

Prevalence and Determinants of Anxiety Disorder among Undergraduate Students of Islamabad

(BS-PUBLIC HEALTH)



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Abstract

Among undergraduate students globally, anxiety disorder is one of the most prevalent mental illnesses. The academic achievement, mental health, and quality of life of students are all significantly impacted by anxiety disorders. The study aimed to determine the prevalence and determinants of anxiety disorder among undergraduate students at an Islamabad semi-government institution. Data were collected through a structured, self-administered questionnaire developed in Google Forms, which included socio-demographic information, potential risk factors, and the Generalized Anxiety Disorder-7 (GAD-7) scale to measure anxiety levels. A total of 382 students were enrolled using purposive sampling in this cross-sectional study design. Descriptive statistics were applied to assess the prevalence of anxiety, while inferential statistics were used to identify associations between anxiety and variables such as social support, academic stress, financial difficulties, and digital media use. Data were analyzed using SPSS (Version 27). The findings revealed a high prevalence of anxiety, with academic pressure, limited social support, and financial challenges emerging as the strongest contributors, alongside notable influences of excessive digital media use and poor sleep patterns. The study concludes that anxiety is a major and growing concern among university students, underscoring the urgent need for institutions to strengthen mental health awareness, provide accessible and stigma-free counseling services, and develop structured support systems that promote early identification, resilience-building, and overall student well-being.

Key words: Anxiety disorder, mental health, undergraduate students, prevalence, determinants, Academic performance, GAD-7 scale, cross sectional study, Islamabad Pakistan, University Students.

CHAPTER ONE

INTRODUCTION

Anxiety disorder is one of the most prevalent mental health conditions among university students Worldwide. According to the American Psychiatric Association (2020), anxiety is characterized by excessive worry, fear, and uneasiness that can disrupt everyday routines, academic performance, and general well-being. Mohamad et al., (2021) noted that anxiety is commonly experienced but when it comes to severe, persistent and excessive worry and fear it can intensify and lead to anxiety disorder. According to Beiter et al. (2015), undergraduate students are particularly susceptible to anxiety disorder because they frequently suffer high levels of stress as a result of their academic burden, financial worries, and social expectations. Furthermore, when students engage in university forces they have to cope with new life events such as new life circumstances, participating in university society, and satisfying the needs of life Salama AH, (2024). Students' mental health problems are often disregarded because of stigma and ignorance, despite their significance, and if ignored, can have detrimental long-term effects Hunt & Eisenberg, (2010).

On a global scale Students' anxiety disorder is becoming a major public health problem. According to studies, over 30% of college students suffer from anxiety disorder symptoms, which impairs their focus and academic performance Auerbach et al., (2018). Additionally it is estimated that 12-15% of the students contribute at least one diagnostic criteria for one or more mental illnesses. Biological factors like age and gender, particularly being female, competition, worries about not living up to parents' expectations, forming new relationships, and moving to a strange place are some of the causes of stress during university life. Other factors include financial burden and academic pressure from things like workload and exams. Ramon-Arbues, E., et al. (2020). Mental health services are easier to get in industrialized nations, yet many students choose not to ask for assistance out of fear of being judged. Because there are less mental health resources and support networks in low- and middle-income nations, the situation is more distressing World Health Organization (2021).

In Pakistan the occurrence of anxiety disorder is significantly high among university students. Studies indicate that between 40 to 60 percent of students have anxiety symptoms,

mostly as a result of pressure to do well academically, unstable finances, and a lack of social support Siddiqu et al., (2020). Cultural taboo and a lack of mental health facilities when the problem of psychological issues is most common among young adults and campus students frequently make students to neglect professional mental health assistance (Zafar et al., 2024; Javed et al., 2024).

The recent years have witnessed a tremendous change in the global context of the higher education, and the university students are strained even more. Pedrelli et al. (2015) suggest that the stress levels of young adults have risen as a result of a confluence of forces that include higher academic competitiveness, uncertain work environment, poor finances, and changing socialization and norms. This is how students end up prioritizing their studies at the expense of their mental health due to the increasing pressure to achieve academic excellence. Excessive pressure like this leads to anxiety, academic burnout, absenteeism, and in severe situations, dropout Ibrahim et al., (2013).

Additionally, new mental health issues have been brought about by digital innovation and the integration of learning platforms. Although the opportunity to learn online offers flexibility, excessive dependence on digital devices and social media by students has been associated with increased emotions of loneliness, anxiety, and self-comparison Twenge et al.,(2018). Students' separation process has been made more difficult by digital addiction, which has also increased both social and academic pressures and exacerbated their mental health issues Twenge et al., (2018); Chhasatia et al., (2025).

According to Ramon-Arbues et al., (2020) anxiety among students is also influenced by the period of transition from childhood to adulthood. University life tends to test people's ability to manage their money, make important life decisions on their own, adjust to heterosocial environments, and cope with new academic institutions. Most people may find the sudden need to learn self-regulation skills intimidating, especially newcomers, which might lead to increased worry and emotional suffering. Current studies still shows gender differences in the prevalence and severity of anxiety disorders among college students, according to current research. According to a number of studies, female students consistently show higher anxiety levels than male students. Ibrahim, Abdelreheem, and Bahar (2023) conducted a comprehensive study which

emphasized that females are more susceptible to anxiety due to a combination of psychological vulnerabilities, societal pressures, and biological factors such as hormone fluctuations.

This gender disparity is further exacerbated by sociocultural norms, particularly in nations that are traditionally conservative. In these countries, women have more chances to experience emotional and psychological stress because of increased family demands on their social interaction, marriage, and academic success Arslan et al., (2023). Fitzpatrick et al. (2022) state that women are more likely than men to absorb stress and emotional pain, and this may make them susceptible to anxiety disorders. Men, however, would enjoy more externalizing coping mechanisms. All these gender gaps have also increased due to the COVID-19 epidemic. The new study also mentions that female students were affected more severely by the disruptions of the pandemic, including having more family obligations, loneliness, and academic insecurity (shown by a sharp rise in the manifestations of anxiety symptoms experienced by female university students) (Zhang et al., (2022)). These findings bring to focus gender sensitive approaches to mental health care that could take into consideration special challenges that female students have in their social and academic lives.

Moreover, discussing the aspects which precondition the development of anxiety in students, it is simply not possible not to mention the impact which the culture and social expectations have. Kim and Zane, (2022) remark that the culture of stigma in most traditional societies such as those in Pakistan does not encourage them to be open about mental health because it is perceived as individual deficiency or weakness instead of a health problem. This stigma makes students less willing to rely on help of professional care and makes them feel even more isolated and humiliated. In the case of female students whose social restraint is worse, the influence of family and community level on social behavior, marriage, and academic performance provides yet another psychological burden Arslan, Aydin, & Kaya, (2023). It is therefore necessary to reduce occurrences of anxiety disorders in this community by tackling this stigma by developing specific awareness efforts as well as culturally sensitive ethnically oriented therapies.

Student anxiety is a major issue that includes environmental and structural factors. The article by Karatas, Uzun, and Tagay.,(2024) observed that stress levels tend to escalate in campuses where there are no adequate services of academic counseling, safe housing facilities,

recreational services, and student support network. Competitive grading schemes, classes with too many students and minimal faculty attention increase anxiety. As a result of migration of students who live in rural or conflict-filled regions to schools in urban locations, environmental instability also contributes. They are faced with problems of acclimatization, economic hardships and social support systems is lacking Yildirim, Dogan, & Bayram, (2009).

So are the intellectual aspects that determine anxiety. The transitioning to university enhances the effects of performance-related stress, and in addition to it, growing academic demands, competition, and high-periodic exams (Ramon-Arbues et al., 2020). Students tend to equate academic performance to self worth, a habit that fosters perfectionism and fear of failure. In one of the studies by Pedrelli et al., (2015), students are worried about whether they will be able to secure jobs in the future, however, their future income increases their concerns and doubts about the employment opportunities. These stresses also promote chronic anxiety-related practices that further increase anxiety in conjunction with inhibiting learning. Alhadi, Alarabi, & Al Asmari, (2021).

Moreover, particular attention should be given to the gender disparities in terms of occurrence of anxiety. According to Ibrahim, Abdelreheem, and Bahar, (2023), female students are most significantly affected because of biological factors, hormones, and psychosocial factors. Social conventions subject more restrictions to women and put more strain on the family increases the emotional strain. These gender restrictions were even enhanced during the COVID-19 pandemic, because female students have expressed more anxiety levels due to mounting levels of home task, social isolation, and uncertainty in academics Zhang et al., (2022). Thus, gender inequalities are an important issue to be considered in order to develop effective and equal mental health therapeutic methods.

Besides social and academic constraints, psychological factors in the assessment of the severity of anxiety among students are important such as personality traits, coping strategies and self-efficacy. Research Beiter et al., (2015) found that students who use maladaptive coping strategies including substance abuse, avoidance or denial could be more vulnerable to persistent symptoms associated with anxiety. Conversely, individuals with adaptive coping mechanisms, including problem-solving and mindfulness and seeking social support are more likely to manage their stress levels and maintain psychological resiliency Fitzpatrick et al., (2022). Personality

traits such as neuroticism and perfectionism have also been related closely to anxiety disorders because students who unrealistically expect much of themselves tend to be disappointed and self-critical and worry more Pedrelli et al., (2015). The findings bring out the importance of integrating the development of psychological skills using interventions in health programs offered in universities.

Anxiety is largely dependent upon the lifestyle choice and other behavioral variables. The poor quality of sleep and irregular sleep duration make students very anxious as sleep deprivation affects the emotional control and cognitive performance Alhadi et al., (2021). On the same note, it has been widely proven that moderate physical exercise can avert psychological agony by synthesizing endorphins and improving stability of mood, and the opposite (increased stress and anxiety) is also linked to sedentary existence and absence of physical exercise Karatas et al., (2024). Another behavioral correlate that increases anxiety symptoms and causes dependence to earn a new dependence is alcohol and tobacco use which also results in a cycle of dependence that further puts the health of students at risk Yildirim et al., (2009). The high rate of anxiety disorders among the undergraduates can therefore be reduced through specific awareness campaigns that promote better living.

In this case, there are still two sides of digital technology. Even though overuse of social media may lead to an increase in anxiety because of social comparison and cyberbullying, as well as the fear of not feeling good enough, the promotion of mental health can be done through social media, although it should be used with responsible use (Twenge and Campbell, (2018). Digital mental health applications, peer support forums and online counseling platforms have increasingly found use in resource-constrained settings, in order to provide psychological assistance Elhai et al., (2017). The digital treatments may be a creative alternative to in-person counseling, where institutional neglect, financial limitations, and stigma often limit access of Pakistani students World Health Organization, (2021). More empirical research would be required to measure the effectiveness of these digital treatments in low- and middle-income countries.

Another aspect, which should be paid close attention to is financial insecurity. The Pakistani students are under a lot of stress due to the cost of tuition, books, living, and transportation. Families experiencing unstable incomes or having pupils whose education is the

first in the family to enter college are under extra economic pressures of ensuring a good performance in school and securing employment in adulthood Khan et al., (2021). Other studies have achieved similar outcomes in other low and middle-income countries, showing that students who have financial difficulties are also more vulnerable to anxiety and depression Haque et al., (2024). This proves that colleges have to implement financial aid programs, scholarships, and jobs to their students to reduce the financial burden and ensure the mental well-being of their learners.

