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## Anxiety and Academic Performance of Undergraduate University Students

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**Abstract:** Aim of the study was to find out the relationship between anxiety with academic performance of undergraduate university students. The study was conducted for the objectives; (i) to find out the anxiety level of undergraduate university students. (ii) to identify the level of achievement scores (GPA) and co-curricular activities of undergraduate university students, and (iii) to find out the relationship between anxiety and academic performance of undergraduate university students. A sample of 408, including 195 male and 213 female 2nd-semester undergraduate BS students from 12 different departments out of 4 faculties of the University of the Sargodha, taking 34 students from each department, were selected through multistage random sampling techniques. Two instruments, anxiety scale and performance checklists, were developed to collect data from students. Research instruments were validated through experts' opinions, pilot testing was done, and the reliability coefficient Cronbach Alpha value for the anxiety scale was .832. Frequencies, mean, standard deviation, t-tests and Pearson correlation were used for data analysis. There was a weak and negative relationship between anxiety and achievement scores of undergraduate university students whereas. But there was a significant but weak and negative relationship between anxiety and achievement scores and co-curricular activities of undergraduate university students. So it is recommended that teachers of the university may integrate activities in their classroom teaching to keep students involved and reduce anxiety.

**Key Words:** Anxiety, Academic Performance & Undergraduate University Students

### Introduction

Anxiety is a sensation of tension, apprehension, and stress that is connected to the activation of the nervous system. A high degree of anxiety makes it

impossible for a person who lives a stable life, while distorted behaviours make his life socially uncomfortable. One of the various emotional and behavioural problems is anxiety ([Shukla, 2021](#)).

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Anxiety is a natural response to a stress disorder that triggers a general sensation of apprehension or anxiety. Anxiety is an anticipated belief of psychological distress which is a result of a perception of a potentially dangerous event ([Larson et al., 2016](#)). Students with anxiety disorders exhibit a passive attitude toward their studies, as seen by a lack of interest in studying, poor class performance, and incomplete assignments, among other things.

Anxiety, when studied as a determinant of academic performance, multiple kinds of research determined that it has a strong influence ([McCrary et al., 2000](#)). Anxiety levels have a considerable influence on students' memory recall, attention, and perception. Anxious students have a disorderly memory space, poor concentration, a lack of confidence, and poor reasoning ability ([Maqsood & Ijaz, 2013](#)). In general, a high level of worry is linked to lower performance among students of low ability.

Anxiety is also defined as a combination of tension, anxious thoughts, and physiological changes in reaction to environmental factors. Anxiety, on the other hand, is associated with irritability and impatience. A depressed person exhibits a mix of low mood, lack of interest or pleasure, low self-respect, disordered appetite, disturbed sleep, and disturbed meditation ([Cowardry, 2012](#)). Similarly, stress is the common cause of anxiety among newly admitted university students. Many of the challenges influencing students' mental health are caused by academic variables such as a broad curriculum and extended study hours (Evans, Borriello, & Field, 2018).

Other causes of anxiety among students include stress related to family issues, a common tragedy, oppression by crime, physical abuse, health illness, intoxication, and so on. All of these situations affect students, and as a result, they avoid attending university regularly and are unable to concentrate on their studies. Students can also experience test anxiety while preparing for or taking a test in class ([Khan, Munir, Afzal, Ansari, 2020](#)).

This research examines the relationship between students' academic procrastination and attitude, as well as their career excellence at the

university level. Academic performance is described as accomplishments in class at a school, college, or university that are assessed by examinations or continuous evaluation and scored using a grade point average (GPA). According to [York, Charles, & Susan \(2015\)](#), academic performance refers to how well a student or university has met short and long-term learning outcomes. At a higher level of education, like in universities, it is measured in grade point average (GPA). It is the present level of the learner's learning output. The focus of this research is to see whether there's a relationship between anxiety and students' evaluations of academic performance.

As we all know, higher studies are quite different from college studies because students at the college level feel somewhat relaxed and easy to adjust to a new environment. After all, it is closely related to the university environment, but when they enrol in the university and begin studying at the university level, they face many other problems, such as the new environment causing extreme anxiety amongst students.

