



**ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES,
SCHOOL OF MEDICINE, DEPARTMENT OF
PSYCHIATRY, CLINICAL PSYCHOLOGY PROGRAM**

**PREVALENCE OF TEST ANXIETY AND ASSOCIATED FACTORS
AMONG ADDIS ABABA UNIVERSITY GRADUATING STUDENTS:
CROSS-SECTIONAL STUDY.**

BY: ADAMU GUDINA. (CLINICAL PSYCHOLOGY TRAINEES)

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MS. FEKIR GETANEH (MA IN COUNSELING PSYCHOLOGY)**

**SEPTEMBER, 2024
ADDIS ABABA, ETHIOPIA**



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**A THESIS SUBMITTED TO THE DEPARTMENT OF PSYCHIATRY,
SCHOOL OF MEDICINE, COLLEGE OF HEALTH SCIENCES, AND
ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR MASTER'S DEGREE IN CLINICAL
PSYCHOLOGY.**

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Abbreviation

AA.....	Addis Ababa
AAU.....	Addis Ababa University
DSM-5.....	Diagnostic statistical manual-5
TAI.....	Test anxiety inventory
TA.....	Test anxiety
cGPA.....	Cumulative Grade point Average
GPA.....	Grade point Average-GPA
RSE	Rosenberg Self-Esteem Scale
WTAI.....	Westside Test Anxiety Inventory-WTAI
SPSS.....	Statistical Package for Social Sciences
TAI.....	Test Anxiety Instrument TAI
UAE.....	United Arab Emirates-UAE
ETB.....	Ethiopian Birr-ETB
OSSS-3K.....	Oslo Social Support Scale-OSSS-3K
GAD.....	Generalized Anxiety Disorder

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Abstract

Introduction: Test anxiety is a psychological and emotional factor that affects students. Studies about test anxiety, including previous research in Ethiopia, have primarily focused on medical and health science students, leaving a gap in understanding test anxiety across fields.

Objective: To investigate the prevalence of test anxiety and identify associative factors with it among Addis Ababa University final-year undergraduate (graduating) students.

Method: A cross-sectional research and stratified random sampling techniques were utilized to select a sample of participants. Test anxiety was assessed by the Westside Test Anxiety Inventory. Oslo Social Support Scale-3 was utilized to measure social support. The Rosenberg Self-Esteem Scale was utilized to measure self-esteem. GAD-7 utilized to measure anxiety level, and questionnaires developed by the researcher after reviewing different literature to measure students' perceptions about exit exam, course load, and the new curriculum. Data were analyzed using the SPSS 26. To identify associative factors from multivariable data, ordinal logistic regression analysis was performed.

Result: A total of 380 students participated. Of these, the prevalence of test anxiety is 50.5% (95% CI: 45.4-55.7). The most common symptoms found in this study were: wandering thoughts during exams (28.4%), difficulty concentrating as the exam approached (26.6%), worrying about remembering material (24.7%), and fear of poor performance or failure (18.5%). In this finding 20.8% of participants had low self-esteem, 31.3% had poor social support, and 5.0% of participants had severe anxiety levels. This study found multiple factors that are significantly associated with high test anxiety. The result reported that social science field of study (AOR: 1.96, 95% CI: 1.29-2.98), minimal and mild anxiety level (AOR: 0.34, 95% CI: (0.11, 0.97) respectively, students' positive and neutral perception about exit exams, course load and new curriculum (AOR: 0.18, 95% CI: 0.10-0.33), and (AOR: 0.33, 95% CI: 0.21-0.54) respectively were most significantly associated with test anxiety p-value < 0.05.

Conclusion: Test anxiety was a significant problem among Addis Ababa University final-year undergraduate (graduating) students. The most often linked associated factors for test anxiety were perception, and field of study. This result emphasizes the necessity of focused intervention to address particular issues and lessen test anxiety.

Key words: Graduating students, test/exams, and test anxiety.

Introduction

Background

As the world becomes competitive, performance quality is crucial for personal progress. Exams are the main instruments used in educational settings to evaluate students' performance and achievement, both families and students most of the time have high expectations for success in their educational journey. High expectations and academic burden can contribute to anxiety, especially test anxiety, which can impair performance in evaluations (1).

Test anxiety is a psychological and emotional condition that features excessive stress and worry before, during, or after the test (2), (3). Students at all levels, from elementary to research candidates- may be impacted. Before a test, it's normal for people to experience some degree of worry or stress (3), (4). However, test anxiety is when this psychological and emotional pressure reaches an extreme level, which makes it difficult for students to study and perform effectively and function well on an exam (5), (6).

Test anxiety is currently a hugely researched and highly problematic issue that many students face. The research shows the prevalence of test anxiety among college students and its potential impacts on future careers (7), (8). Research in northern Ethiopia has reported a wide range in the prevalence of test anxiety among undergraduate health sciences students 54.7%. This kind of high test anxiety can be really bad for students, hurting their grades, emotions, and even health (9).

Test anxiety can show up in different ways, affecting the mind, body, and feelings. Physical symptoms can include headaches, nausea, sweating a lot, trouble breathing, fast heart rate, dizziness, and even a panic attack. Emotions can be stress, fear, feeling helpless or disappointed, and dwelling on worries. Thinking it is hard to concentrate, which leads to negative thinking patterns, comparing oneself to others, and putting things off (3).

When studying test anxiety, it is crucial to acknowledge the role of assessments in the educational system. Examinations have traditionally been used to evaluate students' abilities and academic accomplishments (10). However, researchers recognize that exams can also significantly contribute to test anxiety among certain individuals (11), (8). Other studies show

that test anxiety is higher when the nature of the test is extremely mandatory for the test taker (12).

In addition to other examinations, Ethiopia has started exit exams as mandatory for degree completion since 2023 (13). This assessment ensures that students have acquired the necessary capabilities by the end of their studies, preparing them for future careers. Students are expected to approach the exam by carefully applying the knowledge, skills, and attitudes gained throughout their studies (14). This high expectation and way of determining their future career leads to test anxiety, which hinders their capacity to perform exams (15).

Test anxiety is a significant factor that affects academic success and goes beyond its immediate consequences. It has a profound impact on students' mental well-being, overall perspective, and future opportunities. Since test anxiety is such a big problem, it is important to fully understand its widespread and associative factors.

Statement of the Problem

Mental health is essential for individual wellbeing and quality of life (16). World Health Organization recognize this and has developed action plan to encourage a coordinated global effort to improve mental health care worldwide (17). Despite these efforts, WHO has reported a 25% rise in mental health conditions worldwide since 2021, with university students particularly impacted (18), (19). Global evidence shows that mental issues among university students range from 10% to 85% and academic pressure being a key contributing factor (20). Other research confirmed that academic pressure had a positive correlation with anxiety, such as test anxiety (21).

Test anxiety is a prevalent problem among medical students worldwide and has harmful impacts on their academic performance. Research shows that a huge proportion of undergraduate medical students, ranging from 25% to 40%, grapple with problematic test anxiety (22). A study conducted at Gulf Medical University in Ajman, UAE, revealed that 82.6% (8) in Malaysia had a 20% high level of test anxiety (23). A separate study conducted in Ethiopia discovered that (52.3%) (24); other studies in Ethiopia revealed 54.7% (9).

However, previous research, both local and global, has primarily focused on medical and health science students, leaving a gap in understanding test anxiety across various departments and academic years. This focus on health-related disciplines neglects students in various other departments who may experience an equally significant level of test anxiety, yet whose challenges are overlooked. Consequently, the full scope of how test anxiety affects a diverse student population remains unclear.

Hence, the primary objective of this study is to address the research gap by examining the prevalence of test anxiety and associated factors among Addis Ababa University graduating students in 2024. The insight gained from the study was instrumental for future studies.

Rationale of the Study

The majority of research on test anxiety, both locally and globally, has focused on health science and medical students. It is important to study the prevalence and associative factors of test anxiety across various fields of study. This will be important to contribute to building a broader evidence base. So this study can function as starting a succession of researches yet to come on this important area.