More broadly, the effects of untreated anxiety go well beyond college. Chronically anxious students are more likely to experience depression, substance addiction, and even suicide thoughts Beiter et al., (2015), Ibrahim et al., (2013). They perform poorly academically, which results in low grades, absenteeism, and in severe situations, dropping out of school Saleem et al., (2021). Beyond academic results, untreated anxiety affects employability and long-term career success because people with ongoing psychological distress may have trouble retaining their jobs, performing well at work, and forming relationships with others Pedrelli et al., (2015). Research in Pakistan is still narrowly focused and shallow, despite the mounting evidence from around the world. There is a knowledge vacuum on the prevalence of anxiety in a variety of fields and academic institutions since the majority of research focuses on medical students or particular subgroups Siddiqui et al., (2020). Few studies incorporate all of the determinants environmental, social, psychological, and biological into their research. The policies intended to support students and their experiences are not aligned due to the dearth of thorough, region-specific research. This study aims to close that knowledge gap and offer useful information to academic institutions, decision-makers, and mental health practitioners by thoroughly examining the prevalence and contributing factors of anxiety disorders among undergraduate students.

1.1 RESEARCH GAP

The prevalence and determinants of anxiety disorders among undergraduate students in Pakistan have not been extensively studied, despite growing awareness of student mental health. Most existing literature focuses on students from developed Western countries, mostly neglecting the new social, psychological, and environmental stresses that scholars in emerging nations must contend with. There is a lack of local study on major contributing factors such as social isolation, cultural shame, financial instability, academic stress, and exposure to digital environments.

Furthermore, there have been few studies done on the direct effects of anxiety on students' everyday life and academic achievement. This disparity emphasizes the need for region based studies that look at the prevalence of anxiety as well as its various factors among Pakistani university students.

1.2 PROBLEM STATEMENT

Anxiety disorder is a continuous mental health issue among students affecting their academic performance and overall wellbeing. However, the research for determinants of anxiety disorder among students in Pakistan is remain limited. This study will investigate the prevalence and the factors that influence the mental health leading to anxiety.

1.3 RESEARCH OBJECTIVES

- To assess the prevalence of anxiety disorder among undergraduate students.
- To investigate the social, environmental, and psychological determinants influences the mental health leading to anxiety.

1.4 HYPOTHESIS

Null hypothesis: Ho

There is no association between the determinants and anxiety disorder among undergraduate students.

Alternate hypothesis: Ha

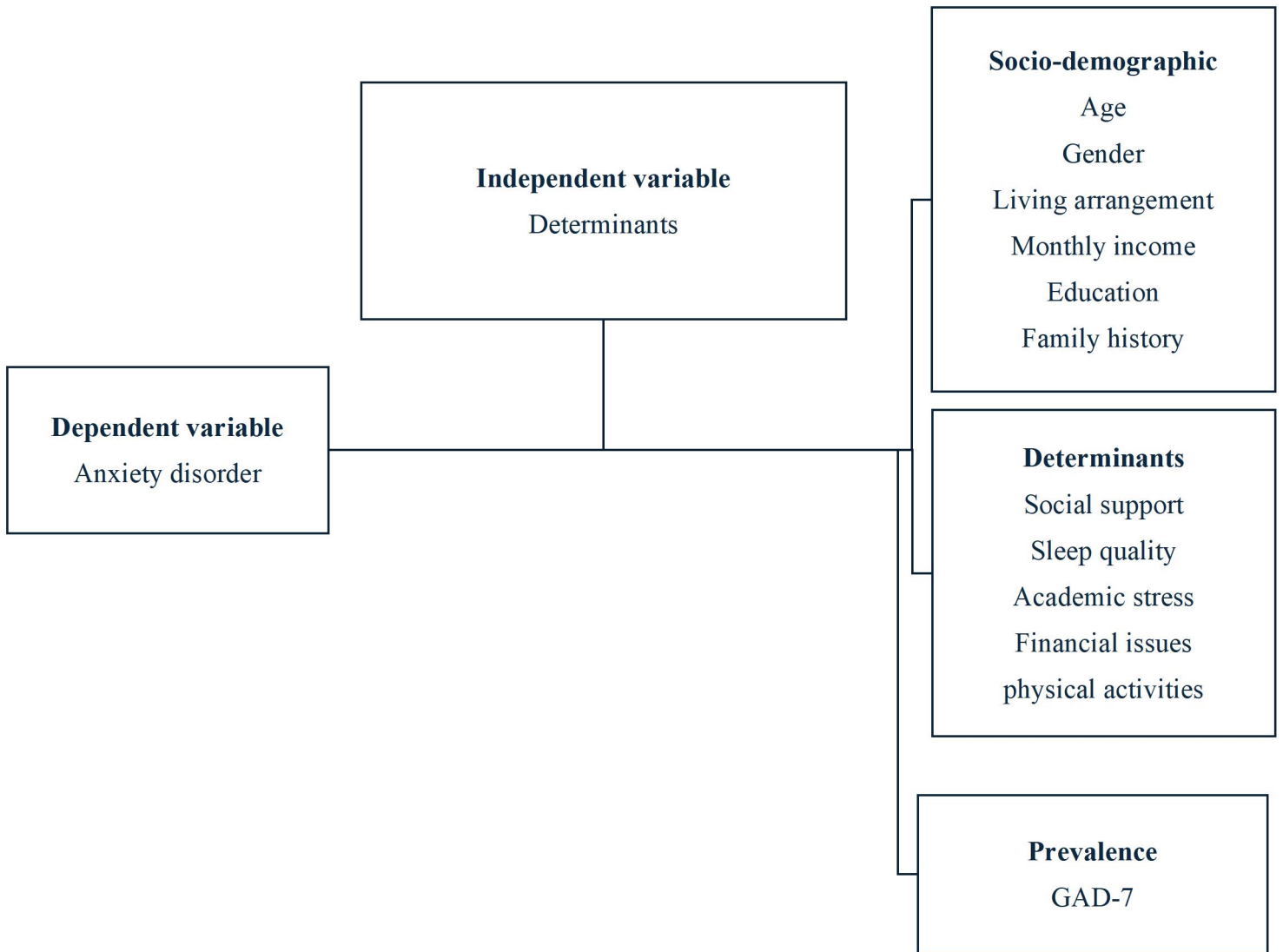
There is significant association between the determinants and anxiety disorder among undergraduate students

1.5 SIGNIFICANCE OF RESEARCH

This study is significant since it discusses the prevalence and main determinants (social, psychological, environmental) of anxiety disorder among university students. Given that the risk factors such as social influences, financial hardships, and academic stress can be identified, the anxiety can be identified early and addressed. In addition, it will facilitate healthier academic environment and lessen stigma. Another area that the study can fill in the literature is by providing specific evidence concerning student mental health. The future research and policy

efforts can work to improve better mental health assistance within higher education based on the findings. The study holds significance to teachers, policy makers and mental health professionals since it provides viable suggestions on how to improve the academic performance and wellbeing of the students. Understanding the underlying problem of anxiety may assist the universities to develop more specific solutions to meet the needs of particular students such as peer support groups, counseling services, and stress management. To ensure that mental health education and support systems can be incorporated in educational institutions of higher learning, the policymakers can use the results to come up with evidence-based programs. The purpose of the research is to support students in achieving their academic and educational goals successfully without losing their mental health thus emphasizing the importance of timely diagnosis and prevention.

CONCEPTUAL FRAMEWORK



CHAPTER TWO

LITERATURE REVIEW

Anxiety disorders, one of the most prevalent mental health diseases globally, are especially widespread among college students. During this crucial time of life, which is characterized by academic pressure, social adaptability, and the transition to adulthood, students are frequently subjected to excessive psychological stress (Al-Sharbati et al., 2024). Anxiety hinders students' academic performance, interpersonal connections, and general quality of life in addition to having a et al., 2023). Detrimental effect on their mental health. During the university years, people are exposed to increased academic demands, financial obligations, and changing social roles, all of which can make them more prone to anxiety (Beiter et al., 2015; Ibrahim et al., 2023). Particularly after worldwide stressors like the COVID-19 pandemic, research on the incidence of anxiety and related variables has increased significantly in recent years (Ma et al., 2020).

Over 264 million individuals worldwide suffer from anxiety disorders, according to the World Health Organization (2021), with a large percentage of those affected being college students. This is a concerning global burden of anxiety disorders. Clinically severe anxiety symptoms are reported to affect approximately 39% of college students worldwide, according to recent meta-analyses; prevalence rates are higher in low- and middle-income countries than in high-income ones (Ma et al., 2020; Lipson et al., 2022). These variations demonstrate the way that cultural, societal, and economic concerns affect the mental health outcomes. Anxiety symptoms are worsened by rigid academic systems, monetary issues, and the shame culture of South Asian students in seeking treatment, such as seeking psychological therapies (Haque et al., 2024; Khan et al., 2021). Stressors, on the other hand, are more commonly linked with student anxiety in high-income, such as school debt, its competition, and ambiguity of the employment market (Beiter et al., 2015; Fitzpatrick et al., 2022). Even though the phenomenon of student anxiety is a broad scenario, these simultaneous variations suggest that the difference in the causes of anxiety may differ significantly depending on the place.

Anxiety also impacts long-term education and career opportunities, thus it is not that distressing in a short-term perspective. Anxiety disorders impair focus and memory, as well as decision-making and often lead to low academic performance, absenteeism, and in the worst case,

dropout (Karatas et al., 2024; Putwain and Daly, 2014). Anxiety is psychologically related to comorbid issues such as substance abuse, depression, and burnout, which worsen the difficulties related to school (Pedrelli et al., 2015; Son et al., 2020). The long-term outcomes of anxiety have already proven that anxiety development during college is also a predictor of poorer outcomes of employment and diminished life satisfaction in adulthood (Kessler et al., 2012; Al-Sharbati et al., 2024). Such findings demonstrate that the problem of anxiety in students is a highly prevalent public health concern, which not only impacts social productivity and well-being but is as well a personal psychological problem.

These complications are under urgent concern by policy makers and universities in their quest to offer mental health treatments that are focused on addressing the issue of anxiety. It has been found that if access to peer mentoring, counseling services, and resilience training is available, the effect of anxiety on academics and psychological factors can be reduced (McCarthy et al., 2024; Lipson et al., 2022). Also, it has been found out that programs which reduce stigma, build awareness and the integration of mental health service into school environments provide more supportive conditions in which students are more willing to seek help (Hunt and Eisenberg, 2010; Kim and Zane, 2022). It is also because of the increasingly common levels of anxiety in students that there is a need to conduct comprehensive research that will not only determine the extent of its widespread but also examine its cause and consequences so as to be able to come up with effective methods to intervene.

2.1 Global prevalence and pattern

Anxiety disorders, as per (WHO, 2021) is one of the most widespread mental health challenges faced by college students all over the world. Since it presents numerous impacts in academic success, personal development and eventually professional achievement, the increased prevalence has become one of the primary concerns of mental health studies. The world estimates over 264 million people to be having anxiety disorders projections provided by the World Health Organization (WHO) and vast number of them includes students.

Ma et al. (2020) embedded a comprehensive meta-analysis of 64 studies of over 100,000 college students to establish an average prevalence rate of anxiety at 39.0%. There was also a great deal of geographical variation in the study: students living in lower-middle-income countries exhibited greater anxiety levels as compared to students living in high-income areas.

Social factors, academic pressures, and inequalities in accessing mental health services are usually mentioned as the causes of these inconsistencies.

The study raised the percentage of the respondents who felt anxious when exposed to the COVID-19 pandemic (Alhadi et al. 2021). They discovered that 63.6% of Omani pupils were anxious throughout the pandemic period. On the same note, Saudi Arabian and Turkish studies indicated that students displayed considerable amounts of anxiety, particularly at times of stress such as final exams or the pandemic lockdown (Karatat et al., 2024).