The most frequent emotion is anxiety, which is also one of the essential concepts in human behaviour. Worries, nervousness, anxiety, and distress are all challenging emotions ([Barlow, 2010](#)). The influence of anxiety on a student's academic performance is considerable. It is common knowledge that the occurrence of stress, anxiety, and depression is in height among university undergraduates ([Mofatteh · 2021](#)). They are unable to concentrate on their studies due to the high amount of worry they are experiencing in a new scenario. Another issue that occurs with male and female students is that some students are compelled by their parents to study their least favourite courses, even if they are not interested in these subjects. This results in students becoming worried and unable to achieve higher scores in their studies. As a result, this research may be useful in determining what level of anxiety a student has in various situations when they enrol in university for higher education.

Many students get enrolled in different disciplines, and programs come from different colleges each year. All of these students are different in some aspects like family education, religious

backgrounds and socioeconomic status. All of these students may have different academic performances and anxiety levels. The present study is aimed to explore the impact of anxiety on academic performance, including achievement scores (GPA) and co-curricular activities of undergraduate university students.

## Objectives of the Study

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The objectives of the study were as follows:

1. To find out the anxiety level of undergraduate university students.
2. To identify the level of academic performance achievement scores (GPA) and co-curricular activities of undergraduate university students.
3. To the relationship between anxiety and academic performance of undergraduate university students.

## Hypotheses

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Hypotheses of the study were:

H<sub>01</sub>: There is no significant relationship between anxiety with academic performance in co-curricular activities of undergraduate university students.

H<sub>02</sub>: There is no significant relationship between anxiety with academic achievement scores (CGPA) of undergraduate university students.

## Review of Literature

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The purpose of the research was to see how anxiety affects undergraduate university students' academic performance. The purpose of this review of literature is to examine the factors that influence undergraduate university students' anxiety levels and attitudes.

## What is Anxiety

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Anxiety is a sensation of worry, unease, or nervousness that occurs in the absence of an upcoming threat; its forms are a sense of fear, overly emotional responses, excessive worrying, negative thinking and restlessness (Vitasari, Wahab, Othman, Herawan, & Sinnadurai, 2010). This

sensation is generated by a succession of biological changes in the brain and body that induce the heart to beat rapidly due to an increase in adrenaline and a decrease in cerebral dopamine (Neiuwenhuys, 2013). Natural anxiety, on the other hand, can become an anxiety disorder if the condition concern is not appropriately addressed or if it is caused by a stimulus that does not respond over time. Anxiety is beneficial when a person's physical or mental condition is created by an organism's routine activity rather than anything external to the organism. If worries are not addressed or if there is no external trigger, an anxiety disorder might develop (Cody & Techman, 2011).

Silverman & Field (2011) explored that students with anxiety disorders are obstructed by negative environmental stimuli. Although the familiar and social setting impacts the probability of developing an anxiety disorder, depression and anxiety have a neuroscience foundation that includes neurochemical changes that disrupt the normal activity of several brain regions.

Anxious disorders in humans are marked by extreme anxiety and discomfort in the absence of a genuine threat. Attention to the environment, fatigue, sleep or concentration problems, impatience, muscle tension, aggressive behaviour, susceptibility perception, observation annoyance, and enhanced emotional reactivity to threat are only a few of the symptoms.

## Anxiety Correlates

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According to Shamsuddin et al. (2013), academic anxiety affects students' overall performance and, in extreme circumstances, might result in academic failure. Parents' little worry can help their children change their study habits. However, excessive levels of stress imposed on children by their parents contribute to academic inequity among students. Mild anxiety instilled in children by their parents is useful in changing their study habits; nonetheless, high stress imparted in children by their parents leads to academic unfairness among pupils. When students have tried to deal with significant anxiety managed to bring on by their family members, they

become task-oriented and seek to accomplish their objectives by any means necessary.