In addition, this research is important to various stakeholders. Firstly, the research holds significant importance for mental health professionals. According to scholars, treating psychological problems like test anxiety indirectly helps to treat and prevent mental illness. It helps them to understand the psychological and emotional burdens that students face, which may have significant effect on their mental health. The findings can inform mental health practitioners/experts to research further and develop school-based mental health treatment strategies. Secondly, it is important for students as it can provide an effective understanding of test anxiety, leading to enhance their academic performance and reduced test anxiety levels. This facilitates students to reach their full potential in their studies, maintain mental wellness, and fulfill life goals.

Thirdly, the research was important for the university itself. The findings can inform the development of improved educational practices based on determined the prevalence of test anxiety and identified associative factors to provide actionable insights. This is to make more supportive learning environment for students and contribute to enhanced students' outcomes.

Fourthly, the research might be relevant for curriculum planners and policymakers. It provides valuable insight into how the new curriculum affects the performance of students and offers guidance on the incorporation of stress management techniques, and the provision of additional resources. This can lead to more effective educational policies and practices.

Furthermore, the study's contribution to the understanding of test anxiety within the Ethiopian educational context is important for researchers. It expands the knowledge base and can inform future research endeavors on test anxiety.

Literature Review

Definition of Test Anxiety, and Its Impact

Historically, theologians and philosophers have involved in exploring of the concept of anxiety, as an important aspect of human existence. According to theologian Luther, define anxiety as existential dread and guilt are associated with signs and divine judgment, while Nietzsche viewed as part of the human struggle for self-overcoming and the search for meaning in the world (25), (26). As per the DSM-5 mental illness classification criteria, anxiety is categorized as excessive dread or worry that is challenging to manage it, result to uncontrolled distress and effect in daily life (27). While the DSM-5 doesn't have delineation for test anxiety, it type of anxiety commonly arises in evaluative situations like exams or performance assessments.

According to research, test anxiety was a major problem and mental health issue among students, affecting their psychological and emotional well-being (28). While test anxiety does not always meet the strict criteria for a clinical disorder, it can still have significant psychological and emotional implications for an individual's mental well-being.

According to a Dutch University study, shows that treating psychological problems indirectly treats and prevents mental illness (29). Test anxiety can result in uncontrolled distress, hinders academic performance, and negatively impact self-esteem and confidence. Therefore, studying test anxiety allows us to explore underlying mechanisms, identify risk factors, and develop appropriate interventions for individuals who suffer from severe and persistent test anxiety.

Test anxiety significantly impacts students' educational journeys and professional paths by impairing their test-taking abilities and academic performance (30), (31). With the ongoing advancements in test administration methods and administering the most important tests such as exit exams, students are suffering more and more from test anxiety. Therefore, by understanding how it manifests and influences individuals, we can effectively address and manage it within the evolving testing approaches.

Impact of Test Anxiety on Cognitive Performance

Test anxiety in higher education might be influenced by attentional theories, indicating that the stress of exams can negatively affect cognitive performance (32). Exam pressure leads to

excessive self-focus, intensifying the burden on students and impacting their performance (33). Additionally, these theories suggest that exam stress can harm cognitive performance not only during the exam but also during exam preparation (34), (35).

Test anxiety can also be explained by distraction and attitudinal control theories. These theories propose that anxiety causes individuals to lose focus as their attention becomes divided between preparing for the exam and negative thoughts about potential failure and its consequences. This divided attention consumes cognitive resources, impairing their ability to perform at their best and negatively impacting their overall performance (36).

According to Liebert and Morris structure of test anxiety the cognitive component of test anxiety called worry dimension. As their definition worry dimension is instead of all focusing on cognitive capabilities to solving the task, it thinks a lot about the implication and consequence of his own failure which in his opinion. Later it leads to lose of interest to solve problem and increase avoidance of challenging situation (37).

In conclusion, test anxiety in higher education institutions is strongly influenced by attentional, distraction, and attitudinal control theories. These theories highlight how exam pressure not only impairs cognitive performance during exams but also affects students during exam preparations. This excessive self-focus and divided attention caused by test anxiety consumes cognitive resources, leading to decreased performance and heightened stress. Understanding these dynamics is essential for developing effective strategies to help students manage test anxiety and perform to their fullest potential.

Impact of Test Anxiety on Academic Achievement and Mental Health

The impact of test anxiety on academic achievement and mental health is profound. Test anxiety can hinder a students` ability to perform well on exams, which in turns affect their overall academic achievements. This can leads to missed opportunities and hinder the fulfillment of life goals that are tied academic success. A study shows that tests, which are crucial for determining academic and career prospects, can create intense fear and panic known as test anxiety (38) (39).

Test anxiety is often viewed solely through its impact on students' academic performance, but it can also link to various psychiatric disorders. Stress and fear associated with test anxiety can

negatively affect a students` mental health. Research also showed that test anxiety was a specific type of academic anxiety linked to negative outcomes such as increased risk of anxiety, depression , somatic complaints, substance misuse, and suicide (32), (40), (41), (29), (42).

In summary, while good academic achievements can open doors to favorable opportunities and lead to achieving life goals, the impact of test anxiety cannot be overlooked. This form of academic/test anxiety has been shown to have a significant effect not only on academic performance but also on mental health, leading to a range of negative outcomes, including anxiety disorder, depression, and even more severe issues such as substance misuse, and suicidal thoughts.

Importance of Study of Test Anxiety in Higher Education

One study showed that test anxiety is very high in tertiary educational institutions; because students expect to finish their educational journey and transient to the professional working world in their respective fields of study (12). The greatest and most valuable bridge between finishing the educational journey and transitioning to the professional working world is the key factor in the qualification exams in their respective fields. During this time, students may be preoccupied with many psychological and emotional factors, which lead to test anxiety and underperformance.

One study conducted at the University of the Punjab in Lahore shows a clear link between test anxiety and lower achievement scores, emphasizing the role of test anxiety in underperformance (43). This shows that when test anxiety hinders test-taking ability, lower achievement scores lead to an unsuccessful educational journey and failed personal future expectations. It can also result in observable behaviors (poor performance), physical symptoms, and even leads to unethical conduct (44). Long-term effects include reduced academic motivation, negative attitudes toward academics, and compromised self-esteem (45).

In summary, test anxiety is a barrier to students` successful transition from education to the professional world. Studies show a high level of test anxiety not only leads to lower achievement scores but also has lasting negative impacts on educational motivations, low self-esteem, mental health issues, and unethical conduct for community and personal wellbeing. Addressing test anxiety is essential for ensuring that students can perform at their best, achieve their educational

goals, and fulfill their future aspirations. Educators and mental health professionals must collaborate to create supportive environments and interventions that mitigate the detrimental effects of test anxiety.

Prevalence of Test Anxiety

High-Income and Upper Middle-Income Countries

Extensive acknowledgment exists regarding the detrimental effects of elevated test anxiety on both academic performance and the overall well-being of students, spanning various countries and age cohorts. To examine the global evidence on interventions targeting test anxiety, a systematic review was undertaken between 2011 and 2018 (46). This review acknowledges the prevalence of test anxiety across the globe. One study showed that the difference in test anxiety between high socioeconomic status and lower socioeconomic status is due to providing learning resources (47). This shows even the cause of test anxiety due to different factors; this problem is prevalent among high and low-income countries.

A study conducted in Malaysia revealed that nursing students included in the research experienced mild to moderate levels of test anxiety (TA) (48). In addition, the researchers in Saudi Arabia investigated test anxiety among undergraduate health science students. This study was part of a broader investigation that encompassed medical and paramedical students from six Arab countries, involving a total of 18,979 participants. This finding highlights the high prevalence of test-related anxiety among medical and paramedical students in the studied Arab countries. Test anxiety can harm students' academic performance, well-being, and overall educational experience (49), (50).

Lower Middle Income and Low-Income Countries

One study conducted in a Chinese University cross-sectional study of 389,215 students nested in 51 countries shows income inequality contributed to high test anxiety (51). The other study conducted in Sudan identified several significant test anxiety predictors. The study shows that 20% of students had a high normal level of test anxiety, 16% had moderately high test anxiety, 9% had high test anxiety, and 9% had extreme test anxiety (52).