Anxiety is a very high percentage among a significant number of students in Pakistan. A research conducted in Pakistan conducted on the issue of anxiety symptoms among undergraduate students revealed that 42.6% of students of public institutions experienced anxiety symptoms (Khan et al. 2021). All these factors are contributing to the cause of mental health among financial troubles, lack of information regarding mental illness, pressure at school, and stigmatization towards mental illnesses in the society. As another relevant study by Jadoon et al. (2020) demonstrated, 48.6 percent of Pakistani medical students stated that they experienced moderate to severe symptoms of anxiety, indicating a serious problem doctors are going through.

Moreover, (Haider et al. 2022) also highlighted that the combination of psychological care and student support issues, the family, economic, and academic stressors are problems that Pakistani university students quite often encounter. In this way, such individuals are highly susceptible to the emergence of an anxiety disorder. In Pakistan undergraduate students have also been found to be highly prevalent with anxiousness as indicated in (khan et al.2021). Jadoon et al. (2010) observed that 48.6 percent of the medical students were moderately to severely anxious, and 42.6 percent of the students at the public institutes presented negative symptoms of anxiety (Khan et al., 2021). These results demonstrate how the high level of academic competition and pressure on students by their parents can be the initial antecedent in the case of students in a professional track. Moreover, Haider et al. (2022) came up with societal stigma, mental health knowledge, mental health facilities, financial instability, these are the systematic barriers. This indicates that the Pakistani students are more exposed to the long-term effects due to the accumulative strain of societal expectations and environmental elements in addition to the psychological restrictions, which make them particularly vulnerable to the effects.

Anxiety among students has been well-reported in high-income countries. As an example, Beiter et al. (2015) noted that 27% of college students in the United States were moderately to severely anxious with financial strain and academic stress being the primary sources of their stress. Low- and middle-income countries are depicted as students, who, in turn, are more likely to declare higher anxiety levels due to a conglomeration of stress factors, such as economic concerns, cultural shame of seeking help, and the inability to obtain mental health services (Fitzpatrick et al., 2022; Ma et al., 2020). This gap is essential because it is important to contextualize the anxiety studies under different cultural and economic settings. In South Asia and the Middle Eastern countries, the rate of anxiety among students is an issue that is significantly worrying. Alhadi et al., (2021) and Karatas et al. (2024) have shown that the prevalence of Anxiety among Saudi and Turkish students was dramatic in the period of academic and social disruption and the Omani students during the COVID-19 pandemic, reaching up to 63.6%. Much the same, Haque et al. (2024) highlighted that the levels of anxiety among the students from Bangladesh studying to pass the entrance exams were also high, with academic pressure and the future being the primary sources of such anxiety. These findings suggest that the structural stressors, which include rigorous testing issues, the absence of counselling services, and cultural requirement increase the chances of anxiety in these regions.

According to (WHO, 2021). Anxiety disorder will still remain as one of the most severe mental disorders in the global population that plagues college students, and the differences between the regions are due to social, cultural, and economic factors. The steadily rising incidence means that anxiety is increasingly emerging as an issue of concern in terms of its effect on society as well as individual-level psychological problems. As Auerbach et al. (2018) have found in one cross-national study, the prevalence of clinically severe anxiety symptoms by students in 21 countries is more than 30 percent, which proves the spread of the condition. These conclusions were also reported in a large-scale study by Lipson et al. (2022), who reached the conclusion that increasing levels of anxiety among college students are related to the shifting social pressures on the young adult population, the lack of employment opportunities, and the difficulty of tasks in college.

These cross-cultural variations reveal the complexity of interactions between institutional, economic and cultural aspects which precondition the prevalence of anxiety in students.

According to (Haque et al., 2024; Alhadi et al., 2021), due to what is attributed to the absolute necessity of respecting the culture and the pressures of the family, as well as financial insecurity, in the Asian and Middle Eastern setting, students are often reported to experience a higher rate of anxiety compared to those in the West. Academic systems and high-stakes exams are some of the major factors that contribute to stress and anxiety in countries such as Bangladesh and Pakistan, and students are at risk of burnout and chronic psychological dissatisfaction (Jadoon et al., 2010; Khan et al., 2021). On the contrary, children in high-income countries like the United States and the United Kingdom tend to record lower, although also not negligible, anxiety rates. The primary reasons behind this would be financial debt, competitive academic settings, and uncertain job markets (Beiter et al., 2015; Lipson et al., 2022). These findings demonstrate that despite the widespread problem of anxiety being a global issue, there are regional variations in its occurrence and severity which are determined by structural and cultural factors that are unique to the specific area.

The disproportion in which anxiety is felt by certain subgroups of students e.g. in professional courses like law, engineering, and medical are among other main factors that make the incidence of anxiety common in most parts of the globe. As per many researches, learners of such programs exhibit more anxiety than those studying on other educational programs due to the intensive workload, their competitive exams, and future oriented concerns regarding job prospects (Jadoon et al., 2010; Ma et al., 2020). In the case of Pakistan, it was actually revealed that nearly half of all medical students had moderate-to-severe anxiety, which is significantly greater in comparison with the percentage of the discipline occupying students (Khan et al., 2021; Haider et al., 2022). In Saudi Arabia, Turkey, and India, among medical and engineering students, higher exam anxiety and burnout during academic activity are noted, and similar outcomes are reported (Karatas et al., 2024; Alhadi et al., 2021). This indicates that there are certain academic disciplines that may be more vulnerable to anxiety than others and therefore special mental health interventions that put into consideration the specific difficulties that are faced by these students are required.

Secondly, the COVID-19 pandemic on a global scale has significantly contributed to the anxiety situation among students due to the intensification of existing problems and the emergence of new stressors and effects on the human mind. The primary triggers of the

significant changes in the rates of student anxiety during the pandemic are academic disruptions, social isolation, and uncertainty about future work prospects, which is reported in numerous studies (Son et al., 2020; Fitzpatrick et al., 2022). The anxiety levels of students in Oman, Saudi Arabia, and Turkey during lockdowns and transitioning to on-line education were nearly 60, which creates the psychological load of many protracted requirements of uncertainty and minimal social interaction (Alhadi et al., 2021; Karatas et al., 2024). Economic instability and lack of digital infrastructure increased the stress levels among students, which led to a higher anxiety report compared to the global average (Haider et al., 2022; Haque et al., 2024). The studies carried out in Bangladesh and Pakistan showed that these factors directly contributed to an increased level of student stress. These findings illustrate how exogenous shocks such as pandemics are able to drastically increase the rate of anxiety among the pupils particularly in the field where institution is wanting.

And, finally, the fact that the rates of high prevalence rates are still present in an array of scenarios, shows that the importance of student anxiety being among the global public health priorities is crucial. Studies by the World Health Organization (2021), Auerbach et al. (2018), and Lipson et al. (2022) demonstrate that anxiety amongst college students is an organizational issue that has implications on their future employability, personal development, and academic performance in the long run. They observed that there is evidence suggesting that as the anxiety rates have been increasing, so have more profound societal transformations, like the unstable labor markets, more competitive higher education, and the shifting expectations of the young adults in society and mental health centers (Ma et al., 2020; Fitzpatrick et al., 2022). The solution to this problem includes the global initiatives to integrate mental health care into the academic institutions and the considerations of the contextual factors, such as the academic foundation, financial resources, and stigma (Beiter et al., 2015; Hunt and Eisenberg, 2010). Unless specific measures are taken, the rates of anxiety among a student are likely to continue growing and threaten not only the personal health of the individual but also the overall societal physical and economic progress.

2.2 Determinants and risk factors of anxiety

Anxiety levels among undergraduate students are high due to a variety of interrelated variables. Most studies always portray academic load and performance pressure as reliable measures of

anxiety. Studies conducted in Malaysia (Lai et al., 2021) and China (Ma et al., 2020) have confirmed the stress that students endure due to rigorous coursework, ongoing tests, and highly competitive learning settings. These stresses are subsequently mitigated by alcohol use, poor sleeping patterns, financial difficulties, and worries about future results and job instability (Lai et al., 2021). Conditions related to mental and physical health might also make people more prone to anxiety. Alhadi et al. (2021) emphasized that students who have chronic medical issues or a history of mental health disorders are more likely to exhibit symptoms of anxiety. Research from Bangladesh also supports this, finding that pupils who do poorly and have long-term health problems are more susceptible to severe anxiety Haque et al., (2024).

Social and environmental elements are equally important. International students often suffer from high levels of social anxiety as a result of difficulties integrating into society and inadequate support networks, according to a cross-sectional study carried out in Turkey Karataş et al., (2024). According to Yildirim et al. (2009), there is a strong link between living circumstances and anxiety, particularly for students who reside in boarding houses. These students were more stressed at exam times since they were apart from their families and familiar environments.

According to Alamri et al. (2025), academic stress affects all students, regardless of field, since non-medical students in Saudi Arabia reported anxiety levels comparable to those in the health sciences. Another influence is gender. According to several research, such as those by (Haider et al. 2022 and Karataş et al. 2024), female students are more likely to experience anxiety. This might be because of coping strategies, social roles, and cultural expectations. Digital and lifestyle habits are also becoming more and more significant. Anxiety among students is increasingly seen to be caused by excessive screen time, excessive social media usage, physical inactivity, and sleep difficulties. A clear connection between screen time and psychological discomfort.

Although prevalence studies offer important information on the extent of anxiety among college students, determining the causes is crucial to comprehending the causes and developing successful treatments. A student's mental health outcomes are influenced by a variety of elements, including socio demographic, social, psychological, and environmental factors, which

are typically complex drivers of anxiety disorders in young people was demonstrated by Twenge et al. (2018).

2.3 Socio-demographic and behavioral correlates

The prevalence, severity, and presentation of anxiety disorders in undergraduate students are knowingly influenced by behavioral and socio-demographic characteristics. These elements affect how students feel and manage anxiety by interacting with psychological and academic pressures. The literature consistently reports that behavioral correlates including substance use, exercise, and coping mechanisms, as well as important socio-demographic factors like gender, age, socioeconomic background, and housing arrangements, are major predictors of anxiety in students.

According to (Alhadi et al., 2021; Karataş et al., 2024) it has been well acknowledged that gender plays a role, with women often displaying higher levels of anxiety. The additional behavioral characteristics that positively correlate with anxiety symptoms are drug usage, smoking, and a lack of physical exercise. According to several reports, exercise provides preventive effects (Karataş et al., 2024). According to studies by Yildirim et al. (2009) and Lai et al. (2021), students' living arrangements, such as living with family or in dorms, were associated with higher anxiety levels. Anxiety is further exacerbated by a lack of social support and ignorance of the future.

Anxiety problems can have serious academic consequences. Students who experience anxiety frequently report low performance, difficulty focusing, and exam anxiety. Alhadi et al. (2021) proposed that students with anxiety are more prone to engage in avoidance behaviors and perform poorly in institute. Long-term psychological consequences like depression and exhaustion can also be brought on by ongoing worry (Ma et al., 2020). Ibrahim et al., (2023) and Arslan et al., (2023) conducted a research that indicates the onset and severity of anxiety disorders in undergraduate students are significantly influenced by behavioral and socio-demographic factors. One important factor is still gender, as female students continuously show greater levels of anxiety than male students. This discrepancy is caused by a combination of gender-specific stresses, emotional coping strategies, and sociocultural influences.

The findings of Fitzpatrick et al., (2022) regarding the effects of mental health also rely greatly on the socioeconomic position. The primary causes of such school related anxiety in

lower-income students are financial, lack of resources, and the overwhelming need because of the security in the future to perform academically so that the person can achieve the future security. Also financial instability could augment their anxiety disorder concerns over cost of living, tuition fees, and employment opportunities upon graduating making them more susceptible. Anxiety can be caused by lack of a strong social support and uncertainty about their success on the long run in work. There are increased rates of current anxiety and emotional instability, students become anxious when they are trapped by lack of support of peers or families, as well as when they are not sure about their academic and career trajectories (Zhang et al., 2022). Moreover, these effects are exacerbated by associated socioeconomic factors such as academic stress and poverty among other financial strains, especially among low-income adolescents. School anxiety may have dire consequences on performance. Highly anxious students often complain of procrastination, low achievement, inability to concentrate, and increased tension during a test.