[Crystal et al. \(2012\)](#) discovered that intellectual apprehension correlates have a considerable influence on students' performance as well. Students with higher levels of anxiety have lower levels of self-efficacy and hence have fewer capacities to self-regulate their learning and vice versa. Students' expectations are also hampered by academic stress to a great amount.

Individual differences are significantly related to subject anxiety. It has been confirmed that a student's age and gender have an impact on their anxiety. When university students are evaluated for the field of education, it is discovered that age has a significant impact on academic stress, with senior students being much more concerned than new students ([Mustafa, 2003](#)).

It has been found that anxiety has a major impact on academic achievement. Students with poor academic performance are more disposed to suffer from low self-esteem and anxiety ([Norman & Yosef, 2010](#)).

### How Anxiety Contributes to Academics

According to [Fletcher & Speirs \(2012\)](#), anxiety affects more than just ordinary pupils and students with learning impairments. Anxiety issues are common among gifted students. Perfectionism and achievement motivation impact gifted students. Because of high expectations set by themselves or others, perfectionist students may experience academic anxiety.

According to [Sharif \(2013\)](#), anxiety has an impact on students' behaviour, cognition, and physiology. High-risk testing, for example, might be extremely challenging for anxious kids. Anxious pupils are more likely to develop depression. Parents and teachers may cooperate together to assist children in finding a way to deal with anxiety. [Nadeem et al. \(2012\)](#) explored the influence of anxiety on students' learning. An in-depth examination of the study of anxiety has an effect on students' educational outcomes, according to the results. The outcomes demonstrate that as anxiety

levels increase, both male and female students' academic performance suffers.

### Study Anxiety

Anxiety influences each other at some time in their life, in varying degrees and forms. A sequence of mental and emotional responses, such as tension and feelings, describe it. As a result, Anxiety might make it difficult to concentrate and deal with problems in a more positive way. It is described as an uncomfortable condition that leads to avoiding and defence mechanisms. It may also be described as a specific feeling that a person must go through in order to prepare for potential and dangerous situations.

[Akinsola & Nwajei \(2013\)](#) investigated that anxiety and depression have both positive and negative associations with students' academic performance of undergraduates. Over the course of 12 years, over 1,000 students aged 16 to 25 were studied to see that there was an association between anxiety disorders and students' brilliance.

### Academic Performance

The academic performance of students is considered a crucial element at a young age. Whether students enrol in remedial, normal, or advanced classes depends on their academic performance in university. At the university level, grade point average (GPA) and class positions are essential even though they are settled by higher education officials ([Isik et al., 2018](#)).

### Anxiety and Academic Performance of Undergraduate University Students

[Smith \(2012\)](#) reported that as a student progresses through the educational system, the pressure to perform well academically increases and this tendency continues after college. Internal and external pressures on university students to achieve are enormous. The concept that academic performance is vital to success is reinforced in higher educational environments.

[Larson & Warne \(2016\)](#) explored that in the study, mental health issues were shown to be both

positively and negatively related to grade point average (GPA). Students who were stressed out to have difficulties reducing their distress had physical health issues that affected their change in eating and sleeping patterns. When working with kids who have anxiety or depression, physical health issues are usually highlighted as a difficulty.

[McMahon & Oketch \(2013\)](#) stated that many students go to university for their preferred career, and for many students, it is the next step of education. Though higher education has other advantages, such as reduced violence, decreased poverty, better healthcare, and contentment are just some of the benefits, students at the university level face a wide range of challenges. Increasing intellectual requirements, making new friends, living separately, being away from home for the first time, and increased study material are just some of the issues of this generation.

[Brook & Willoughby \(2015\)](#) reported that many university students could make the transition smoothly, but others find it difficult to adjust. As a consequence of these hurdles, university students are now at a higher risk for psychological issues. The most prominent mental health illnesses in this community are anxiety and depression. Problems with anxiety and depression can become severe, even tragic, if not remedied ([Khubchandani et al. 2016](#)).

According to [Agboola & Evans \(2015\)](#), there is a definitive relationship between the anxieties of the students. A study by [Shibli \(2015\)](#) revealed that individual, interpersonal, institutional, social, and economic factors are all recognised as possible dangers to students' superior academic anxiety.