According to the research conducted among Addis Ababa medical students, the prevalence of test anxiety was high. The study showed that the prevalence of problematic test anxiety is 52.3 among undergraduate medical students. This high prevalence of test anxiety has been shown to harm the academic achievements and success of students in their studies (5). In addition, a study conducted in Ethiopia focused on undergraduate first-year health science students. The findings of this study reported that test anxiety was quite prevalent among the participants, with a rate of 54.7%. This shows that a significant proportion of the students was experienced test anxiety, which can potentially influence their academic performance and overall well-being (9).

In conclusion, the evidence highlights that test anxiety is a widespread issue affecting students across high-income and low-income countries. These findings highlight the importance of addressing test anxiety, as it is affecting students' educational experience and mental health regardless of socioeconomic status.

Factors Associated with Test Anxiety

Other studies show that test anxiety is often experienced by students at different educational levels. It stems from a negative self-perception of academic abilities, causing individuals to anticipate failure or inferior performance. Inadequate exam preparation, high-stakes exams, and discomfort in testing situations are factors that contribute to the development of test anxiety (43).

Psychological Factor

The research results indicate that several psychological factors have an effect on test anxiety among students. The effect of psychological factors such as self-efficacy, stress, and test anxiety on students` has been recognized (53). A study conducted in India recognized several independent risk factors associated with exam anxiety in that population. These risk factors include the perception of excessive course load, psychological stress, and low self-esteem (53).

The other findings showed that students generally had negative views of exams. These negative perceptions were influenced by factors such as anxiety, stress, uncertainty about the exam content, and concerns about being excluded. These factors played a significant role in shaping the students' unfavorable perspectives on exams (54). The study investigated two aspects of test anxiety: worry and bodily symptoms, and found that both components had a negative correlation

with examination performance. In other words, higher levels of worry and bodily symptoms were associated with poorer performance on exit exams (55).

In conclusion, the research highlights the significant impact of psychological factors on test anxiety among students. Key factors such as self-esteem, psychological stress, negative perceptions of exams, and uncertainty about the content of exams further exacerbate exam-related anxiety. Addressing these psychological factors is essential for student success and overall well-being.

Social Factors

Numerous social factors have been identified as being associated with test anxiety. These factors include gender, excessive course load, negative family environment, a lack of educational support at home, and insufficient time for preparation. These social factors can contribute to the development and exacerbation of test anxiety among students (9).

The prevalence of test anxiety among medical students is influenced by a range of social factors. These factors include the extensive and complex curriculum, ineffective study skills, and challenging test formats (56). Specifically, exam formats that involve examiner supervision, such as the long case exam, are more likely to trigger test anxiety among medical students. It is important to note that other confounding factors also significantly contribute to test anxiety in this context (57).

The study conducted by Zamira Hyseni Duraku at the University of Prishtina on the factors influencing test anxiety among university students indicates that students' inability to enhance their learning, insufficient time for exam preparation or studying course materials, family responsibilities and pressure, the characteristics of instructors, and the difficulty level of exams all play a role in increasing test anxiety among bachelor students (57).

The presence of other test-takers and observing their performance, like finishing exams faster or scoring higher, can trigger test anxiety symptoms. Moreover, the format of exams, such as paper-based, oral, or digital, and whether they are administered in person or asynchronously, can also affect test anxiety. Studies indicate that various testing environments and exam formats can

influence test anxiety levels, with greater emphasis on the exam format than the physical testing setting (58).

In summary, social factors play a significant role in test anxiety among students. Key factors such as gender, course load, negative family environment, lack of educational support at home, and insufficient preparation time are closely linked to the development and exacerbation of test anxiety.

Educational policy factors

The New Curriculum

The curriculum is a vital section of education that guides the realization of desired outcomes. It determines what knowledge and skills students should acquire in a specific subject or field. To ensure success, it was essential to create a curriculum that met the specific needs of the students (59). This indicates that the curriculum's nature and structure, including its assessment methods, may contribute to the development of test anxiety in students (60).

According to Higher Education Proclamation Proc. 1152/2019, the Ministry of Education in Ethiopia made arrangements to introduce an exit exam for graduates of higher education institutions (61). As Ethiopia's new curriculum aims to improve educational quality and address the drawbacks of the previous system, it is crucial to consider the potential impacts it may have on test anxiety among graduating students. As the educational system evolves, careful attention must be given to how these changes might affect students' stress levels and academic performance.

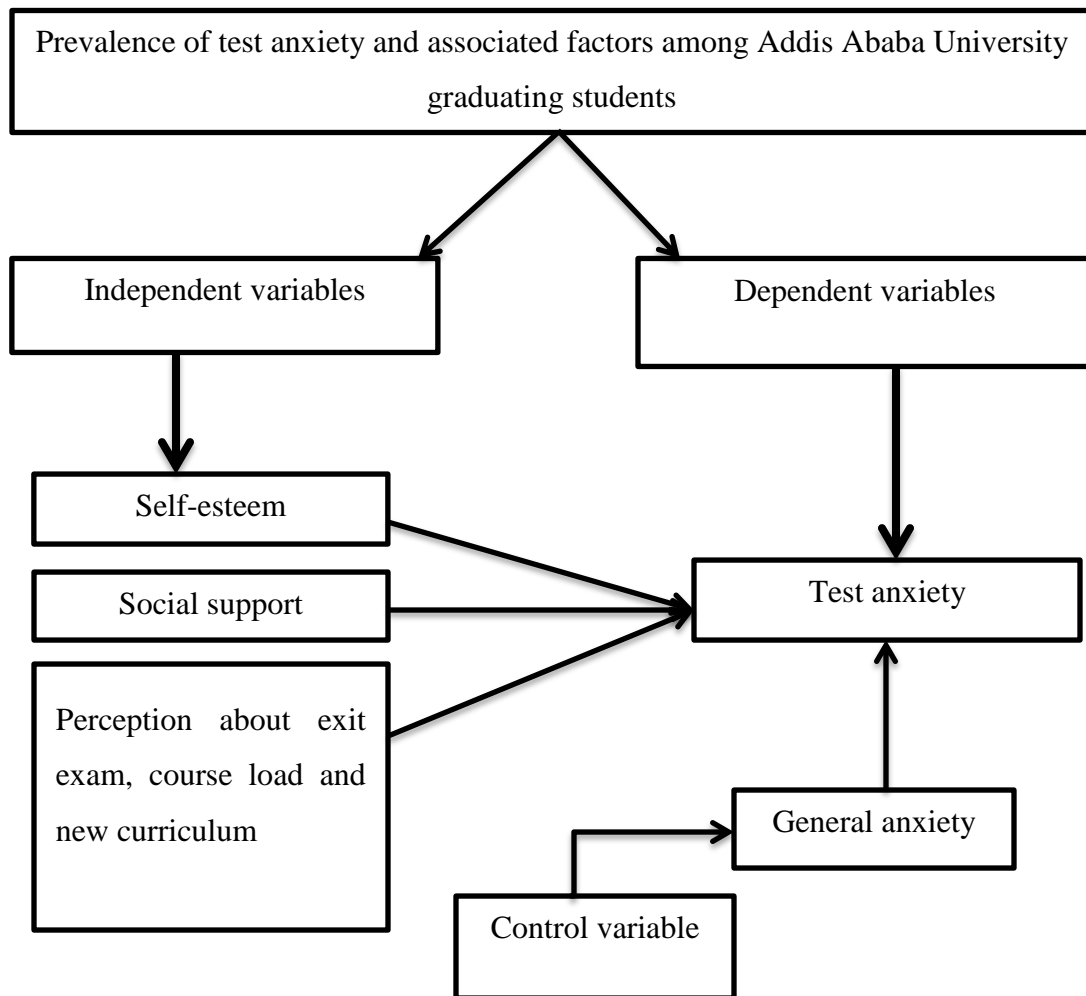
Modes of Test Administration

A study examined the effects of numerous ways of administering tests, including online testing, on test anxiety. The mode of test administration can indeed affect test anxiety. Modifications in the curriculum, such as changes in content, teaching methods, evaluation techniques, goals, and learning materials, may be influenced by the results and performances observed in exit exams. (62). The message of this paragraph is that the modes of test administration can have an impact on test anxiety.

