90-94
Students	2	37	95-99
	3	24	100-104
Male	1	25	90-94
	2	23	95-99
	3	16	100-104
Female	1	13	90-94
	2	12	95-99
	3	08	100-104

Research Tool

Walber (1995, p.43) has referred a questionnaire to be relatively inexpensive to be administered, can be self-administrated and can be used to survey a large group of people of one time. In addition, a questionnaire can be distributed by mail or by hand. Keeping in view the different factors and after studying literature two questionnaires were developed and used as tools to collect the information from the respondents.

Otis self-mental administering test was used to check IQ level of students.

Anxiety measurement scale was used to check anxiety level of students.

Otis self-administrating mental ability test. This test was used to check the IQ-level of University students. This test consisted to 75 optional questions.

Anxiety measurement scale. It consisted of 23 questions relating anxiety and each question had four options. The main purpose of Otis self-administering tests of mental ability and anxiety measurement scale was to get information about the impact of anxiety on the academic achievements of students.

Validation of Tool

A research tool pilot study was done to check the validity of research tool prior to actual data collection. For this purpose 20 female teachers and 20 male students of the Islamia University of Bahawalpur were selected for pilot study. After getting responses from respondents, two questions were dropped because of non-response and three items of tool were modified.

Data Collection

200 Otis self-administering mental ability Tests were distributed among the students of Islamia University Bahawalpur. Only 97 students were selected that had IQ 90-104. After it anxiety scale was applied on these students.

Scoring

In Otis self-administering mental ability test, a correct response was given one mark while incorrect response was awarded as zero. After marking the questions, Otis formula was applied on obtained marks +100-42 and then IQ level was calculated.

Scoring of Anxiety Scale

In anxiety scale each question carried six marks in total.

0 for option 1

1 for option 2

2 for option 3

3 for option 4

After marking the anxiety level of each student was received.

Table 2. Anxiety Levels

19-27	Mild Anxiety
28-36	Moderate Anxiety
37-49	Server Anxiety

Data Analysis

After getting IQ levels of students, 97 students were selected by stratified sampling and anxiety measurement scale was applied. After the exams of these students the researcher collected the marks obtained in the exams.

The formula of regression was applied to see the impact of anxiety on academic achievement of students and formula of co-relation was applied to see the relationship of anxiety and academic achievements of students by using the software SPSS.

Findings of the Study

Table 3. Impact of anxiety on academic achievement of students having IQ level (90-94)

Sr. No	Model	Sum of Squares	Df	Mean Square	F	Sig
1	Regression	120.529	1	120.529	23.5	.000
2	Residual	51.360	34	00	00	00
3	Total	171.889	35	00	00	00

This table shows significant impact of anxiety upon the academic achievement of students of IQ level (90-94)

Regression: Here p value is .000 which is less than .05 which shows that result is highly significant. It means that anxiety has significant impact on students' academic achievement.

Correlation: Here $r = -.837$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increases academic achievement falls and when anxiety decreases academic achievement rises. So hypothesis is accepted.

Table 4. Impact of anxiety on academic achievement of students having IQ level (95-99)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	6.091	1	6.091	4.601	.039
02	Residual	46.341	35	1.324	0	0
03	Total	52.432	36	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (95-99)

Regression: Here p value is .039 which shows is less than .05 which shows result is highly significant it means anxiety shows its significant impact on student academic achievement.

Correlation: Here $r = -.710$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increase academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 5. Impact of anxiety on academic achievement of students having IQ level (100-104)

S, No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	57.603	1	57.603	41.747	.000
02	Residual	30.356	22	1.380	0	0
03	Total	87.958	23	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (100-104)

Regression: Here p value is .000 which is less than .05. it shows result is highly significant which means anxiety has significant impact on student academic achievement.

Correlation: Here $r = -.809$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increases academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 6. Impact of anxiety on academic achievement of students having IQ level (90-94)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	8.094	1	8.094	4.253	.051
02	Residual	41.865	22	1.380	0	0
03	Total	49.958	23	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (90-94)

Regression: Here p value is .05 that is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact upon students' academic achievement.