### Anxiety and Student's Academic Performance

[Saefer & Shah \(2019\)](#) described that though anxiety is associated with the brain, it can have a reflective impact on emotions. Students who experience anxiety would be shut off after society and obliged to continue their difficulties themselves. Some students showed extreme mood fluctuations, were difficult to deal with, were prone to overreacting to situations, were introverted, and were socially isolated. [Horwitz \(2010\)](#) said that anxiety and

sadness are all emotional states of an affair from which students can lead to mental illness. This disorder is quite common, and it can affect anyone at any time in their lives. Major depressive disorder (MDD) is a significant mental illness that can affect anyone else's life.

Anxiety and depression in university students lead to functional impairment, as well as increased difficulty with study, peer, and family interactions. Many factors can indicate anxiety and depression disorders among university students. Increasing family size, overpopulation, poor family income, marital discord, parents' non-employment, family members' misbehaviour, and educational inequality are only a few indicators of social adversity ([Kessler, 2012](#)).

For children, their parents, and the context in which it occurs, career excellence is essential. Academic performance benefits an individual and his or her family economically, socially, and psychologically. Communication issues in societal structure as a collaborative workplace, in combination with a prosperous academic life and basic learning, will contribute to the advancement of society. It is critical to examine and characterise the factors that influence academic performance in this regard ([Islam & Tasnim, 2021](#)).

[Moonaghi et al. \(2017\)](#) said individual attributes (determination, consciousness, study skills, and student behaviour), school (attitude towards the lesson, going to lead instructor, school culture and leadership), and family (attitude towards the subject, teacher and school culture) are all used to assess academic performance. These three factors were emphasised as having a major impact on academic attainment.

According to [Dawood et al. \(2016\)](#), academic performance has been related to a high incidence of anxiety in university students. Anxiety in adolescents is influenced by the student's perception of educational demands in terms of cognition and self-control. University students encounter numerous problems, particularly when new educational regulations mandate standardised evaluations of learning without taking into account the unique demands of each context. As a result, high anxiety during assessments lowers student

performance, impacting self-esteem and social relationships ([Mcardle et al., 2014](#)).

According to [Jonsson et al. \(2010\)](#) a study of male and female university students aged 19–22 years old, students with the poorest academic performance experienced the largest degrees of adverse involvement in the distraction technique framework of examination passing; students who were continuously positioned in the lower elevations of the study score had the highest symptoms of distress. Furthermore, there is an association between teenage anxiousness and academic success, with depression having an impact on academic performance rather than the other way around.

Educational achievement and performance have limited significant differences in students' interests. Academic progress, gender, and religion are all factors that influence students' learning ([Sridevi, 2013](#)). At the same time, University students have several prospects to raise anxiety, particularly during the course of their studies. Anxiety is intensified by academic challenges, identity conflicts, cultural issues, and social challenges. Psychological symptoms are becoming more common among university students. Symptom age occurs in people with high anxiety levels during their university years. According to [Murad \(2020\)](#), anxiety during studying is a significant predictor of academic performance.

Researchers explored the relationship between anxiety causes and students' academic performance and revealed that students with high levels of anxiety performed poorly in university. In the classroom, discomfort and anxiety do not promote the learning of students. Insecurity before a study session, sweating, going blank during exams, feeling inadequate when completing duties, or a lack of interest in difficult subjects are some cognitive symptoms of anxiety, while physical signs include sweaty hands, speeding heartbeat, or a stomach ache ([McCraty, 2000](#)).

Academic anxiety is described as a person who develops anxiety symptoms as a result of a difficult situation experienced during their studies. Study anxiety can be caused by a variety of factors,

including misconceptions about courses and poor experiences in past classes. In moderate students, high anxiety is more strongly linked to poor performance than in high-ability undergraduates. Anxiety is regarded as a permanent trait on a worldwide scale since some people are just naturally anxious ([Shakir, 2014](#); [Szafranski et al., 2012](#)).