To address test anxiety effectively, it is crucial to consider various factors, including the mode of test administration, student familiarity with technology, and the educational context. A holistic approach that combines supportive teaching practices, resources for computer literacy, and strategies to manage test anxiety can help create a more conducive testing environment for all students.

Conceptual frameworks

This conceptual framework was provided a clear, structured view of the factors contributed to test anxiety among Addis Ababa University graduating students, illustrated how self-esteem, social support, GAD-7, students perception about exit exam course load and new curriculum factors impact the level of test anxiety.



Research Question

What is the prevalence of test anxiety among Addis Ababa University graduating students?

What are the factors that contribute to test anxiety among this specific group of students?

Objective

General Objective:

To investigate the prevalence of test anxiety and identify associative factors with it among Addis Ababa University graduating students.

Specific Objectives

This study aims to:-

Determine the prevalence of test anxiety among Addis Ababa University graduating students.

Identify the associative factors to test anxiety among this particular group of students.

Methods

Study Setting

This research took place at Addis Ababa University, the first and leading institution of higher education in Ethiopia. Established in 1950 as the University College of Addis Ababa, the university has 14 campuses and offers an array of educational opportunities, including undergraduate, graduate, and postgraduate programs (63). For graduate and postgraduate programs, the university administers the Graduate Admission Test early, as required by the Ministry of Education for all universities. This reflects AAU's commitment to producing competent students at both national and international levels. As an independent university, AAU holds prominent official status in the country.

The study participants were selected from four campuses at Addis Ababa University: the 4-kilo campus, the 5-kilo campus, the Faculty of Business and Economics Campus, and the 6-kilo campus. The main campus, located in the Gulele sub-city near Yekatit 12 Hospital Medical College, specializes in social sciences and is home to eight colleges and institutes. The 4-kilo campus, located in Arada sub-city next to Menelik II secondary school, is dedicated to natural sciences and consists of four colleges and institutes.

The study specifically targeted final-year students on these campuses, where programs typically take 4 to 5 years to complete. Researching prevalence of test anxiety and associated factors among graduating students across various departments at Addis Ababa University was crucial and exciting for several reasons.

According to a study conducted in Gulf of Medical University, there was a substantial correlation between student's ages and test anxiety (8). According to this study, stress related to performance and success rose with age (64). This demonstrates that student cares are about both their academic performance and their adults' lives. Furthermore, another research indicates that test anxiety was elevated in the final year program (65). This occurred because the student was worried about how their exam result would affect their future academic or professional performance (15). Consequently, final year students were selected for the research population due to their average age and final year program.

One study conducted in Ethiopia revealed that the oral exam, which qualifies students' knowledge, attitude and skill, was one of associative factors for test anxiety (24) and another study revealed that test anxiety peaks high during standardized and is extremely mandatory for test takers (66). This oral exam is equivalent to an exit exam. Therefore, this test is given at the final year of study as Minister of Education policy in Ethiopia for all degrees completed. Based on this final year students were chosen for study population.

Finally, the diverse student population across different fields and colleges aligns with the research objectives makes this group study populations. By ensuring a comprehensive representation of diverse academic disciplines, the research yielded valuable insights into the prevalence and associated factors across varies field of study.

Study Period

The study was conducted from June 7 - 28, 2024.

Study Design

A cross-sectional study design was employed.

Study Population

The reference population was all undergraduate students at Addis Ababa University who were eligible to take the exit examination. The college of health sciences, school of law and school of medicine were not part of population. The study populations were four campuses of AAU: from 4-kilo, the 5-kilo, the Faculty of Business and Economics campus, and the 6-kilo campuses.

Inclusion Criteria

Final-year undergraduate students (graduating) registered for the exit examination at the 4-kilo, the 5-kilo, the Faculty of Business and Economics campus, and the 6-kilo campuses of AAU.

Exclusion Criteria

College of health sciences, School of law, and school medicine students have been excluded because they have already undergone qualifying exams tailored to their specific fields. These exams may induce similar levels of pressure and stress as the exit exams, potentially resulting in overlapping findings. Most of researches were conducted on prevalence of test anxiety and associated factors among health science students. By excluding these groups, the research can

concentrate on Final-year undergraduate students (graduating) students from diverse fields of study.

Sample Size determination

The sample size was determined using a single population proportion formula by using the prevalence of test anxiety was 54.7%, taken from a study conducted at the University of Gondar, Northwest Ethiopia, among first-year Health Sciences students, with a confidence interval of 95% and a margin error of 5%; by adding 10% non-response rate, a total sample of 410 was obtained.

Sampling procedure

A stratified sampling technique was utilized to select participants. First, total samples were divided into four campuses, and then the allocation of departments was given based on the lottery method. After departments were selected and the participants were determined proportionally, the participants were selected by the lottery method from each department.

Operational definitions

Test Anxiety, measured by the Westside Test Anxiety Inventory, refers to the emotional and cognitive distress experienced by Addis Ababa University Final-year undergraduate (graduating) students during their final exit exam. It encompasses feelings of worry, and stress and hinders concentration, focus, and overall well-being. A score range of 3.5 to 5.0 on the Westside Test Anxiety Inventory indicates a high or extremely high test anxiety level (67).

Self-esteem is subjective emotional evaluation, judgment, as well as attitude towards oneself by students. It was measured by the Rosenberg Self-Esteem Scale (RSE), these scores range from 0 to 40. Scoring involves a method of combined ratings. Low self-esteem responses are disagreed with and strongly disagreed with items 1, 3, 4, 7, and 10, and agreed with and strongly agreed with items 2, 5, 6, 8, and 9 (68).

Social support: social support among Addis Ababa University Final-year undergraduate (graduating) students refers to the extent to which they perceive help from others during

preparation for exit examinations. This was also measured by the Oslo Social Support Scale (OSSS-3K) to assess the perceived level of support available (69).

Negative view of exit exams: a perception held by Addis Ababa University final-year undergraduate (graduating) students that the exit exams conducted by the university are useful or not for their academic journey. The Likert used to assess the perceived relevance of the exit exam for their academic journey.

Measurements/instruments for data collections

The questionnaires had six sections. The first section consists of the socio-demographic variables of the study participants. The second, self-esteem: was measured by Rosenberg Self-Esteem (RSE). The measurement tool was used to assess students' general sense of self-esteem. It consists of a set of ten items that students respond to indicate their level of agreement with their self-esteem. The scale consists of four Likert scales (1 strongly agree, 2 agree, 3 disagree, and 4 strongly disagree). These scores range from 0 to 40. Scoring involves a method of combined ratings. Low self-esteem responses are disagreed and strongly disagreed with items 1, 3, 4, 7, and 10, and agreed and strongly agreed with items 2, 5, 6, 8, and 9 (68).

The third, social support: The Oslo Social Support Scale (OSSS-3) questionnaires were used to measure social support. This validated 3-item questionnaire assesses the number of close friends, perceived concern from others, and relationships with neighbors (practical help accessibility). Scores range from 3 to 14, indicating insufficient support [3 to 8], moderate support [9 to 11], and high support [12 to 14] (70).

The fourth, anxiety: the General Anxiety Disorder-7 (GAD-7) was used to differentiate test anxiety from other anxiety disorders. It consists of a set of seven items that students respond to indicate their level of agreement over the last two weeks and how often they have been bothered by the problems. The scale consists of four Likert scales ("0" not at all, "1," several days, "2," more than half the days, and "3," nearly every day). GAD's total score ranges from 0 to 21. 0 to 4 indicates minimal anxiety, 5 to 9 indicates mild anxiety, 10 to 14 indicates moderate anxiety, and 15 to 21 indicates severe anxiety (71).