The study conducted by Alhadi et al. (2021) argued that it is clear that worried students engage in avoidance behaviors more than other students, which adversely influence academic attendance, submission of assignments, and involvement in campus activities. Ma et al. (2020) suggest that long-term exposure to anxiety without any intervention may have psychological long-term effects in depression, school burnout, and school dropout. Son et al., (2020) have concluded that most of these behavioral and socio-demographic risk variables have been augmented by the COVID-19 pandemic. The mental wellbeing of the students was also adversely impacted due to reduced socializing activities across the globe, increased uncertainties regarding academic matters coupled with difficulties in remote learning. The importance of evidence-based targeted mental health interventions in higher education can be explained by the fact that the vulnerable population of students, such as females and individuals with low socioeconomic status, experience a disproportionate effect of mental health issues. (Fitzpatrick et al., 2022).

2.3.1 Gender Differences

Gender has been identified repeatedly to be one of the strongest socio demographic predictors of anxiety among college students. Many studies indicate that female students experience more anxiety as compared to male ones (Ibrahim et al., 2023; Alhadi et al., 2021). They have

attributed this disparity to many biological, psychological, and social influences. The reproductive years are those that affect females who have biological changes in hormones and are hence worsened by mood and anxiety issues (Kessler et al., 2012). Men experience externalization more than women do due to substance abuse or avoidance, and women experience internalization more than men do due to the adoption of maladaptive coping strategies such as rumination (Fitzpatrick et al., 2022).

This mismatch is even aggravated by society and cultural expectations. Arslan et al. (2023) said that additional stressors including family demands on social conduct, marriage, and educational success are common among women in the conservative societies in South Asia and Middle East. The demands can worsen the effects of anxiety especially when combined with financial and academic stress. Due to their greater domestic responsibilities, fewer social networks, and more academic uncertainty, studies conducted showed that female students disproportionately would complain of more anxiety with the COVID-19 pandemic, according to studies Zhang et al. (2022).

Gender-based inequalities in anxiety also have bigger trends on an international level with regards to inequality in mental health. As many studies show, the prevalence of anxiety disorders is higher in women than in men at the general population and in universities, despite the cultural background (WHO, 2021). This tendency emphasizes the connection between psychological vulnerability and universal gender inequality. As reported by Bayram and Bilgel (2008) and Khan et al. (2019), women are supposed to succeed in school as they prepare to assume the traditional duties associated with gender, such as being a wife and a homemaker and particularly in the collectivist nations. A combination of these opposing demands creates the so-called double burden which adds to mental anguish. Girls also have higher chances of having higher performance anxiety in educational contexts because they perceive academic work to be a threat and Beiter et al. (2015). Conversely, male students can experience academic stress, however, they are more likely to deal with it by using aggressive, avoidant, or dangerous responses to the situations, a quality that reduces the manifestation of anxiety on self-reported scales Pedrelli et al. (2015). This may be one of the reasons behind this gender gap in self-report surveys in anxiety Lipson et al., (2022).

The COVID-19 epidemic increased the gender gap. The research shows that female students showed a disproportionate burden of caregiving and household responsibilities and did not have enough coping resources at their disposal; moreover, academic uncertainty during lockdowns was higher in female students (Zhang et al., 2022). A worldwide survey conducted by Son et al. (2020) shows that women were more inclined to report issues with balancing their household and academic tasks and this resulted in an increase in the rates of anxiety.

The studies conducted in Pakistan demonstrate the prevalence of anxiety among students and their social barriers to overcome the disorders. Khan et al. (2021) indicated that the condition of financial hardship, academic burden, and deficiency of supporting services provided by institutions were the primary contributors to the anxiety symptoms experienced by 42.6% of the undergraduate students in government-owned institutions. To justify these findings, Khan et al. (2019) emphasized that mental health stigma and knowledge gap about this problem are the key factors that reduce the chances of students seeking professional help to a minimum.

2.3.2 Age and academic year

The prevalence of anxiety also depends on the age and the academic year. Stress levels among the younger ones particularly among the first year university students are often greater than amongst the senior children. This, according to Bayram and Bilgel (2008), is due to the most part owed to the challenges of transitioning out of the more secure secondary school environment to the more intense and independent atmosphere of a university. Anxiety may arise due to a deficiency in coping skills among students in the first year because of adapting to new living conditions, interpersonal relations, and academic requirements (Beiter et al., 2015).

As various studies claim, feelings of uncertainty and the improvisation of identity is highly experienced in this period of transition, which can also cause people to be more susceptible to concern. Most of the students who are the first to live away feel less parental support but more responsive to themselves in terms of academic performance, economic self-sufficiency and self-discipline (Yildirim et al., 2009). First year has especially significant academic pressure when students are adapting to new teaching techniques, increased classes, and increased number of assessments. Eisenberg et al. (2013) indicated that due to stigma or ignorance, students in their first year are prone to use mental health treatments less than they should, thus making them feel even more wretched. These challenges are further worsened in

South Asian cultures due to cultural requirements in academic achievement and high stakes in professional degree programs such as public health, engineering, and medicine (Siddiqui et al., 2020).

Saleem et al. (2021) claim that anxiety levels generally rise during the last year of study, although they generally decline during the middle school years as students develop peer groups and coping strategies in place. Graduate students are faced with specific stressors including job competitiveness, unstable careers and postgraduate studies. A longitudinal study conducted by Eisenberg et al. (2013) demonstrated that the prevalence of anxiety was in the form of a U-shaped pattern, highest in both the first and final academic year. In this study, it is stressed that students are even more susceptible during the critical transition times when they enter and exit universities. In the absence of special support at these stages, children may experience persistent anxiety that becomes detrimental to their wellbeing and performance in the long-term.

Conversely, final-year students also mention that anxiety levels are high as often, but these are often connected with concerns about employment, independence, and post-graduate life Saleem et al. (2021). The shape of the pattern in the longitudinal study conducted by Eisenberg et al. (2013) was a U, as the level of anxiety increased in the first and final years of study. This study suggests that anxiety is associated with the challenges of early academic adaptation and also the uncertainties of the latter in life like joining workforce or attending college.

Multiple researches in different contexts testify to the fact that the competition in the job market, the lack of a stable budget, and the burden of outstanding student debts usually make the graduating students more nervous (Beiter et al., 2015; Lipson et al., 2022). The study by Eisenberg et al. (2013) reveals that the final-year students have high levels of anxiety that are strongly linked with their concerns regarding employment and repayment of the school debt in the high-income countries. An unstable economic situation, absence of job opportunities, and expectations of becoming financially independent rather soon after graduation can lead to the situation in low- and middle-income countries such as Pakistan (Haider et al., 2022; Siddiqui et al., 2020).

Also, third-year students can develop role strain because they have to spare time fulfilling family responsibilities, preparing to enter the workforce, and complete demanding academic tasks (Arslan et al., 2023). Part of the concern experienced by some people during this period is

around their choice of what to do next, either after graduation or as a consequence of moving somewhere to work or fulfill their cultural expectations such as a marriage (Khan et al., 2019). In combination, these stresses enhance psychological pain and they may present themselves in the form of comorbid depression, performance-related anxiety, or generic anxiety. (Ibrahim et al., 2023).

2.3.3 Socio-economic status

The socioeconomic background is an important predictor of student anxiety. Due to the financial pressure, insufficiency of means, and uncertainty about their future jobs, low-income students are more vulnerable to anxiety disorders (Fitzpatrick et al., 2022). The family-imposed burdens on academic achievements are often tied to socioeconomic challenges in South Asian settings where living costs and tuition fees may be large (Siddiqui et al., 2020). Children who are also in poor backgrounds may struggle to match their rich friends in terms of education and other aspects such as socialization due to the fact that they lack access to luxuries like private tutoring, technology and extracurricular activities. This financial inequality within colleges is also a factor toward psychosocial stress. This comparative scarcity may enhance nervousness related to results and states of inferiority.

A study conducted among Pakistan university students showed that financial instability and absence of available scholarship opportunities are major prognostic factors associated with anxiety symptoms (Haider et al., 2022). Many students reported that chronic stress, insomnia, and poor performance were among the effects of having to work part-time and attend school (Bayram and Bilgel, 2008; Beiter et al., 2015). Similarly, in a study in Bangladesh, the authors had discovered that students in low-income households were more stressed during their studies and less willing to seek professional help due to economic reasons (Haque et al., 2024; Khan et al., 2019). The social disengagement or spending too much time on the screen is a consequence of using poor coping strategies which many low-income students choose in the face of inability to afford counseling services and cultural stigmatization of mental health problems. Such habits may increase anxiety (Fitzpatrick et al., 2022; Twenge and Campbell, 2018).

Besides financial stress in the short term, there is a socioeconomic-based influence on future worry. On the one hand, the fact that students with low-income families are less likely to succeed in their future career and advancement leads people to anticipatory stress and pessimism

about the future (Lipson et al., 2022; Eisenberg et al., 2013). It is specifically relevant in developing countries like Pakistan where unemployment among young people is very high and puts a strain of mind on those who complete their studies and leaves them ambivalent (Saleem et al., 2021; Siddiqui et al., 2020). Conversely, students with higher financial means could be having financial safety nets, professional ties, and familial support, which contribute to reducing anxiety linked to school and careers (Karatas et al., 2024; Smith et al., 2023). These outcomes all lead to the relevance of socioeconomic differences in determining the mental wellbeing of students and the need to enact legislation that are capable of alleviating anxiety among needy pupils, including need scholarships, free counselling, and career advancement programs. (Haque et al., 2024; Haider et al., 2022).

2.3.4 Living arrangement and family support

Family support and living circumstances also have an impact on how anxiety manifests. Students who live away from their families or in dorms or hostels frequently report higher anxiety levels than those who live with their families (Yildirim et al., 2009). This heightened susceptibility is often linked to feelings of loneliness, less parental supervision, and challenges adapting to new social settings (Bayram & Bilgel, 2008; Beiter et al., 2015). According to Eisenberg et al. (2013), many students experience heightened anxiety at times of academic stress or personal difficulties because they have less access to emotional and financial assistance when they are separated from their families. Living away from home can be especially stressful for South Asian students, who may find it difficult to strike a balance between their independence and the cultural expectations of familial connectedness, which are based on collectivist cultural norms that prioritize tight family ties Siddiqui et al. (2020).

On the other hand, family conflict, occurrences of privacy, or pressure to live up to social and academic standards can also cause anxiety among students who live with relatives. According to a cross-sectional study conducted in Turkey, hostel residents had higher levels of exam-related anxiety than their at-home counterparts, underscoring the significance of environmental stressors and social isolation Karataş et al. (2024). The quality of family interactions is important, though; high-conflict households exacerbate psychological distress, whereas supportive family situations offer emotional stability and serve as a protective barrier against anxiety (Hunt & Eisenberg, 2010; Ibrahim et al., 2023). The preventive effect of

emotional and instrumental family support has been repeatedly demonstrated. Students' anxiety ratings on standardized tests like the GAD-7 scale were lower for those who reported having great emotional support from friends and family (Lipson et al., 2022; Smith et al., 2023).