It is inferred that anxiety has an impact on the academic performance of students, especially among university students.

## **Research Methodology**

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The nature of the study was quantitative correlational research. A survey technique was applied for data collection to calculate the relationship between two variables, i.e. anxiety and academic performance.

## **Population**

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University of Sargodha (UOS) is a public sector university in the Punjab province of Pakistan. UOS was taken as the source of data for this study because this university offers BS to PhD programs in every faculty, and a relatively larger number of students takes admission.

All the undergraduate female and male students in the second semester BS (4 years) program studying in all the departments of the University of Sargodha were the populations of this study. BS students are taken because they get enrolment after the college phase of education, and the University environment is new to them and due to difficulties in the new environment face anxiety. BS second semester was purposively taken as they were new to the university environment and had achieved scores in the first-semester final term exams.

## **Sample and Sampling Techniques**

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A multistage random sampling technique was used, and the following steps were taken to draw a representative sample.

1. UOS has 9 faculties, out of which 4 faculties were selected randomly for this study.
2. A simple random sampling technique was used to select departments from each faculty.



From large faculties having a maximum of nine departments; four (4) from nine departments were selected randomly, and from faculties including five or fewer departments, two (2) departments were selected randomly.

3. From each selected department, thirty-four (34) undergraduate students were selected randomly.
4. The sample size was 408 students from twelve (12) different departments of undergraduate programs at Sargodha University.

### Research Instrument

The study consisted of the variables, i.e. anxiety and academic performance. In order to measure these variables following scales were used.

Due to the non-suitability of available instruments, a self-developed scale was developed for the assessment of the anxiety level of undergraduate university students. This anxiety scale contains two sections; the first section was about demographic information (Gender, Department, and Locality). The second section contains 40 items about anxiety. The scale was based on 5 points Likert scale, i.e. Strongly Disagree

(SDA), Disagree (DA), Undecided (UD), Agree (Ag) and Strongly Agree (SA). An academic performance checklist, including achievement scores (GPA) and co-curricular activities, was also formulated to examine the student's performance consisting of 9 items about academic performance and CGPA.

Both the instruments were validated through the opinions of seven (7) experts with PhD in the subject of Education with sufficient academic and research experience. All the experts reviewed the instruments and judged whether the English statements of the scales communicated the concerning meaning. After incorporating suggestions of the experts, the anxiety scale was pilot tested carried out on 100 students from four departments not included in the study. The reliability coefficient

Cronbach's value was .832 value.

Data was collected through self-visit and collected responses of 408 BS students; the response rate was 100%, including 213 female and 195 male students. Data was analysed through the application of frequencies, mean scores, standard deviation, t-tests, ANOVA, and Pearson correlation coefficient 'r' was applied to analyse the data.

### Data Analysis

**Table 1.** Factor Wise Analysis of Anxiety

S.No	Factors	SDA	DA	SDA+DA	UD	SA	A	SA+A	Mean
1	Communication Factor	546 26.7%	1113 54.5%	1695 83%	62 3%	64 3.1%	255 12.5%	319 15.6%	2.10
2	Course syllabus & curriculum	476 23.3%	1046 51.20	1522 74.6%	57 2.7%	77 3.7%	384 18.8%	461 22.5%	2.28
3	Exam Difficulty	114 4.6%	421 17%	535 21.8%	45 1.8%	534 21.8%	1334 54.4%	1868 76.3%	3.71
4	Financial Pressure	361 22.1%	897 54.9%	1258 77%	24 1.4%	68 4.1%	282 17.2%	350 21.4%	2.26
5	Health	93 5.6%	339 20.7%	432 26.4%	34 2%	330 20.2%	836 51.2%	1166 71.4%	3.6
6	Time Management	89 7.27%	238 19.4%	327 26.67%	27 2.2%	293 23.93%	567 46.32%	860 70.25%	3.8
7	Discrimination	313 25.5%	719 58.74%	1032 84.24%	37 3%	90 7.35%	155 12.66%	245 20.01%	2.44