Fifth, test anxiety was measured using the Westside test anxiety inventory questionnaires. The tool consists of ten items, and participants indicated their level of agreement on a 5-point scale. The scale was rated from “1” not at all/never true, “2” slightly/seldom true, “3” moderately/sometimes true, “4” highly/usually true, and “5” extremely/always true. This score was the sum of all items divided by ten. This was interpreted as 1 to 1.9 indicates comfortably low test anxiety, 2.0 to 2.5 indicates normal or average test anxiety, 2.5 to 2.9 indicates high normal test anxiety, 3.0 to 3.4 indicates moderately high (some items rated 4=high), 3.5 to 3.9 indicates high test anxiety (half or more of items rated 4=high), and 4.0 to 5.0 indicates extremely high test anxiety (items rated 4=high and 5=extremely) (67).

For the data to be more representative, previous research conducted divided test anxiety into three categories based on the test anxiety scores calculated on the Westside test anxiety scale. 1.0 to 2.5 indicates low test anxiety, 2.6 to 3.4 indicates moderate test anxiety, and 3.5 to 5.0 indicates high test anxiety (72).

Sixth, negative views of exit exams, excessive course load, and the new curriculum were assessed by questionnaires developed by the researcher after reviewing different literature. The students have the opportunity to assess their perception of the significance and impact of the exit examination using nine-item Likert scale questionnaires. The respondents used a scale to show their level of agreement or disagreement regarding the significance of the examination. This Likert scale was calculated as a five-point Likert scale calculation (73). The score range was 1 to 45, based on a five-point Likert scale calculation, 1.0 to 2.6 indicates positive perception, 2.61 to 3.40 indicates neutral perception, and 3.41 to 5.0 indicates negative perception about exit exams, excessive course load, and new curriculum.

Data collection process

Data were collected using a self-administered English version of questionnaires by the principal investigator. To protect confidentiality, data collection was conducted anonymously, and strict confidentiality measures were implemented.

Data processing

In this study, data processing involved several key stages to ensure the quality and reliability of the data set. Initially, data cleaning was performed to address incompleteness and outliers. A few participants (7.3%) agreed but did not complete it, so they were not included in the final analysis. Entries with incomplete responses were either removed or, in cases where missing values data were minimal. Next, data coding was performed at some part of the open-ended question and for recoded Likert scales for further analysis. The data was then organized into an organized format, and data organization performed at Microsoft Excel 10, exported to SPSS software, which was used to facilitate subsequent analysis. Data transformation was also applied where necessary as variables to meet the assumptions of the statistical models.

Data analysis

The collected data were checked for completeness and consistency, then pre-coded, entered into Microsoft Excel 10, and exported to the SPSS 26 version for further analysis. In the multivariable analysis, ordinal logistic regression was performed, and the variables with P-values <0.05 was statistically significant. The final results were compiled and presented in the form of text and tables.

Data Quality assurance

In this study, data quality assurance focused on both validity and reliability. To ensure accuracy, forward and backward translation of the survey was conducted (see Appendix 3). For measures that showed high similarity to previously used tools in Ethiopia, those tools were applied directly, even though they had not been formally adopted. Additionally, before conducting full data collection, a pilot test was carried out. The reliability of the survey was assessed using Cronbach`s alpha ($\alpha = 0.75$).which confirmed the consistency of measurement.

Ethical Considerations

Ethical approval was obtained from the institutional review board of the College of Health Science School of Medicine, Department of Psychiatry, Addis Ababa University, with the approval number MF/psy225/16, and administered to study subjects. Additionally, permission

was sought from the University Administration, Register, and Dean of relevant campuses (4-kilo, 5-kilo, 6-kilo, and FBE). Once ethical clearance was granted, the researcher provided each participant with a detailed explanation of the study's goal and significance. Participation was entirely voluntary, and written consent was obtained from participants. To protect confidentiality, data collection was anonymous, and strict confidentiality measures were implemented throughout all the stages of the study.

Based participants risk and benefit who participated in this study; even if data collection was adhered ethical issues by provided detailed information and contact addresses, participants were not aware about their test anxiety and other anxiety problems. To maintain participants benefit what we understood from finding, we repost researchers contact address as they can access psychiatric or psychotherapy facilities. This contact address was found around study setting in the form of hardcopy of attached on halls.

Results

Socio-Demographic characteristics

A total of 410 participants were invited, with a response rate of 92.7%. A few of the (7.3%) participants agreed but did not complete it, so they were not included in the final analysis. More than half of the participants (66.6%) were male; the age range of participants ranged from 19 to 32, with a median of 23 years old. Majority of participants were single marital status (86.3%). The median monthly pocket money was 1400.00 ET birr, with an interquartile range of 1350 ET birr. Regarding their cumulative GPA, 30.3% of participants were consider their GPA to be good, more than half of the participants (56.3%) rated their feeling about their GPA as medium, and 11.8% of participants rated their feeling about their GPA as bad. Among participants, the median cumulative GPA was 3.42, with an interquartile range of 0.56 cGPA. Participants were from four campuses: the Institute of Technology (26.5%), the College of Natural and Computational Science (23.9%), the College of Social Science (24.1%), and the Faculty of Business and Economics (25.5%).

Table 1: Socio-demographic characteristics of participants (n-380)

Variables	Variables category	Frequency	Percent %
Birth place	Rural area	186	48.9
	Urban area	181	47.6
Current living place	Dormitory	336	88.4
	With family	41	11.1
self-reported relative economic status	Low income	43	11.3
	Like others	290	76.3
	High income	41	10.8
Religion	Orthodox	179	47.1
	Protestant	143	37.6
	Catholic	6	1.6
	Islam	32	8.4
	Other religions	16	4.4
Health conditions	No	355	93.4

Other religions: Waaqeffataa, Apostolic, Atheist, and Agonistic.

Self-esteem and social support

The majority of respondents reported positive self-satisfaction (82.7%); others were happy with their self-qualities (84%), believed in their abilities (79.2%), and had positive attitudes toward themselves (84.8%). The data suggest that most individuals view themselves favorably. On the

other hand, some respondents reported having self-doubt (38.7%), lack of self-proud (35.8%), feeling uselessness (31.6%), and some of them perceived themselves as failures (22.3%). Generally, based on the Rosenberg self-esteem scale, most respondents had high self-esteem (78.2%), while 20.8% had low self-esteem.

Table 2: Participant’s self-esteem

Items	SA (%)	A (%)	D (%)	SD (%)	Mean (St.D)
On the whole, I am satisfied with myself.	137 (36.1)	177 (46.6)	36 (9.5)	30 (7.9)	1.89 (.873)
At times I think I am no good at all.	47 (12.4)	100 (26.3)	121 (31.8)	111 (29.2)	2.78 (1.004)
I feel that I have a number of good qualities.	161 (42.4)	158 (41.6)	34 (8.9)	27 (7.1)	1.81 (.873)
I am able to do things as well as most other people.	136 (35.8)	165 (43.4)	46 (12.1)	32 (8.4)	1.93 (.903)
I feel I do not have much to be proud of.	58 (15.3)	78 (20.5)	118 (31.1)	126 (33.2)	2.82 (1.057)
I certainly feel useless at times.	51 (13.4)	69 (18.2)	121 (31.8)	137 (36.1)	2.91 (1.039)
I feel that I'm a person of worth.	184 (48.4)	113 (29.7)	41 (10.8)	41 (10.8)	1.84 (1.002)
I wish I could have more respect for myself.	119 (31.3)	141 (37.1)	68 (17.9)	51 (13.4)	2.13 (1.008)
All in all, I am inclined to think that I am a failure.	32 (8.4%)	53 (13.9%)	109 (28.7%)	184 (48.4%)	3.18 (.968)
I take a positive attitude toward myself.	196 (51.6)	126 (33.2)	29 (7.6)	29 (7.6)	1.71 (.904)

NB: Strongly agree-SA, agree-A, Disagree-D, and strongly disagree-SD St.D= standard deviation.