According to this, student anxiety may be effectively decreased by the Peer interactions and replacement social support networks play a significant role when students live away from home. Even in the absence of close relatives, friends, supportive roommates, and social networks can act as a substantial anxiety buffer for those living in dorms or hostels (Karataş et al., 2024; Beiter et al., 2015). Students who don't build strong peer relationships, on the other hand, could feel lonely, socially isolated, and more distressed Lipson et al. (2022).pies that foster social connectedness and improve family communication. Students living in shared housing who participated in extracurricular and social activities had lower anxiety levels than their solitary counterparts, according to a global analysis by Peltzer and Pengpid (2015). This research emphasizes that although living far from family may raise anxiety risk at first, resilience can be improved and these effects can be lessened with the growth of robust social support networks.

2.3.5 Behavioral correlates

Students' anxiety is greatly impacted by behavioral factors like sleep, nutrition, exercise, and substance usage. Increased anxiety and poorer cognitive function have been repeatedly associated with poor sleep hygiene, which is typified by irregular sleeping patterns and shorter sleep duration (Ma et al., 2020; Lund et al., 2010). According to (Beiter et al., 2015; Fitzpatrick et al., 2022) university students frequently forgot sleep in favor of social activities, technology use, or academic responsibilities, which leads to chronic exhaustion and elevated stress levels. Since excessive screen usage throws off circadian cycles and exposes students to unfavorable social comparisons, it is strongly linked to insomnia and elevated anxiety (Twenge & Campbell, 2018; Levenson et al., 2017). According to Siddiqui et al. (2020), these lifestyle changes exacerbate students' susceptibility to anxiety in South Asian contexts, where shared spaces and extended family living may already affect sleep.

Substance abuse, such as smoking, drinking alcohol, and excessively using energy drinks, has also been documented as a coping strategy and a risk factor for elevated anxiety in students (Beiter et al., 2015; Pedrelli et al., 2015). Though it frequently exacerbates long-term anxiety, alcohol is a widespread maladaptive approach adopted in Western environments to momentarily

escape academic stress (Kessler et al., 2012; Eisenberg et al., 2013). Because of cultural and religious prohibitions against alcohol use, students in Pakistan and other conservative societies may turn to smoking, chewing betel nuts, or consuming excessive amounts of caffeine as coping mechanisms (Haider et al., 2022; Khan et al., 2019). Although these actions might offer temporary respite, they are linked to prolonged anxiety symptoms, physical health issues, and disturbed sleep (Fitzpatrick et al., 2022; Ibrahim et al., 2023).

However, preventive practices like mindfulness, a good diet, and physical activity have been shown to work as a buffer against anxiety. Frequent exercise is closely associated with better sleep quality, lower stress levels, and better mental health outcomes for students (Smith et al., 2023; Biddle et al., 2019). Similarly, research has demonstrated that meditation and mindfulness-based therapies can help university populations manage their emotions better, become more resilient, and experience less symptoms of anxiety (McCarthy et al., 2024; Galante et al., 2018). Additionally linked to improved mood control and reduced anxiety are healthy eating habits, such as eating regular meals and drinking enough water (Jacka et al., 2010; O'Neil et al., 2014). Significantly, lifestyle treatments are a useful way to support students' well-being since they are frequently more culturally acceptable in conservative societies where formal counseling is still stigmatized (Lipson et al., 2022; Karataş et al., 2024).

2.3.6 Peer relationship and social connectedness

Social connections and peer interactions have a big impact on students' anxiety. According to Karataş et al. (2024), there is a persistent correlation between elevated anxiety levels and social isolation and less peer support. According to Beiter et al. (2015) and Peltzer & Pengpid (2015), university students who have difficulty adjusting to new social settings frequently express emotions of loneliness, which is a strong predictor of psychological distress. On the other hand, robust peer networks and encouraging friendships serve as protective barriers, boosting resilience and lowering psychological distress by offering both practical assistance and emotional validation (Lipson et al., 2022; Eisenberg et al., 2013).

According to Bayram and Bilgel (2008), involvement in clubs, student societies, and group activities has also been shown to improve social belonging and lessen anxiety symptoms, especially for students who live away from home. Peer support functions as both an emotional resource and a structural aspect that shapes students' adjustment to university life, as these

studies demonstrate. In South Asia in particular, the cultural taboo around mental health deters students from talking candidly about their difficulties. Students consequently frequently underuse the mental health services that are offered to them and depend more on unofficial peer support, which might not always offer sufficient coping mechanisms (Hunt & Eisenberg, 2010; Kim & Zane, 2022). According to (Khan et al., 2019; Siddiqui et al., 2020) in order to avoid social rejection or familial embarrassment, students in Pakistan and other collectivist societies may confide in their peers rather than counselors; however, this can postpone obtaining professional assistance and exacerbate symptoms. Furthermore, rather than aiding in recovery, peers' support may encourage unhealthy coping mechanisms when they themselves lack sufficient mental health literacy (Ibrahim et al., 2023). Research has demonstrated that peer dependence and stigma create a vicious cycle of underreporting and untreated anxiety in college populations (Lipson et al., 2022; Haider et al., 2022). Peer interactions are therefore crucial for reducing stress, but in order to guarantee that peer support enhances rather than replaces professional mental health care, cultural obstacles must be removed.

2.4. Psychological and academic impact

Psychologically, (Alhadi et al., 2021; Ma et al., 2020) undergraduate students with anxiety problems have a substantial difficult academic environment. The more anxious students perform poorly on academic tests and are also unable to focus and learn. Anxiety and academic performance were always found to be negatively related; anxious students are less motivated and discourage to complete their work and procrastinate it. Besides its impact to cognition, anxiety also has emotional illnesses, which include, but are not limited to emotional weariness, low self-esteem and anger. The psychological pressures encountered keep on interfering with academic advances that manifested through increased absenteeism and classroom truancy. Also, they experience chronic fatigue and sleeping problems, which worsens their mental and intellectual challenges Karatas et al. (2024).

Short term impacts of anxiety include depression and burnout which occur over time as secondary impacts of mental health. Al-Sharbati et al. (2024) also indicate that the occurrence of these secondary disorders is more probable among students with the pre-existing chronic anxiety that may persist even after people leave college and continue to influence their future social and work achievements. As a result, untreated anxiety does not only hamper the current academic

performance but it also poses a threat to the quality of life and career performance of the students as a whole. Due to the complex nature of the consequences of anxiety, it is very important to identify and deal with it in its initial stages. It has been found that peer mentoring programs, psychological support services and academic advice can be used as means to alleviate the adverse impact of anxiety. Lipson et al. (2022) note that those colleges that proactively engage in promoting awareness of mental health and reducing stigma provide more conditions under thanks to which the students are more likely to address help and become more academically successful.

Moreover, as well as anxiety diminishes the current performance of a student, it also affects his future commitment to education. Unwarranted anxiety is connected with the lower participants of the classes, high risk of quitting courses, and augmented academic delay (Beiter et al., 2015; McCarthy et al. 2024). Also, academic attrition is more probable in students who are not treated against their anxiety due to the lack of confidence and academic persistence created by continuing to avoid their fears and lack of motivation (Eisenberg et al., 2013; Bayram and Bilgel, 2008). The latter indicates the possibility of anxiety being a contributor to institutional issues such as large percentage of dropout and overall low student retention in case it is not addressed at an early stage.

Anxiety also has an impact psychologically on emotional control and social functioning causing academic challenges to be significantly worse. Karatas et al. (2024) and Hunt and Eisenberg (2010) suggest that students who experience high anxiety often report broken peer relationships, want to avoid involvement in group work, and avoid school discussions due to their fears of embarrassment or being judged. Lipson et al. (2022) and Peltzer and Pengpid (2015) report that, upon dropping out in guess the way, students divest themselves of important peer support in addition to becoming isolated, which has been shown to be one of the mechanisms that help mitigate stress. Al-Sharbati et al. (2024) and Ibrahim et al. (2023) claim that these behaviors predispose comorbid psychiatric disorders, like depression, loneliness, and burnout, as almost all promotes sense of inadequacy and social exclusion in the long run.

The effect of the anxiety on students and the school as a whole is a major concern (Smith et al.2023; Fitzpatrick et al.2022). The effect when a large population of students has an anxiety disorder can be seen in classroom interactions, the overall academic involvement, and the strain

on support services in the institution. It was mentioned that in many cases, universities often cannot fulfill such ubiquitous needs due to their limited resources, resulting in the overload of counseling services and the absence of preventive lecturing (Haque et al., 2024; Haider et al., 2022). This highlights the importance of the adoption of school-wide mental health interventions, including peer mentoring, academic advising, and stigma reduction programs as a way of supporting the holistic health of the students.

Test anxiety is one of the most common manifestations of generalized anxiety among students and it is directly intertwined with poor performance in examinations. To memorize the material during the tests students with high test anxiety often have intrusive thoughts, feel more physiologically aroused and have less working memory (Putwain and Daly, 2014; von der Embse et al., 2018). This becomes a vicious cycle because poor performance contributes to an idea of fear of failure, and a lack of this causes an increased state of anxiety about future tests (Beiter et al., 2015; McCarthy et al., 2024). Among South Asian cultures, the problem of exam anxiety tends to be particularly prevalent and often exacerbates the academic stress since academic success has a close correlation with the social status and family expectations (Siddiqui et al., 2020; Haider et al., 2022). One of the factors that contribute to mental health among students is exam related stress, thus the need to consider this in institutions of learning.

Anxiety has not only negative impacts on academic performance but on other aspects of psychological wellbeing, emotional strength and self-concept. Ibrahim et al. (2023) and Karatas et al. (2024) report that students with anxiety are generally low self-esteem, overly self-critical and experience stressor management difficulties. These symptoms hurt their ability to cope both at personal and academic level. Moreover, anxiety is linked to the emotional dysregulation strategy, which involves the rise of irritability and aggression, leading to the form of escalating tension when communicating with the family and peers (Lipson et al., 2022; Hunt and Eisenberg, 2010). Exposure to long-term stress increases the exposure to burnout, one of the features of which is cynicism, weariness, and decreased academic efficacy (Saleh et al., 2017; Pedrelli et al., 2015). These findings show that worry does not only affect instant cognitive ability of students but also their overall psychological strength and emotions.

Academic performance and psychological well-being effect of untreated anxiety is long-term and extends beyond college to influence future career advancement and overall quality of

life. Chronic anxiety among students has been associated with worse social functioning in adulthood, reduced employability, and inability to adapt to the demands of the occupation (Al-Sharbati et al., 2024; Kessler et al., 2012). Also, students with chronic anxiety were found to have comorbid conditions such as substance abuse and depression, which further complicate their personal and professional trajectory (Son et al., 2020; Fitzpatrick et al., 2022). Research also indicates that the lack of treatment in graduates leads to poorer job satisfaction and less upward mobility; this is due to their avoidance tendency and lack of confidence (Lipson et al., 2022; Eisenberg et al., 2013). These are long-term consequences indicating why it is important to identify and treat anxiety at the beginning of college life as it is not only dangerous to academic achievements but poses a long-run risk on individual health and the effective functioning of society.

2.5 Impact of environmental conditions on anxiety

According to (Cosh et al., 2024; Fitzpatrick et al., 2022) Anxiety disorders are impacted by the interaction of environmental exposures, psychological states, and genetic predisposition. Environmental exposures have gained increasing recognition as having a significant impact on the onset and persistence of anxiety. The physical, social, and economic settings in which people live, learn, and interact with others can either contribute to or act as a buffer against psychological discomfort. Environmental stressors of many kinds, from digital stress and poor housing conditions to urban tension and climatic anxiety, have been scientifically linked to anxiety disorders (Mortreux et al., 2023).

According to Kioumourtzoglou et al., (2017) Living in an urban area is one of the most researched environmental factors that influences anxiety. High levels of anxiety and stress have been linked to urban settings' typical characteristics of increased population density, noise pollution, a lack of green spaces, and overstimulation. Karataş et al. (2024) also found that due to environmental insecurity and loneliness students living in shared housing or away from their relatives in metropolitan locations reported higher levels of social anxiety. According to Cosh et al. (2024), limited exposure to restorative settings, such as parks or the outdoors, has been associated with less mental resilience and increased susceptibility to symptoms of chronic anxiety.