S. No	Factors	SDA	DA	SDA+DA	UD	SA	A	SA+A	Mean
8	Memory Shortage	312	594		19			299	
		25.49	48.52	906	1.55	113	198	25.37	2.45
		%	%	74.01%	%	9.2%	16.17%	%	
9	Social Adjustment	314	670		28			212	
		25.65	54.73	984	2.28	113	212	17.32	2.2
		%	%	80.38%	%	9.23%	17.32%	%	

Table 1 shows the majority of the students, 83% with a supporting means score of 2.1, strongly disagreed or disagreed that anxiety is due to communication factors. Similarly, the majority of the students, i.e. 74.6% with a supporting means score of 2.28, strongly disagreed or disagreed with anxiety due to the factor of 'course syllabus and curriculum'. Likewise, the majority of the students, i.e. 76.3% with a supporting means score of 2.18, strongly disagreed or disagreed with anxiety due to the factor of 'exam difficulty'. In the same way majority of the students, 77%, with a supporting means score of 2.26, strongly disagreed or disagreed with anxiety due to the factor 'Financial Pressure'. Moreover, the majority of the students, 84.24% with

a supporting means score of 2.24, strongly disagreed or disagreed with anxiety due to discrimination. Similarly majority of the students, 74% with a supporting means score of 2.45, strongly disagreed or disagreed with anxiety due to memory shortage. In the same way majority of the students, 80.38%, with a supporting means score of 2.2, strongly disagreed or disagreed with anxiety due to social adjustment.

While the majority of students, 71.4%, responded differently, they agreed or strongly agreed that their anxiety is due to health factors. Moreover, the majority of students, 70.25%, responded that they agreed or strongly agreed that their anxiety is due to time management.

**Table 2.** Overall and Gender-Based Anxiety Level of Undergraduate University Students

Level	Male	Percentage	Female	Percentage	Total	Percentage
Low (40-93)	34	17.4%	29	13.6%	63	15.4%
Moderate (94-146)	148	75.9%	180	84.5%	328	80.3%
High (147-200)	13	6.7%	4	1.9%	17	4.1%
Total	195	100%	213	100%	408	100%

Table 2 shows gender-based students' anxiety levels. Three levels of anxiety were formulated, i.e. high, moderate and low. The values range 40-93 was taken as low-level anxiety; for moderate anxiety, the level values range was (94-146) and for high-level anxiety values range was (147-200).

Overall, 4.1% of students (17) have a high level of anxiety, and 80.3% of students (328) have a moderate level of anxiety, and 15.4% of students (63) have a low level of anxiety.

There were 6.7% of male students (13) and 1.9% of female students (4) who had high anxiety, while 75.9% of male students (148) and 84.5% of female students (180) had moderate anxiety. The remaining 17.4% of male students (34) and 13.6% of female students (29) have low anxiety. The majority of male and female students had moderate levels of anxiety.



### Analysis of Students' Performance

**Table 3.** Item Wise Analysis of Students' Performance in Cu-Curricular Activities

S. No	Statement	Yes %	No %	Mean	SD
1	In the previous examination, did you have any position in class?	86 (21.1%)	322 (78.9%)	1.79	.408
2	Did you perform in the drama?	72 (17.6%)	336 (82.4%)	1.82	.382
3	Did you take part in the sports (games)?	307 (75.2%)	101 (24.8%)	1.25	.432
4	Did you participate in the science competition?	86 (21.1%)	322 (78.9%)	1.79	.408
5	Did you participate in the speech contest?	92 (22.5%)	316 (77.5%)	1.77	.418
6	Did you participate in the <i>Qirat</i> and <i>Naat</i> competitions?	53 (13%)	355 (87%)	1.87	.337
7	Did you participate in the essay contest?	84 (20.6%)	324 (79.4%)	1.79	.405
8	Did you participate in the painting contest?	81 (19.9%)	327 (80.1%)	1.80	.399
9	Did you receive any prizes for the Talent hunt show?	94 (23%)	314 (77%)	1.77.	.422

Table 3 shows that the majority, 78.9% (322) of students with a mean score of 1.79 and SD = .408, did not have any position in intermediate exams, while a handsome number of students, 21.1% (86), have positions in class.