Correlation: Here $r = -.711$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increase academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 7. Impact of anxiety on academic achievement of students having IQ level (95-99)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	22.970	1	22.970	5.401	.03
02	Residual	89.320	22	4.253	0	0
03	Total	112.293	23	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (95-99)

Regression: Here p value is .03 that is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact on students' academic achievement.

Correlation: Here $r = -.714$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increases academic achievement falls and when anxiety decreases academic achievement rises. So hypothesis is accepted.

Table 8. Impact of anxiety on academic achievement of students having IQ level (100-104)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	47.150	1	47.150	6.329	.02
02	Residual	156.458	21	7.450	0	0
03	Total	203.609	22	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (100-104)

Regression: Here p value is .02 that is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact on students' academic achievement.

Correlation: Here $r = -.837$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increases academic achievements falls and when anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 9. Impact of anxiety on academic achievement of students having IQ level (90-94)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	31.567	1	31.567	18.528	.001
02	Residual	18.741	11	1.704	0	0
03	Total	50.308	12	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (90-94)

Regression: Here p value is .001 which is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact on students' academic achievement.

Correlation: Here $r = -.810$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increase academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 10. Impact of anxiety on academic achievement of students having IQ level (95-99)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	36.945	1	36.945	23.510	.001
02	Residual	17.286	11	1.571	0	0
03	Total	54.231	12	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (95-99)

Regression: Here p value is .001 that is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact on students' academic achievement.

Correlation: Here $r = -.837$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increase academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Table 11. Impact of anxiety on academic achievement of students having IQ level (100-104)

S. No	Model	Sum of Squares	Df	Mean Square	F	Sig
01	Regression	15.004	1	15.004	15.334	.008
02	Residual	5.871	6	.978	0	0
03	Total	20.875	7	0	0	0

This table shows significant impact of anxiety on academic achievement of students of IQ level (100-104)

Regression: Here p value is .008 that is less than .05 which shows that the result is highly significant. it means anxiety shows its significant impact on students' academic achievement.

Correlation: Here $r = -.848$ which shows perfect negative relationship between anxiety and academic achievement of students. It means that when anxiety increase academic achievement falls and if anxiety decrease academic achievement rises. So hypothesis is accepted.

Discussion

Impact of Anxiety on Male and Female Students

Male students

1. P value is .05 which is less than .05 which shows perfect negative relationship between two variables, anxiety and academic achievement.

On the other hand, $r = -.809$ which shows perfect negative relationship between two variables, anxiety and academic achievement.

2. P value is .03 which is less than .05 which shows result is significant. It means anxiety has its significant impact on students' academic achievement.

On the other hand, $t = -.714$ which shows there is significantly negative relationship between two factors, anxiety and academic achievement.

3. P value is .02 which is less than .05 which shows result is significant. It means anxiety has its significant impact on students' academic achievement.

On the other hand, $t = -.837$ which shows there is perfectly negative relationship between two variables, anxiety and academic achievement.

Female students

1. P value is .001 which is less than .05 which shows result is highly significant. It means anxiety has its significant impact on students' academic achievement.

On the other hand, $r = -.810$ which shows perfectly negative relationship between two variables, anxiety and academic achievement.

2. P value is .001 which is less than .05 which shows result is highly significant. It means anxiety has its significant impact on students' academic achievement.

On the other hand, $r = -.837$ which shows there is a perfectly negative relationship between two factors, anxiety and academic achievement.

3. P value is .008 which is less than .05 which shows that the result is highly significant. It means anxiety has its significant impact on students' academic achievement.

On the other hand, $r = -.848$ which shows there is perfectly negative relationship between two variables anxiety and academic achievements.

From the results of analysis, we see that there was high impact of anxiety on female students as compared to male students.