According to Cosh et al. (2024) the concept of climate anxiety, sometimes known as eco-anxiety, has recently gaining popularity, particularly among young people. Individuals are experiencing persistent anxiety about ecological destruction and future uncertainty due to heightened awareness of environmental deterioration, unstable weather patterns, and natural disasters. Nomura et al. (2024) conducted a study that prenatal exposure to stress associated to catastrophes (such as hurricanes or wildfires) increased the likelihood that adolescents will acquire anxiety disorders throughout adolescence. According to Fitzpatrick et al. (2022), environmental trauma is largely invisible but can have long-lasting psychological impacts, especially in impoverished nations when coping mechanisms are inadequate.

Another important danger factor to the environment was found to be socioeconomic deprivation a study by Fitzpatrick et al. (2022) has shown. The poverty, food insecurity, unsafe neighborhoods and a lack of access to healthcare are the norm among people that are lower in the socioeconomic classes. Elhai et al. (2017) argue that a continuous economic hardship not only predicted high rates of anxiety but also decreased the possible chances of individuals seeking the treatment as it is too costly and stigmatized. The lower-income students are reported to experience test anxiety more and especially when it is accompanied by academic competitiveness and a deficit in social support (Zhang et al., 2022).

It is also been reported that the internet environment can greatly contribute to the development of anxiety, particularly among students and teenagers (Elhai et al., 2017). It is highly correlated that higher levels of anxiety symptoms are associated with excessive use of cellphones, social media, and Internet peer comparison. Such websites propagate irrational expectations, overthinking, and sleep disorder affecting emotional control negatively (Twenge & Campbell, 2018). Also, Smith et al. (2023) confirmed that high digital devices levels are linked to less physical exercise, lack of social interaction, and digital burnout all of which lead to a worsening of anxiety symptoms in the long run.

Karatas et al. (2024) noted that some of the environmental factors leading to environmental anxiety are shared dormitories, narrow housing, and relocation. The higher the anxiety, the more the avoidance behavior among students in the unsafe and crowded dorms or with limited space. Cosh et al. (2024) supported these results and observed that individuals subjected to less stable housing conditions are at risk of developing chronic stress and having an

emotionally threatened state. There is a high probability of developing clinical anxiety in the event of a combination of social isolation, academic pressure, and residential instability Zhang et al. (2022).

The scientific literature on the topic by Cosh et al. (2024) suggests that anxiety is a mental state of both environment-related risk and insecurity, as well as its fundamental type. Mortreux et al. (2023) think that these aspects result in a structure of vulnerability, which is based on a macro view of urban development and climate change, and on the micro-scope of internet exposure and homestead conditions. The rise in prevalence of anxiety disorders can only be reduced by responding to the effect of environmental variables through mental health policy and academic efforts that consider the variables as structural risk factors to this mental health outcomes by combining with individual vulnerability (Fitzpatrick et al., 2022). It is becoming more widely acknowledged that environmental determinants of anxiety are structural risk factors that dictate mental health outcomes through an interaction with an individual vulnerability. It has been shown that the urban setting, especially, is a source of stress, especially as a result of factors such as traffic jam, noise, overcrowding, and a limited access to greener space (Kioumourtzoglou et al., 2017; Mortreux et al., 2023). As Karatas et al. (2024) and Cosh et al. (2024) note, students residing in overpopulated metropolitan areas often experience overstimulation of the senses, lack of leisure, and experience of loneliness, all of which worsens the state of anxiety. Nevertheless, it has been demonstrated repeatedly that the access to the curing natural settings such as parks and gardens, as well as walking paths, is associated with greater psychological resilience and a reduction in anxiety levels (Nomura et al., 2024; Smith et al., 2023). These findings explain the importance of incorporating stress relieving spaces and green landscapes in city-building to avoid the risks of anxiety among the youth.

The effects of the stresses related to climate on the outcomes of anxiety are also gaining increasing importance particularly in younger age groups. Through studies, climate anxiety, or eco-anxiety, constant concern over environmental downfall and uncertainty about the future is disproportionately high amongst the teens and college students (Cosh et al., 2024; Mortreux et al., 2023). As research says exposure to extreme weather events and natural disasters may cause both instantaneous and intergenerational psychological effects. The disruption of mental health of pregnant adolescents by natural calamities is proven to enhance the probability of anxiety

development (Nomura et al., 2024; Fitzpatrick et al., 2022). The impact of disasters on underdeveloped countries is the most dangerous to students because they often lack the coping mechanisms, institutional intervention, and disaster planning resources which may reduce the long-term consequences (Elhai et al., 2017; Zhang et al., 2022). The results prove the strong interconnection between environmental sustainability and mental health, and thus cross-sectorial solutions are needed, considering psychological well-being as the State of climate change adaptation.

Moreover, the study has indicated that digital environments cause a person to become even more anxious particularly the group of students. Twieng and Campbell (2018) and Elhai et al. (2017) say that emotional deregulations, sleep disturbance, and unrealistic expectations are caused by excessive screen time, the constant use of social media, and online peer comparison. The studies have shown that high-levels of smartphone addiction are associated with digital burnout symptoms, social disconnection, and lack of academic attention (Smith et al., 2023; Fitzpatrick et al., 2022). Moreover, due to the anonymity and accessibility of the online spaces, students are often exposed to negative social comparison, false information, and cyberbullying, which further contribute to the development of the anxiety symptoms (Cosh et al., 2024; Zhang et al., 2022). The need to use technology in a balanced and considerate manner is also evident by the fact that, despite the fact that academic materials and social management can be provided via digital platforms, students with poor digital literacy and self-regulation abilities are more vulnerable to psychological distress.

Housing instability and unstable living conditions are the other factors of the environment with the direct correlation with student anxiety. Karatas et al. (2024) and Cosh et al. (2024) state that students who are located in overcrowded dorms, unsafe communities, or unstable rental accommodations often mention increased instances of stress, avoidance behaviours, and various vulnerabilities. The inability to have privacy and personal space exacerbates academic stress and test anxiety and contributes to social disengagement (Zhang et al., 2022; Haider et al., 2022). These effects are particularly apparent in the case of low-income students who lack the means to acquire alternative housing and, thus, are always put in stressful circumstances (Elhai et al., 2017; Mortreux et al., 2023). As such results indicate, university level intervention measures such as safe accommodation policy and convenient means of facilitating access to student housing

accommodation services are necessary by showing how an environmental state of insecurity can be further compounded by social isolation and academic stress factors to form a cumulative risk of clinical anxiety.

Finally, the literature demonstrates that the environmental determinants do become working at multiple levels, starting with micro-level effects, such as digital exposure and domestic environment, and macro-level frameworks, such as urban planning and climate change. As Mortreux et al. (2023) and Fitzpatrick et al. (2022) claim, these structural components form a system of vulnerability that enhances the psychological burden of students, particularly when such environments are low- and middle-income areas.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study design

The cross-sectional study design was used to assess the prevalence and to establish the determinants of anxiety disorder among undergraduate students in the city of Islamabad. This research methodology was considered appropriate because it allowed the researcher to obtain data on a high number of participants at a specific time thus provided a clear picture of the prevalence of anxiety and which factors are associated with it. It was also economical, time saving and suitable to establish correlates of numerous determinants, of which, there are environmental, psychological, and social factors as well as the outcome variable, anxiety disorder. Such design helped to discover patterns and relationships that may guide future research or even the further project.

3.2 Study Area and Population

This study was conducted among undergraduate students in Bahria University Islamabad. The target population include student pursuing different academic programs independent of year or faculty, to ensure a diverse and representative sample.

Inclusion criteria: Undergraduate students who are currently enrolled at Bahria University Islamabad and who are at least 18 years old, as well as male and female students who freely consent to participate, included in the study.

Exclusion criteria: Postgraduate students and individuals with previously diagnosed psychiatric disorders under clinical treatment, excluded from the study.

3.3. Sample technique & Sample Size

The selection of students meeting the inclusion criteria was done through a purposive sampling method as the participants were considered relevant and give quality data to study. This methodology was chosen because it targeted individuals who had the highest likelihood of depicting the traits under investigation. The enrollment of the students was voluntary and took place within the time frame of data collection. The calculation of the sample size was based on the Slovin's formula ($n=N/(1 +Ne^2)$) where the sample size of 382 included out of a population

of 8,644 students. The sample size is adequate because it is represented at a 95% level of confidence and the margin of error was at 5 percent thus giving reliable and valid results.

Dependent variable: Anxiety disorder

Independent variable: Determinants (sleep quality, physical activity etc.)

3.4. Data collection

Data were collected through self-administered, structured questionnaire distributed straight through Google form to ensure the confidentiality and convenience of responses. Available students who met the inclusion criteria at the time of data collection were enrolled to participate. There were three sections in the questionnaire:

- **Demographic information:** Gender, age, family income, academic year.
- **Anxiety determinants:** include things like health history, financial difficulties, social support, Sleep quality, and Academic stress, social media use, access to mental health.
- The **Generalized Anxiety Disorder-7 (GAD-7) scale** is a validated tool for measuring participants' anxiety levels. The survey will be conducted in online format (Google form) ensuring ease of understanding and confidentiality of responses.

3.5 Data Analysis

Data that was collected was then analyzed with the help of the Statistical Package of the Social Sciences (SPSS) Version 27. The demographic data were summarized using descriptive statistics including frequency, percentage, mean and standard deviation, determining the occurrence of anxiety. To analyse the relationships between the levels of anxiety and the following determinants, such as academic stress, financial problems, and social support, inferential statistics, namely Chi-square test and logistic regression analysis, were used.

3.6 Ethical consideration

In the first part of the Google Form, there was a consent statement, which was obvious about the nature of the study, voluntary participation and the confidentiality of the responses. Only the participants who had given their consent passed on to questionnaire. There were no personal identifiers that were in use, so the anonymity and privacy were not compromised. The use of data was valid according to the ethical research practices in an academic and research scope

CHAPTER FOUR

DATA ANALYSIS/RESULTS

In this chapter, the author offers the research results of the study being carried out to identify the prevalence and determinants of the anxiety disorder among the undergraduate students of Islamabad. The findings are based on the data gathered on 382 people by use of a structured survey, which included the socio-demographic factor, behavioral, academic stresses, social and anxiety levels assessed using GAD-7 scale. The chapter is divided into thematic headings and contains frequency tables obtained out of the dataset.

4.1 Univariate Analysis

Univariate analysis was conducted to summarize and describe the distribution of each of the study variables. It contains frequency and percentage distributions of all socio-demographic variables, behavioral variables, academic stress variables, social determinants, and anxiety levels estimated in terms of GAD-7 scale. The outcomes of this research give a preliminary idea about the sample profile and define the trends that can cause anxiety in undergraduate students.

The sample results indicate that most of the respondents were females aged between 18-25 years of age, and most of them were pursuing bachelor programs. It also determined the behavioral indicators which included a daily screen exposure, length of sleep, caffeine consumption and physical activities. AD and academic pressure, financial pressure and social isolation were common amongst participants. Also, the level of anxiety in the population was calculated in accordance with GAD-7 scoring categories to assess the level of anxiety.