The majority, 82.4% (336) students with a mean supporting score of 1.82 and SD = .382, did not perform in the drama, while some of the students 17.6% (72) did perform in drama.

The majority of the students, 75.2% (307) with a mean supporting score of 1.25 and SD = .432, did take part in the sports (games), whereas 24.8% (101) students did not take part in the sports (games).

The majority of the students, 78.9% (322) with a mean supporting score of 1.79 and SD = .408, did not participate in the science competition, whereas a handsome number of students, 21.1% (86) did participate in the science competition.

The majority of students, 77.5% (316) with a mean supporting score of 1.77 and SD = .418, did not participate in the speech contest, whereas a handsome number of students, 22.5% (92), did

participate in the speech contest.

The majority of students, 87% (355) with a mean supporting score of 1.87 and SD = .337, did not participate in the *Qirat* and *Naat* competition, whereas a handsome number of students 13% (53) did participate in the *Qirat* and *Naat* competition.

The majority of students, 79.4% (324) with a mean supporting score of 1.79 and SD = .405, did not participate in the essay contest, whereas a handsome number of students, 20.6% (84), did participate in the essay contest in college.

The majority of students, 80.1% (327) with a mean supporting score of 1.80 and SD = .399, did not participate in the painting contest, whereas a handsome number of students, 19.9% (81), did participate in the painting contest during college.

The majority of students, 77% (314) with a mean supporting score of 1.77 and SD = .422, did not receive any prizes from the talent hunt show, whereas a handsome number of students, 23% (94), did receive any prizes from the talent hunt show.

**Table 4.** Overall and Gender-Based Performance Level of Undergraduate University Students in Co-Curricular Activities

Level	Male	Percentage	Female	Percentage	Total	Percentage
Low (9-12)	10	5.1%	7	3.2%	17	4.1%
Moderate (13-15)	86	44.1%	57	26.8%	143	35%
High (16-18)	99	50.8%	149	70%	248	60.7%
Total	195	100%	213	100%	408	100%

Table 4 shows gender wise performance of students in co-curricular activities. Three levels of performance were formulated, i.e. low, moderate, and high. Values range 9-12 was for low-level performance; for moderate performance level values range was (13-15) and for high-level performance values range was (16-18).

Overall majority 60.7% of students (248) have a high level of performance, 35% of students (143) have a moderate level of performance, and 4.1% of students (17) have a low level of performance.

There were 50.8% male students (99) and 70% female students (149) who had high-level performance, while 44.1% of male students (86) and 26.8% of female students (57) had a moderate level of performance. The remaining 5.1% male students (10) and 3.2% female students (7) have low-level performance. The majority of the students, 60.7% (248), had a high-performance level.

**Table 5.** Gender-based Comparison of Anxiety

Gender	N	Mean	SD	t	df	p-value
Male	195	114.0	21.40	.968	406	.334
Female	213	112.1	16.73			

Table 5 shows that there is no significant difference of anxiety between male and female undergraduate

university students as reflected by t-value= .968, df = 406, and p-value= .334 >0.05.

**Table 6.** Gender-Based Comparison of Performance in Co-curricular Activities

Gender	N	Mean	SD	t	df	p-value	Effect size Cohen's d
Male	195	15.31	1.68	-4.078	406	.000	0.402
Female	213	15.97	1.60				

Note.  $P < .05$ , Cohen's  $d$ =effect size

Table 6 indicates that there exists a statistically significant difference between performance of female and male students as revealed by t-value= -4.078, df = 406 and p-value = .000 < 0.05. Higher mean scores = 15.97 and SD = 1.60 shows that

female students indicated higher performance in co-curricular activities than male undergraduate students (mean score = 15.31 & SD= 1.68) with weak Cohen's d value 0.402.