Conclusions

Overall impact of Anxiety on Academic Achievements of Students

1. It indicates that anxiety has its very high impact on students' academic achievement of IQ (90-94). On the other hand it is concluded that there is negative relationship between anxiety and academic achievement, which means that if one factor increases, the other will decrease. In other words, when anxiety increases, academic achievement falls.
2. It indicates that anxiety has its very high impact on students' academic achievement of IQ (95-99). On the other hand it is concluded that there is negative relationship between anxiety and academic achievements, which means that if one factor increases, the other will decrease. In other words, when anxiety increases, academic achievement falls.
3. It indicates that anxiety has its very high impact on students' academic achievement of IQ (100-104). On the other hand it is concluded that there is negative relationship between anxiety and academic

achievements, which means that if one factor increases, the other will decrease. In other words, when anxiety increases, academic achievement falls.

Impact of Anxiety on Male and Female Students

Male Students

1. It indicates that anxiety has its low impact on academic achievement of the students having IQ (90-94). On the other hand, it is concluded that there is perfectly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases, in other words when anxiety increased, academic achievement falls.
2. It indicates that anxiety has its very highly impact on the academic achievement of the students having IQ (95-99). On the other hand, it is concluded that there is significantly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases. In other words, when anxiety increased, academic achievement falls.
3. It indicates that anxiety has its impact on the academic achievement of the students having IQ (100-104). It is concluded that there is perfectly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases. In other words, when anxiety increased, academic achievement falls.

Female Students

1. It indicates that anxiety has its very highly impact on the academic achievement of the students having IQ (90-94). On the other hand, it is concluded that there is significantly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases, in other words when anxiety increased, academic achievement falls.
2. It indicates that anxiety has its very highly impact on the academic achievement of the students having IQ (95-99). On the other hand, it is concluded that there is perfectly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases. In other words, when anxiety increased, academic achievement falls.
3. It indicates that anxiety has its very highly impact on the academic achievement of the students having IQ (100-104). It is concluded that there is perfectly negative relationship between anxiety and academic achievements, which means that if one factor increased, the other decreases. In other words, when anxiety increased, academic achievement falls.

It is concluded that anxiety has its impact on students' academic achievements but when we see male and female students separately, then it shows impact of anxiety on both type of students but there is more impact on female students as compared to male students.

References

- Benjamin and Lin. (1997). *Psychology and Introduction*. New York: Macgraw Hill Book Company.
- Eysenck (2009). The effect of anxiety on academic achievement of students. Retrived data on 15-07-2012 from <http://www.sciencedaily.com/releases/2009/06/090623090713.htm>
- Eysenck, M.W. (2001). *Principles of cognitive psychology*. Hove, East Sussex: Psychology Press.
- Gay, L.R. (1997). *Educational research*. New York: Macmillan Publishing Company.
- Masson, A.M., Hoyois, P., Pcadot, M., Nahama, V., Petit,F., & Anseau, M. (2004). Girls are more successful than boys at the university: Gender group differences in models integrating motivational and aggressive components correlated with test-anxiety. [Online] Available: <http://www.ncbi.nlm.nih.gov/sites/entrez?db=journals&term> (October 23, 2009).

- Needham, B.L. (2006). Gender differences in the consequences of depressive symptomatology for educational attainment, social support, and health risk behavior during the transition from adolescence to young adulthood, Unpublished PhD thesis, University of Texas.
- Ormord, J. E. (2001). Educational psychology. New Jersey: Merrill and Imprint of Prentice Hall Upper Saddle River.
- Reilly, R.R. and Lewis, E.L. (1991). Educational psychology. New York: Laura Tanner Macmillan Company Inc.
- Rohen Meetei. (2012). A critical study of impact of academic anxiety on academic achievement of class ixth students. <http://www.scribd.com/doc/23767970/A-Critical-Study-of-Impact-of-Academic-Anxiety-on-Academic-Achievement-of-Class-Ixth-Students-Bareilly>.
- Sarason, I. G. (1958). Interrelationships among individual difference variables, behaviour in psychotherapy, and verbal conditioning. *Journal of Abnormal and Social Psychology*, 56, 339-334.
- Science Daily (June 26, 2009). The effect of anxiety on academic achievement of students. Retrieved data on 15-07-2012 from <http://www.sciencedaily.com/releases/2009/06/090623090713.htm>
- Tobias, S. (1979). Anxiety research in educational psychology. *Journal of Education Psychology*, 71. 573-582.
- Walber. (1995). Educational research. New York: Macmillan Company