Social support

Participants reported on their social support. Regarding closeness during personal problems, 10.8% of participants reported having no close connections, while 27.9% had 1 to 2 close connections. Additionally, 30.3% had 3 to 5 sources of support, and 28.9% had more than five individuals available during personal issues. When asked about others interest in what they did, 1.3% of participants reported that no one showed interest, 21.3% felt that others showed little interest, 15.5% were uncertain, 31.8% reported receiving some interest, and 28.2% reported receiving a lot of interest from others in what they did. Regarding practical help from neighbors when needed, 13.3% reported it is very difficult to get help, 16.8% found it difficult, 41.3% said

it was possible to get help, 20.8% found it easy, and 5.8% reported that they could very easily access practical help from neighbors if needed.

Based on the Oslo Social support scale, 31.3% of respondents had poor social support, 50.0% of respondents had moderate social support, and other 16.8% of respondents had strong social supports.

Table 3: Participant’s Social Support

Items	Respective responses for each item and frequency				
	How many people are so close to you that you can count on them if you have great personal problem?	N (%)	1-2 (%)	3-5(%)	>5(%)
	41 (10.8)	106 (27.9)	115 (30.3)	110 (28.9)	
How much interest and concern do people show in what you do?	N (%)	L (%)	UC (%)	S (%)	AL (%)
	5 (1.3)	81 (21.3)	59 (15.5)	121 (31.8)	107 (28.2)
How easy is it to get practical help from neighbors if you should need it?	VD (%)	D (%)	P (%)	E (%)	VE (%)
	51 (13.4)	64 (16.8)	157 (41.3)	79 (20.8)	22 (5.8)

None-N, Little-L, Uncertain-UC, Some-S, A lot-AL, Very difficult-VD, difficult-D, Possible-P, Easy-E, and Very easy-VE

Anxiety level

Some of the participants reported worrying excessively about many things (33.4%), while others felt afraid, as if something awful might happen (27.9%). Additionally, 25.8% of students struggled with restlessness, making it difficult to sit still, and the same percentage had trouble relaxing. Furthermore, 22.6% of students reported being easily irritable, 28.7% experienced nervousness, and 23.9% found it difficult to stop worrying. Generally based on GAD-7, the highest percentage of respondents experienced mild anxiety at 39.2%, followed by minimal anxiety at 33.9% and moderate anxiety at 21.6%, while the smallest portion of individuals suffered from severe anxiety level 5.0%.

Table 4: Participants general anxiety level

Items	NA (%)	SD (%)	MHD (%)	NED (%)
Feeling nervous, anxious, or on edge	128 (33.7)	140 (36.8)	62 (16.3)	47 (12.4)
Not being able to stop or control worrying	163 (42.9)	123 (32.4)	65 (17.1)	26 (6.8)
Worrying too much about different things	100 (26.3)	152 (40.0)	93 (24.5)	34 (8.9)
Trouble relaxation	102 (26.8)	179 (47.1)	62 (16.3)	36 (9.5)
Being so restless that it is hard to sit still	191 (50.3)	90 (23.7)	65 (17.1)	33 (8.7)
Becoming easily annoyed or irritable	153 (40.3)	140 (36.8)	59 (15.5)	27 (7.1)
Feeling afraid, as if something awful might happen	122 (32.1)	151 (39.7)	71 (18.7)	35 (9.2)

Not at all-NA, Several days-SD, More than half the days-MHD, and Nearly every day-NED

Perception of students about exit exam, course load and impact of new curriculum

The majority of respondents (52.4%) felt that the exit examination adds unnecessary stress and pressure to their academic lives. Additionally, 33.4% perceive it as a hindrance to their academic progress. A significant portion, 47.4%, believed that the exit examination did not adequately assess their knowledge and skills. The course load is viewed as too demanding by 46.8% of students, overwhelming them by 47.6%, and negatively affecting their well-being by 45%. Furthermore, 50.3% of students feel that the new curriculum may not adequately prepare them for the exit exam. Many also found the new curriculum confusing 32.4% and believed it had increased their anxiety level 47.1%. The results indicate that the majority of individuals held a neutral view about the exit exams, course load, and new curriculum 45.3%. Meanwhile, 21.9% had a positive perception and 32.7% had a negative perception of these elements.

Table 5: perception of students about exit exam, course load and new curriculum

Item	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean (St.D)
The exit examination adds unnecessary stress and pressure to my academic life.	52 (13.7)	56 (14.7)	70 (18.4)	100 (26.3)	99 (26.1)	3.37 (1.374)
I perceive exit examination as a hindrance to my academic progress	58 (15.3)	82 (21.6)	112 (29.5)	84 (22.1)	43 (11.3)	2.93 (1.226)
The exit examination does not adequately assess my knowledge and skill	38 (10.0)	61 (16.1)	100 (26.3)	77 (20.3)	103 (27.1)	3.39 (1.307)
The course load required for the exit examination is too demanding	44 (11.6)	52 (13.7)	102 (26.8)	92 (24.2)	86 (22.6)	3.33 (1.289)
I feel overwhelmed by the number of courses I need to study for the exit examination.	37 (9.7)	64 (16.8)	96 (25.3)	111 (29.2)	70 (18.4)	3.30 (1.229)
The course load for the exit examination negatively affects my overall well-being.	37 (9.7)	74 (19.5)	97 (25.5)	121 (31.8)	50 (13.2)	3.19 (1.183)
The new curriculum adequately prepares me for the exit examination.	103 (27.1)	88 (23.2)	77 (20.3)	65 (17.1)	44 (11.6)	2.63 (1.353)
I find the new curriculum confusing or difficult to understand.	61 (16.1)	71 (18.7)	123 (32.4)	63 (16.6)	60 (15.8)	2.97 (1.280)
The new curriculum has increased my anxiety levels regarding the exit examination.	40 (10.5)	72 (18.9)	88 (23.2)	121 (31.8)	58 (15.3)	3.22 (1.224)

NB: Strongly disagree-SD, Disagree-D, Neutral-N, Agree-A, and strongly agree” St.D= standard deviation

Test anxiety

Many participants reported that they struggle to concentrate as exams approach (26.6%), worry about remembering material (24.7%), and fear poor performance or failure (18.5%). They often lose focus and have difficulty recalling previously known materials (21%), and they tend to remember the answers only after the exams (25.8%). Pre-exam anxiety affects their performance by 21.8%, and they were frequently unwell or out of sorts during exams (13.9%). Additionally, minds tend to wander during exams (28.4%), and post-exam worries persist (30%).

The magnitude of test anxiety defined by Westside test anxiety, with a total cutoff point of 2.6 to the highest of 5.0, was 50.5% (95% CI: 45.4 – 55.7). In the other three categories, (49.5%) participants did not suffer from test anxiety, (38.9%) participants had moderate test anxiety, and (11.6%) had high test anxiety.

Table 6: Frequency, percentage, mean, and standard deviation of test anxiety

Items	NT (%)	ST (%)	MT (%)	HT (%)	ET (%)	Mean (St.D)
The closer I am to a major exam, the harder it is for me to concentrate on the material.	81 (21.3)	90 (23.7)	108 (28.4)	51 (13.4)	50 (13.2)	2.73 (1.298)
When I study, I worry that I will not remember the material on the exam.	115 (30.3)	87 (22.9)	84 (22.1)	62 (16.3)	32 (8.4)	2.50 (1.300)
During important exams, I think that I am doing awful or that I may fail.	111 (29.2)	109 (28.7)	90 (23.7)	42 (11.1)	28 (7.4)	2.39 (1.220)
I lose focus on important exams, and I cannot remember material that I knew before the exam.	130 (34.2)	100 (26.3)	70 (18.4)	56 (14.7)	24 (6.3)	2.33 (1.258)
I finally remember the answer to exam questions after the exam is already over.	63 (16.6)	112 (29.5)	107 (28.2)	62 (16.3)	36 (9.5)	2.73 (1.195)
I worry so much before a major exam that I am too worn out to do my best on the exam.	103 (27.1)	109 (28.7)	85 (22.4)	57 (15.0)	26 (6.8)	2.46 (1.227)
I feel out of sorts or not really myself when I take important exams.	142 (37.4)	87 (22.9)	98 (25.8)	37 (9.7)	16 (4.2)	2.21 (1.167)
I find that my mind sometimes wanders when I am taking important exams.	84 (22.1)	92 (24.2)	96 (25.3)	68 (17.9)	40 (10.5)	2.71 (1.282)
After an exam, I worry about whether I did well enough.	66 (17.4)	102 (26.8)	96 (25.3)	79 (20.8)	35 (9.2)	2.79 (1.244)
I struggle with writing assignments, or avoid them as long as I can. I feel that whatever I do will not be good enough.	118 (31.1)	105 (27.6)	67 (17.6)	51 (13.4)	39 (10.3)	2.44 (1.325)

NOTE: Not at all/ never true-NT, Slightly/seldom true –ST, Moderately /sometimes true-MT, Highly /usually true-HT, and Extremely/always true-ET. St.D= standard deviation

Factors associated with test anxiety

In ordinal logistic regression analysis; gender, age, field of study, cGPA, feeling about cGPA result, place of Birth, self-reported relative economic status, current living place, monthly pocket money, health condition, self-esteem, GAD, social support, and perception were candidate for multivariate variable ordinal logistic analysis. Before applying this model, multicollinearity was checked. All candidate variables for ordinal logistic regression analysis had a tolerance value greater than 0.1, and the variance inflation factors (VIFs) were less than 10, indicates that the analysis was suitable for ordinal logistic regression.