Table 1. Socio-Demographic Characteristics of Undergraduate Students

S No.	Characteristics of the respondents	Frequency	Percentages %
1	Gender		
	Female	283	74.1
	Male	99	25.9
	Total	382	100.0
2	Age of the respondents		
	18-21 years	177	46.3
	22-25 years	179	46.9
	26-32 years	26	6.8
	Total	382	100.0
3	Living Arrangements		
	With family	285	74.6
	Hostel	66	17.3
	Alone	31	8.1
	Total	382	100.0
4	Education		
	Bachelor's	350	91.6
	Master's	31	8.1
	PhD	1	0.3
	Total	382	100.0
5	Field of study		
	Business studies	83	21.7
	Computer science	61	16.0
	Humanities and social sciences	131	34.3
	Islamic studies	6	1.6
	Law	32	8.4
	Management studies	2	0.5
	Media studies	36	9.4
	Psychology	31	8.1
	Total	382	100.0
6	Monthly income		

	Less than 50,000	79	20.6
	50,000-100,000	68	17.8
	100,000-125000	69	18.1
	More than 200,000	72	18.8
	Prefer not to say	94	24.6
	Total	382	100.0
7	Family history		
	Yes	106	27.7
	No	276	72.3
	Total	382	100.0

The demographic table provides an overview of the characteristics of the 382 undergraduate students included in the study. The findings show that the majority of the respondents were female (74.1%), while males constituted 25.9%, indicating that the sample was predominantly female. Regarding age, almost all participants fell within the early adult age range, with 46.3% aged 18–21 years and 46.9% aged 22–25 years, while only 6.8% were between 26–32 years.

In terms of living arrangements, most students lived with their families (74.6%), whereas 17.3% resided in hostels and 8.1% lived alone. Educational status further showed that the majority were Bachelor's students (91.6%), followed by Master's students (8.1%) with only 0.3% enrolled in a PhD program.

The field of study distribution revealed that Humanities and Social Sciences (34.3%) was the largest group, followed by Business Studies (21.7%), Computer Science (16%), Media Studies (9.4%), and Psychology (8.1%). Smaller proportions were enrolled in Law (8.4%), Islamic Studies (1.6%), and Management Studies (0.5%).

Monthly household income varied across participants, with 20.6% reporting income below 50,000, and nearly equal distributions in the income categories of 50,000–100,000 (17.8%), 100,000–125,000 (18.1%), and above 200,000 (18.8%). Notably, 24.6% of respondents preferred not to disclose their income, indicating sensitivity around financial information.

Lastly, 27.7% reported a family history of anxiety, while 72.3% did not, highlighting that although most participants had no hereditary predisposition, a considerable proportion did report such history, making it an important variable for later analysis.

Table 2. Distribution of determinants variables among study participants

S. NO.	Variables	Category	N (%)
1	Daily screen exposure	Less than 1 hour	6 (1.6)%
		1-2 hours	21 (5.5)%
		3-4 hours	146 (38.2) %
		More than 4 hours	209 (54.7) %
2	Hours spend on social media	Less than 1 hour	24(6.3) %
		1-2 hours	98 (25.7) %
		3-4 hours	160(41.9) %
		More than 4 hours	100(26.2) %
3	Night sleep duration	Less than 5 hours	51 (13.4) %
		5-7 hours	229 (59.9) %
		More than 7 hours	102 (26.7) %
4	Caffeine intake cup/day	1 cup/day	113 (29.6) %
		2 cups/day	106 (27.7) %
		3 or more cups/day	29 (7.6) %
		None	134 (35.1) %
5	Physical leisure activities	Never	70 (18.3) %
		1-2 days/week	170 (44.5) %
		3-4 days/week	82 (21.5) %
		5-7 days/week	60 (15.7) %
6	Indoor leisure activities (movies etc)	Rarely	18 (4.7) %
		Sometimes	129 (33.8) %
		Often	119 (31.2) %
		Daily	116 (30.4) %
7	Academic pressure	Never	46 (12.0) %
		Often	156 (40.8) %
		Sometimes	117 (30.6) %
		Always	63 (16.5) %
8	Financial stress related to studies	Never	110 (28.8) %
		Sometimes	151 (39.5) %
		Often	89 (23.3) %
		Always	32 (8.4) %

9	Social isolation	Never	85 (22.3) %
		Sometimes	163 (42.7) %
		Often	87 (22.8) %
		Always	47 (12.3) %
10	Social/ family support	Yes	262 (68.6) %
		No	120 (31.4) %
11	Recent major stressor	None	1(0.3) %
		Academic	151 (39.5) %
		Family	2 (0.5) %
		Health	132 (34.6) %
		Relationship	69 (18.1) %
		Other	27 (7.1)%

Table 2 presents the results about the distribution of behavioral and lifestyle characteristics among the undergraduate students. The findings indicate that the majority of respondents had high daily screen exposure, with over half of the participants (54.7%) spending more than four hours per day on screens, while 38.2% reported 3–4 hours of daily screen use. Very few students (1.6%) reported screen exposure of less than one hour, showing that excessive screen time was a common behavior in the sample.

Social media usage followed a similar trend, as 41.9% of students spent 3–4 hours daily on social media and 26.2% spent more than four hours. Some students spent 1-2 hours as 25.7%. Only 6.3% used social media for less than an hour, indicating that most participants were highly engaged with digital platforms.

Sleep duration analysis revealed that more than half of the respondents (59.9%) slept for 5–7 hours per night, whereas 13.4% reported sleeping less than five hours, suggesting potential sleep insufficiency. About 26.7% of students reported sleeping more than seven hours.

Caffeine consumption varied across the sample. More than one-third (35.1%) did not consume caffeine, while 29.6% consumed one cup per day and 27.7% consumed two cups daily. A smaller yet significant proportion (7.6%) reported consuming three or more cups, which may have implications for anxiety levels.

Patterns of physical leisure activities showed that 44.5% engaged 1-2 days/per week, while 21.5% 3-4 days/week and 15.7% participated 5-7 days/week. Notably, 18.3% never engaged in physical activity, indicating limited involvement in health-promoting behaviors.

Indoor leisure activities, such as movies or hobbies, were common, with 31.2% reporting “often” and 30.4% reporting “daily” engagement, showing a preference for sedentary forms of recreation.

Regarding social factors, social isolation (loneliness) was experienced variably among students: 42.7% reported feeling isolated sometimes, 22.8% often, 12.3% always, and 22.3% never. This indicates that a significant proportion of students experienced some degree of loneliness, which may contribute to anxiety. In contrast, social and family support appeared relatively strong, with 68.6% of students reporting that they had support from family or close social networks, while 31.4% lacked such support. These findings suggest that while many students face social isolation.

Lastly, recent major stressors were predominantly academic (39.5%) and health-related (34.6%). Other reported stressors included relationships (18.1%), miscellaneous factors (7.1%), family issues (0.5%), and none (0.3%). The “other” category captured a variety of challenges, including combined stressors such as academic, family, and relationship pressures simultaneously, feelings of being overwhelmed, difficulty managing multiple responsibilities at once, lack of productivity, loneliness, financial concerns or wealth-related stress, and pressures related to part-time jobs. This distribution underscores the complex and multifaceted nature of stress experienced by undergraduate students, highlighting how academic, health, social, and personal factors collectively contribute to their anxiety. Majority still have access to supportive relationships that could mitigate stress and anxiety.

Table 3. Distribution of Anxiety levels based on GAD-7 scores

S NO.	Category	Frequency	Percentage
1	Minimal	67	17.6%
2	Mild	108	28.3%
3	Moderate	123	32.3%
4	Severe	84	21.8%

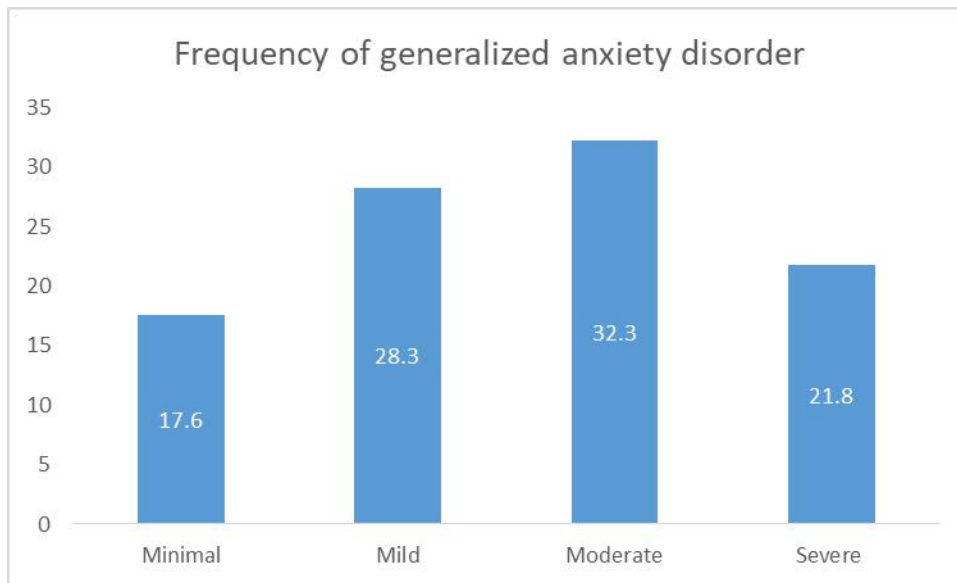


Figure 1. Frequency of generalized anxiety disorder

The bar graph is used to show distribution of anxiety levels amongst the students in the university using GAD-7 scale. There are four levels of anxiety that are shown: Minimal, Mild, Moderate, and Severe. The largest percentage of students were of the Moderate anxiety (32.3, n=123) and Mild anxiety (28.3, n=108). The highest proportion of participants was 21.8 (n=84) who said they were severely anxious and the least percentage (17.6) was observed to be Minimal anxiety (n=67). Comprehensively, the chart shows that most of the students are at moderate and severe anxiety levels, indicating a high mental health issue among the students.

Table 4. Association between Determinant Variables and Anxiety Severity

S NO.	Category	Minimal	Mild	Moderate	Severe	Pearson chi-square	p-value
1	Gender						
	Female	47	76	87	72	8.952	0.030
	Male	20	32	36	12		
2	Hours spend on social media						
	Less than 1 hour	7	5	7	5	20.407	0.016
	1-2 hours	24	34	20	20		
	3-4 hours	24	42	65	29		
	More than 4 hours	13	27	31	30		
3	Night sleep duration						
	Less than 5 hours	5	7	25	14	18.418	0.005
	5-7 hours	45	70	74	40		
	More than 7 hours	17	31	25	29		
4	Caffeine intake						
	1 cup/day					6.826	0.655
	2 cups/day	22	29	36	26		
	3 or more cups/day	17	30	40	19		
	None	8	7	6	8		
	20	42	41	31			
5	Financial stress related to studies						
	Never	34	31	21	24	41.532	<0.001
	Often	17	54	55	25		
	Sometimes	14	18	36	20		
	Always	2	5	11	15		

6	Perceived academic pressure						
	Never	16	11	10	9		
	Sometimes	26	49	48	33	19.685	0.020
	Often	19	34	43	20		
	Daily	6	14	22	22		
7	Loneliness/social isolation						
	Never	32	25	16	10		
	Sometimes	24	56	58	25	59.937	<0.001
	Often	10	17	32	27		
	Always	1	10	16	22		
8	Social/family support						
	Yes	53	71	75	42	13.520	0.004
	No	14	37	48	42		
9	Family history of anxiety						
	Yes	13	25	39	28	5.931	0.115
	No	55	83	84	55		
10	Indoor activities						
	Rarely	4	3	9	2		
	Sometimes	19	41	50	19	17.984	0.035
	Often	20	28	39	32		
	Daily	24	36	25	31		
11	Recent stressor						
	None	0	1	0	0		
	Academic	21	34	54	41		
	Family	0	0	1	1	27.559	0.024
	Health	35	42	37	18		
	Relationship	10	22	19	18		
	Other	1	9	12	4		

12 Physical leisure activities						
Never	10	18	22	19		
1-2 days/week	26	52	55	37	5.330	0.805
3-4 days/week	18	24	24	15		
5-7 days/week	13	14	22	22		

13 Screen exposure						
Less than 1 hour	3	1	0	2		
1-2 hours	5	4	5	7	21.844	0.009
3-4 hours	34	44	47	20		
More than 4 hours	25	59	71	55		

Table 4 presents the association between various behavioral, lifestyle, psychosocial, and stress-related factors with the severity of anxiety among undergraduate students, analyzed using Pearson's Chi-square test.