**Table 7.** Correlation between Anxiety and Academic Performance

	Mean	SD	Pearson Correlation (r)	p-value
Anxiety	113.0	19.11	-.159	.001
Performance in co-curricular activities	15.6	1.67		

(N=408)

Table 7 shows that there was significant, and negative but weak relationship between undergraduate university students' anxiety (M=113.0, SD=19.11) and Academic performance

(M=15.6, SD=1.67) with  $r(406) = -.159$  and p-value .001 <0.05. It reveals that an increase in the anxiety of students adversely affects their academic performance.

**Table 8.** Overall Achievement Scores of Bs Students

GPA	F	%
2.0	3	.7
3.0	222	55.1
4	183	44.9

Table 8 shows that the majority, 55.1% of students, had a 3 out of 4 GPA, whereas almost equivalent to that, 45% of students had a 4 out of 4 GPA. At the

same time, only 0.7% of students had weak, i.e. 2 out of 4 GPA.

**Table 9.** Correlation between Anxiety and Achievement Scores

	Mean	SD	Pearson correlation (r)	p-value
Anxiety	113.0	19.11	-.159	.001
Academic performance	15.6	1.67		

(N=408)

Table 9 depicts that there was significant and negative but weak relationship between undergraduate university students' anxiety (M=113.0, SD=19.11) and achievement scores (M=15.6, SD=1.67) with  $r(406) = -.159$  and  $p$ -value  $.001 < 0.05$ . It reveals that an increase in the anxiety of students adversely affects their achievement scores.

## Conclusions and Discussion

- Overall undergraduate university students have a moderate level of anxiety, and there was no difference in anxiety between female and male undergraduate students. The result is similar to the findings of [Hossain, Alam, and Masum \(2022\)](#) that the majority of students have a mild or moderate level of anxiety; female students have more levels of anxiety, stress and depression than their male counterparts.
- Undergraduate university students expressed that their anxiety is due to health and time management factors which is similar to the results of a study by Ghiasvand, Naderi, Tafreshi, Ahmadi and Hosseini (2017); they found a statistically significant negative correlation between the students' time management skills and anxiety.
- Communication, exam difficulty, discrimination, Financial Pressure, exam difficulty, course syllabus and curriculum are not the cause of their anxiety. But according to [Tran, Lam, & Legg \(2018\)](#), male and female college students' financial strain was positively associated with general anxiety. The possible reasons are that majority of the students of Sargodha University are from agricultural areas and orange orchard areas, so they have no financial problems. Moreover, for students of financially weak families, there are many need-based scholarships to help them. University teachers are well experienced in teaching and with high qualifications, so students have no problem related to communication, syllabus or curriculum, exams, discrimination etc.
- Undergraduate university students expressed that they did not participate in drama, science competitions, speech contests, *Qirat* and *Naat* competitions, essay writing competitions, or painting competitions, and they did not receive any prizes from the talent hunt show. But they took part in sports (games). At the same time, it is also concluded that there was a significant and weak but negative relationship between

undergraduate university students' anxiety and performance in co-curricular activities. Female undergraduate students have higher performance in co-curricular activities than male undergraduate students. It is similar to the findings of [Floyd \(2016\)](#) that increased involvement in extracurricular activities was related to decreased anxiety.

5. There was a significant and weak but negative relationship between undergraduate university students' anxiety and achievement scores (GPA). It reveals that an increase in the anxiety of students adversely affects their achievement scores and performance in co-curricular activities. Similar results were found by [Shakir \(2014\)](#) showed that significant relationship between academic anxiety and academic achievement among senior secondary school students in Aligarh District of U.P., India; Academic anxiety decreases students' learning

capabilities and hinders excellent academic performance. Soler & McCraty, 2007; Luigi et al. & [Sena et al. 2007](#)) also found a negative correlation between high levels of anxiety and low academic performance.

### **Recommendations**

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- i. The majority of undergraduate university students expressed that their anxiety is due to health and time management factors. So it is recommended that teachers of the university may integrate activities in their classroom teaching to keep students involved to reduce anxiety.
- ii. The majority of the students are not interested in co-curricular activities, so it is recommended that the departmental management of the university may involve students in co-curricular activities like sports and literary contests.

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