In the final model, the ordinal logistic regression results represented provide insights into how different factors, such as field of study (being social science), GAD, and perceptions (having positive and neutral perception), affect the likelihood of experiencing test anxiety.

Males were less likely to experience a high category of test anxiety to compare with females (OR= 0.61, 95% CI: (0.40, 0.92)).

Social science students are more likely to experience test anxiety compared to natural science students. Students in the social sciences students are about 1.96 times more likely to experience the outcome compared to those in the natural sciences (AOR: 1.96, 95% CI: (1.29, 2.97)).

The other associated factor is general anxiety level. Participants with minimal and mild anxiety level are less likely to have high test anxiety compared to participants with severe anxiety level. Having minimal and mild anxiety level reduced the odds of experiencing the high category of test anxiety compared to participants with severe anxiety level (AOR: 0.12, 95% CI: (0.04, 0.36) and (AOR: 0.34, 95% CI: (0.11, 0.97) respectively.

Participants with positive perception are less likely to have high test anxiety compared to participants with negative perception. Having positive perception reduced the odds of experiencing the high category of test anxiety compared to participants with negative perception (AOR: 0.18, 95% CI: (0.10, 0.33)).

Additionally, participants with neutral perception are less likely to have high test anxiety compared to participants with negative perception. Having neutral perception also reduced the odds of experiencing the high category of test anxiety compared to participants with negative perception (AOR: 0.33, 95% CI: (0.21, 0.54)).

Table 7. Analysis of multivariable associated to test anxiety (n = 380)

Variables	Category	COR	95% CL	AOR	95% CI	
					Lower bound	Upper bound
Gender	Male	0.61	(0.40, 0.92)	.804	.453	1.427
	Female	1	1	1	.	.
Age		1.0	(0.91, 1.16)	1.110	.941	1.310
Field of study	Social	1.98	(1.32, 2.98)	1.963	1.296	2.976
	Natural	1	1	1	.	.
cGPA		0.70	(0.40, 1.23)	.768	.371	1.594
Feeling about cGPA result	Bad	1.21	(0.61, 2.38)	.964	.387	2.399
	Medium	0.88	(0.57, 1.36)	1.019	.544	1.908
	Good	1	1	1	.	.
Place of Birth	Rural	0.90	(0.61, 1.34)	1.361	.794	2.335
	Urban	1	1	1	.	.
Self-reported relative economic status	Low income	1.48	(0.64, 3,39)	2.118	.687	6.523
	Like others	1.47	(0.77, 2.88)	1.681	.715	3.949
	High income	1	1	1	.	.
Current living place	Dorm	0.63	(0.34, 1.15)	1.329	.248	7.114
	With family	1	1		.	
Monthly pocket money		1	1	1.000	1.000	1.000
Self-esteem	Low	1.18	(0.73, 1.90)	1.230	.647	2.338
	High	1	1	1	.	.
Social support	Poor	1.49	(0.82, 2.71)	1.881	.829	4.268
	Moderate	1.56	(0.89, 2.72)	2.060	.981	4.323
	Strong	1	1	1	.	.
Perception	Positive	0.20	(0.11, 0.35)	.187	.104	.337
	Neutral	0.31	(0.19, 0.49)	.338	.211	.541
	Negative	1	1	1	.	.
General anxiety level	Minimal	0.11	(0.04, 0.28)	0.12	0.04	0.36
	Mild	0.32	(0.12, 0.79)	0.34	0.11	0.97
	moderate	0.7	(0.27, 1.81)	0.73	0.25	2.15
	Severe	1	1	1	.	.

Discussion

In this research, the prevalence and associated factors were determined. The study shows that a significant proportion of graduating students had significant test anxiety. The prevalence of test anxiety among study respondents found 50.5% (95% CI: 45.4 – 55.7). This result is consistent with the magnitude of test anxiety conducted in Ethiopia at 54.7% and 52.3% (9), (5), and Saudi Arabia 54.7% (74). However, this study is lower than the study conducted in India 60.2% (75), and in Pakistan, 88% (76). This discrepancy may be due to the homogeneity of study participants and the data collection method. In this study participants were from different fields of study, including colleges, while in the Indian study, participants were from similar colleges, and online data collection was conducted. Additionally, the respondents were not graduating students. The study conducted in Pakistan used purposive sampling techniques, and the population was approximately half of this study.

On the other hand, this study was higher than the study conducted in Malaysia, which was 27.5% (42), and in Iran, which was 15.4% (77). This inconsistency may be due to measurement tools, sampling techniques, and the form of data collection. While this study used WTAI, the study conducted in Malaysia used test anxiety inventory (TAI), Google Form data collection, and used purposive sampling techniques. The study conducted in Iran was also due to tool differences.

The finding suggests that field of study (social science), general anxiety level, and perception (neutral and positive) were significant factors in determining the likelihood of experiencing the outcome, with the perception having the strongest effect. Social science programs often require extensive reading, critical thinking, and subjective analysis (78), which may contribute to a higher anxiety level compared to the more structured and objective nature of natural science courses. This is rare or none supported by literature; however in this study, being a social science student was statistically significant association factor for test anxiety. Additionally, when disaggregate data on the field of study and check the associations, were not statistically significant. This might be due to variety of number of students.

Students in social science may perceive their coursework as more challenging or less straightforward than those in natural science. The social science materials and examinations are more related to essays, presentations, and interpretations, which may lack a clear-cut answer.

Also, the nature of questions frequently involves discussion on sensitive topics such as society, politics, and culture. Engaging with such materials can divide attention and create anxiety when it involves debate.

In addition, this finding, general anxiety level was significantly associated to test anxiety. Research revealed that there was a positive correlation between general anxiety levels and test anxiety (1). These issues were supported by the definition that test anxiety, as an evaluative form of anxiety, can trigger normal and neurotic anxiety. When test anxiety and general anxiety are distinct in their specific trigger and context. This aligns with network theory, which suggests that shared symptoms and underlying self-esteem link to a specific form of anxiety to a broader and chronic one. Another study said that test anxiety was a risk factor for developing emotional disorders (79). In addition, this finding revealed that “higher test anxiety was related to emotional risk, and greater emotional risk was related subsequently test anxiety”.

In this study, it was observed that participants who had a neutral and positive perception about the exit exam, course load, and new curriculum were significantly less likely to experience test anxiety compared to those who had a negative perception. Specifically, having a neutral and positive perception reduced the odds of experiencing the high category of test anxiety (AOR: 0.33, 95% CI: (0.21, .54) and (AOR: 0.18, 95% CI: (0.10, .33) respectively. This aligns with other research that, such as a study conducted at the University of Texas, found that the students` positive perceptions of course load, their ability to perform well, and effective time management were closely associated with a lower level of test anxiety (80). This positive perception leads to managed test anxiety and good performance in activities.