Gender show a significant association with anxiety ($\chi^2 = 8.952$, $p = 0.030$). Female students reported higher level of anxiety than males. Screen exposure showed a significant association with anxiety ($\chi^2 = 21.844$, $p = 0.009$). Whereas students with prolonged screen time (>4 hours/day) were more likely to report moderate to severe anxiety levels compared to those with minimal exposure. Similarly, hours spent on social media were significantly associated with anxiety severity ($\chi^2 = 20.407$, $p = 0.016$), indicating that higher engagement on social media may contribute to elevated anxiety symptoms. Night sleep duration was also significantly related to anxiety ($\chi^2 = 18.418$, $p = 0.005$). Students sleeping less than five hours or having irregular sleep patterns were more likely to experience moderate to severe anxiety, highlighting the importance of sufficient sleep in mental health. In contrast, caffeine intake did not show a statistically significant association with anxiety ($\chi^2 = 6.826$, $p = 0.655$), suggesting that daily caffeine consumption may not independently influence anxiety severity in this population.

Perceived academic pressure was significantly associated with anxiety ($\chi^2 = 19.685$, $p = 0.020$), with students reporting frequent or daily academic pressure more likely to experience higher anxiety levels. Financial stress related to studies demonstrated a very strong association ($\chi^2 = 41.532$, $p < 0.001$), indicating that economic concerns significantly impact students' anxiety.

In physical leisure activities the relationship the categories range from never, 1-2 days/week, 3-4 days/week, to 5-7 days/week. The chi square test result ($\chi^2 = 5.330$, $p = 0.805$), indicates that there is no significant association between the frequency of physical leisure activities and anxiety levels.

Loneliness/social isolation was one of the most strongly associated factors ($\chi^2 = 59.937$, $p < 0.001$). Students experiencing social isolation often or always were considerably more likely to report moderate to severe anxiety. Similarly, social and family support showed a significant protective effect ($\chi^2 = 13.520$, $p = 0.004$), with students having support networks less likely to report severe anxiety. Other variables included family history of anxiety, which did not show a significant association ($\chi^2 = 5.931$, $p = 0.115$), suggesting that genetic predisposition was less predictive of current anxiety severity compared to lifestyle and psychosocial factors. Indoor leisure activities were significantly associated with anxiety levels ($\chi^2 = 17.984$, $p = 0.035$), indicating that frequent sedentary leisure engagement may relate to higher anxiety.

Lastly, recent major stressors were also significantly related to anxiety severity ($\chi^2 = 27.559$, $p = 0.024$). Academic and health-related stressors were the most prominent contributors, while other stressors reported by students included combined pressures of academic, family, and relationships, feelings of being overwhelmed, managing multiple responsibilities simultaneously, lack of productivity, loneliness, financial concerns, and pressures related to part-time jobs. These findings emphasize the multifactorial nature of anxiety among undergraduates, highlighting how behavioral patterns, social factors, and stressors collectively influence mental health outcome.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

The objective of the present study was to evaluate the level and predictors of the anxiety disorder among undergraduate students of Islamabad. The study brought about high overall burden of anxiety as results on the GAD-7 showed 32.3% moderate level of anxiety, 28.3% level of anxiety was mild and 21.8% high, with only 17.6% students experiencing minimal symptoms. These results suggest that over fifty percent of the students experience moderate and severe anxiety, which shows that meeting mental health needs is a significant issue in the university.

The prevalence rates are high in this study, which is in line with the previous studies that were conducted in Pakistan, leading to a range of 40-60% anxiety in the students (Siddiqui et al., 2020; Haider et al., 2022). On the same note, Khan et al. (2021) also claimed that clinical signs of anxiety were observed in 42.6 percent of students studying in public universities, which confirms the study results. Similar outcomes are also documented in international studies; Auerbach et al. (2018) have shown that over 30 percent of all students worldwide reported experience in anxiety disorders. This justifies the case that anxiety is a significant public health issue among the youth, especially those who are studying in universities going through academic transitions.

The current study discovered a significant correlation between university students' anxiety levels and gender, with female students showing higher levels of anxiety than male students. This finding supports previous research showing that anxiety symptoms are more common in women. According to Eisenberg et al. (2013), female students are considerably more anxious as a result of emotional fragility and academic pressure. In a similar manner, Saleem et al. (2021) discovered that female students were more likely to exhibit moderate to severe anxiety when faced with social and academic obstacles.

Another interesting finding of the results was that the level of anxiety was significantly related to various determinants such as academic stress and financial burden, lack of social support and excessive use of digital media. one of the strongest predictors of anxiety became academic pressure, which is aligned with the results of Beiter et al. (2015) and Ramon-Arboles et

al. (2020), who also highlighted increased competition and a huge workload as one of the factors leading to psychological distress and burnout in students. Anxiety was also strongly correlated with financial problems, in accordance with previous research stating that financial insecurity has a higher likelihood of causing stress, diminishing coping skills, and exposing people to the threat of mental illnesses (Haque et al., 2024; Fitzpatrick et al., 2022).

Poor social and emotional support was another major distinguishing factor found in the present research as other studies have also cited research by Yildirim et al. (2009) revealing that students who live out of family or do not have the support of peers depict signs of being anxious. The present results have also proved that overuse of social media and digital dependency, as held by Twenge and Campbell, (2018), can indeed increase anxiety as they lead to comparison, isolation and altered sleeping behaviors.

In general, the research is highly additional to the literature at large that anxiety is not realized by a mere single factor, but rather a combination of psychological, academic, environmental, and behavioral determinants. These results reveal that there is an urgent necessity in special mental health interventions, counseling services, stress-management initiatives, and stigma reduction plans in campuses.

5.1 CONCLUSION

The conclusion of this study is that the prevalence of anxiety disorder is very strong in undergraduate students in Islamabad with most having moderate or severe level of anxiety which is a severe issue of mental health in academic environments. The population was found to show that the anxiety is closely linked to a number of factors, especially, the academic pressure, financial challenges, the lack of social support, the excessive use of digital media, and the poor coping methods. These modifying factors have a significant effect on the emotional and psychological well-being of students, which proves that anxiety among university students is not a chance phenomenon but appears as a result of a combination of several stressors, which are interconnected. The findings help to emphasize that anxiety without treatment may adversely affect academic achievement, attention, attendance, social functioning and the quality of life.

According to these results, the initial timely diagnosis and treatment are necessary to avoid psychological outcomes of the problem in the long term. Mental health should be a priority

area in universities, which should be addressed by organized counseling services, awareness programs, support groups and policies that are friendly to students to ease academic tensions and enhance emotional health. Anxiety level among students can be lowered by strengthening social support and promoting healthy lifestyle and digital habits as well. As such, there should be collective efforts between learning institutions, mental healthcare workers, families and policymakers to create a favorable and healthy psychological learning environment that allows students to excel in their academic and personal lives.

5.2 RECOMMENDATIONS

According to the research in this their study, it is advisable that universities have available mental health services such as counseling and psychological support to students who are in a state of feeling anxious. Seminars on stress management, time management and coping skills should be conducted regularly so that the students can be able to handle academic pressure efficiently. Peer-support programs should also be promoted and opportunities of social interactions to be strengthened by institutions to help allay cases of isolation. Scholarships and flexible fee policies are some of the financial support programs that have been proposed to mitigate financial pressure among students. As well as, the knowledge about healthy digital media practices, and regularity of lifestyle habits need to be spread. Through these measures, universities are able to build a positive learning environment that is concerned with the welfare of the students and makes them less anxious.

5.3 LIMITATIONS

There are some limitations of this study. To begin with, the data were obtained among undergraduate students of the selected universities in Islamabad which restricts the externalization of the results to the students of other areas or education levels. The research was based on a self-reported questionnaire (GAD-7), which can be undermined by the response bias or incorrect reporting because of the social desirability or the lack of proper comprehension of the questions. Also, the study has a cross-sectional design, which does not provide the opportunity to conclude on the causal-effect relationships between the determinants and the level of anxiety. The chosen determinants that included the pressure at the academic level, the pressure at the financial level, the social support, and the use of digital media could be viewed as the only selected determinants, whereas other significant psychological or environmental determinants

might not have been covered. It is suggested that further studies on a larger and more diverse sample, including longitudinal data, should be conducted in the future to reinforce the evidence and knowledge regarding anxiety in students.

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ANNEXURES

QUESTIONNAIRE

CONSENT

My name is Eman. I am a final-year BS Public Health student conducting research to assess the prevalence and determinants of anxiety disorder among university students. Your participation is voluntary, and responses will be kept confidential and used only for research purposes. The questionnaire will only take 5-10 minutes to complete. Please answer each question appropriately. By filling out this form, you are giving your consent to be part of the study. Your responses will be highly appreciated. Thank you for your time and support!

Section A: DEMOGRAPHICS

Age

18-21 years

22-25 years

26-32 years

Gender

Male

Female

Year of education

Bachelors

Master's

PhD

Field of study _____

Living Arrangement

With family

Hostel

Alone

Monthly income

Less than 50,000

50,000-100,000

100,000- 125000

More than 200,000

Prefer not to say

Do you have a family history of anxiety?

Yes

No

SECTION B: Determinants

Average daily screen exposure

- Less than 2 hours
- 2-4 hours
- 5-7 hours
- More than 7 hours

How many hours per day do you usually spend on social media (Facebook, Instagram, TikTok, etc.)?

- Less than 1 hour
- 1-2 hours
- 3-4 hours

- More than 4 hours

Average night sleep duration:

- Less than 5 hrs.’
- 5-7 hrs.’
- More than 7 hrs.’

Caffeine intake (cups/day)

- 1 cup/day
- 2 cups/day
- 3 or more cups/day
- None

How often do you engage in physical leisure activities (exercise, gym, sports, walking, Yoga)?

- Never
- 1–2 days/week
- 3–4 days/week
- 5–7 days/week

Do you engage in any indoor leisure activities (watching movies/TV, online Gaming, reading, music, etc.)?

- Rarely
- Sometimes
- Often
- Daily

Perceived academic pressure:

- Never
- Often
- Sometimes
- Always

Financial stress related to studies:

- Never
- Often
- Sometimes
- Always

Social/family support:

- Yes
- No

Loneliness / social isolation:

- Never
- Sometimes
- Often
- Always

Recent major stressor (last 1 month)

- None
- Academic
- Family
- Health

- Relationship
- Other _____

SECTION C

GAD-7 (Generalized Anxiety Disorder)

Over the last 2 weeks, how often have you been bothered by the following problems? Circle the number that best applies.

1. Feeling nervous, anxious, or on edge

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

2. Not being able to stop or control worrying

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

3. Worrying too much about different things

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

4. Trouble relaxing

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

5. Being so restless that it is hard to sit still

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

6. Becoming easily annoyed or irritable

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

7. Feeling afraid as if something awful might happen

0 = Not at all | 1 = Several days | 2 = More than half the days | 3 = Nearly every day

Scoring (For Researcher Use Only)

Total GAD-7 score (0-21): _____

Interpretation:

0-4: Minimal Anxiety

5-9: Mild Anxiety

10-14: Moderate Anxiety

15-21: Severe Anxiety

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all
- Somewhat difficult
- Very difficult
- Extremely difficult

Sidra Shahid

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What does 'qualifying text' mean?

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