Conversely, participants with negative perceptions experienced a higher level of test anxiety. This finding is supported by additional research showing that when students perceive an evaluative process as threatening, their test anxiety levels increase (81), (37). A qualitative study also revealed that the negative perception of the examiner, such as viewing them as “malignant” and fixating on past mistakes, can exacerbate test anxiety (82). Therefore, fostering a positive perception about reading exams, course load, and new curricula is crucial for mitigating test anxiety.

On the other hand, negative perceptions can significantly contribute to test anxiety by creating a cycle of fear, distraction, and diminished focus. When students have negative perceptions, such as fear of failure or judgment from others, they often experience heightened test anxiety that detracts from their ability to concentrate on the task at hand.

Negative perceptions, such as worry about remembering, feeling overwhelmed by the course load and concentrating on unknown contents of the exam, and fear of poor performance or failure, can further exacerbate test anxiety. This perception creates a sense of being unprepared and amplifies stress to balance multiple responsibilities to address content. When they were stressed about their work load, they felt insecure, and the new curriculum was perceived as threatening for their success. Generally, these negative perceptions impact their motivation to prepare and decrease their confidence to handle tasks on time (83).

Moreover, negative perceptions often stem from worries about the unknown exam content, fear of poor performance, and risk of exclusion, and resource constraints contributed to the negative perceptions (84). These worries can disturb memory and cognitive processes, making it difficult for students to remember important information or focus on their studies (85), (86). The fear of making mistakes reinforces anxiety, leading to a vicious circle where the fear of failure actually contributes to poor performance (87).

Therefore, the underlying cause of test anxiety, including psychological, emotional, and situational factors, plays a significant role. Fear of failure and performance pressure, which stem from fear of not meeting family or personal expectations. This pressure fuels anxiety, which hinders success. The other is negative perception of the exam. When the students overestimate the consequence of failure, they feel overwhelmed by multiple tasks, leading to divided attention and increased test anxiety. Therefore, test anxiety is not a simple reaction to the exams, but it is a complex interplay of psychological, emotional, and situational factors. Addressing these underlying issues, such as fear of failure, negative perceptions, and other associated factors identified in this study, can break the cycle of test anxiety and improve the academic success and mental well-being of students.

Limitation

This study acknowledges some limitations. The first one is the cross-sectional design of the study; it captures data at a single point in time, unable to infer causality. The reliance on self-reported measures may introduce biases, as self-administration: cGPA, health condition, and etc. might not accurately report their anxiety level or other relevant factors. Furthermore, potential confounding variables that were not accounted for in this study might have an impact, such as the psychological distress scale. Despite these limitations, the study provides valuable insights into prevalence and associated factors among graduating students.

Conclusion

This study showed the prevalence of test anxiety among final-year undergraduate (graduating) students and needed to address the underlying factors that interfere with learning performance and students' mental well-being. The result reported that the field of study (social science), general anxiety level, perception (neutral and positive) about exit exams, course load, and new curriculum were significantly associated with test anxiety levels. This shows that fostering positive perceptions about exit exams, course load, and new curriculum and providing clear awareness on the nature of the study field have a positive effect on reduce test anxiety. This finding underscores the need for targeted intervention to address specific factors and mitigate test anxiety among students.

Recommendation

In accordance with the study, we recommend creating a supportive environment where students seek and discuss academic concerns and take clear perceptions about exit exams, course load, and the new curriculum. In addition, establish counseling service on each campus to help students mitigate test anxiety and other mental health issues and link to a place where they can gain mental health services from trained mental health professionals.

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Annex-1

Participants` Information Sheet

The objective of this informational document is to provide details about the research project you have been invited to join. It describes the study`s purpose and your role in it.

Aim: This study aims to assess the prevalence and factors associate to test anxiety among Addis Ababa University graduating students.

Procedure: I request you to partake in short a self-reported questionnaire during your regular classroom hours. The surveys consist of six sessions with a total of 51 questions. It should take around 10 to 15 minutes to complete. And cover complete experience in test anxiety.

Risks: There are no known risks related with participating in this study; there will be no penalties if you choose not to participate.

Benefits: The study intends to gain a better thoughtful of the prevalence of test anxiety among college students and develop strategies to support those experiencing it.

Incentive: There is no financial reward provided for participating in this study.

Confidentiality: Your private info will be kept confidential, and only the study team will have access to the data collected.

If you presently experience test anxiety, you can seek support from your campus guidance counselor, consult a clinical psychologist at a therapy center, or visit a local psychiatric clinics and any psychological support (link will be providing)

Ethics Committee office: please contact +251115538734

Primary Investigator: Mr. Adamu Gudina

Email address: adamugudina7@gmail.com

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Consent

Dear participant,

We appreciate you listening to the explanation of this study. Your participation is completely voluntary. You can choose not to participate at all or you can withdraw at any point without explanation and with no negative consequence.

Please be assured that all the information you provide during the study will be treated as confidential. Your honest responses to the questions will greatly contribute to our understanding of the extent of test anxiety among university students. You are also entitled to seek clarification or ask any questions at any point. If you have any doubts or inquiries, please don't hesitate to contact details provided above to reach out to the research team.

If you agree to participate in this study, kindly confirm your agreement by providing your signature.

Signature of participant _____ Date _____

Signature of data collector _____ Date _____

Annex-2

Part one: Socio-demographic questions.

Please put an “X” mark on the appropriate socio-demographic personal information.

	Items	Your possible answer				
1	Gender	Male	Female			
2	Age					
3	Field of study (department)					
4	cGPA					
5	How did you feel about your result? cGPA	Bad	Medium		Good	
6	Place of Birth	Urban area	Rural area			
7	Your families Socio-economic status compared to another people in your area	Low income	Like others		High income	
8	What is your marital status?	Single	In relation	Married	Divorced	Widowed
9	Religion	Orthodox	Protestant	Catholic	Islam	Others: Please specify_____
10	Current living place	Dormitory		With family		Rental house
11	How much your monthly pocket money?					
12	Do you have any known health condition?	No. If yes: please specify_____				

Part two: Rosenberg Self-Esteem Scale (RSE)

The below given direction is a list of statements dealing with your general feeling about yourself. Please indicate how strongly agree or disagree with each statement.

Numeric scores assigned to each of the items							
Strongly agree	Agree	Disagree	Strongly disagree				
1	2	3	4				
	Items			1	2	3	4
1	On the whole, I am satisfied with myself.						
2	At times I think I am no good at all.						
3	I feel that I have a number of good qualities.						
4	I am able to do things as well as most other people.						
5	I feel I do not have much to be proud of.						
6	I certainly feel useless at times.						
7	I feel that I'm a person of worth.						
8	I wish I could have more respect for myself.						
9	All in all, I am inclined to think that I am a failure.						
10	I take a positive attitude toward myself.						

Part three: Oslo social support scale

Please answer the following social support you may have.

1. How many people are so close to you that you can count on them if you have great personal problem?
 A. None B. 1-2 C. 3-5 D. more than five
2. How much interest and concern do people show in what you do?
 A. None B. Little C. Uncertain D. some E. A lot
3. How easy is it to get practical help from neighbors if you should need it?
 A. Very difficult B. difficult C. possible D. Easy E. Very easy

Part four: Views of exit exam, course load, and new curriculum

Please show your level of agreement with the next account on the scale of one to five, where one relates to strongly disagree and five corresponds to strongly agree.

Numeric scores assigned to each of the items					
Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
1	2	3	4	5	
items	1	2	3	4	5
1	The exit examination adds unnecessary stress and pressure to my academic life.				
2	I perceive exit examination as a hindrance to my academic progress				
3	The exit examination does not adequately assess my knowledge and skill				
4	The course load required for the exit examination is too demanding				
5	I feel overwhelmed by the number of courses I need to study for the exit examination.				
6	The course load for the exit examination negatively affects my overall well-being.				
7	The new curriculum adequately prepares me for the exit examination.				
8	I find the new curriculum confusing or difficult to understand.				
9	The new curriculum has increased my anxiety levels regarding the exit examination.				

Part five: Westside Test Anxiety Scale: please consider your test experience and upcoming exit examination.

Rate how true each of the following is of you, from extremely or always true, to not at all or never true. Use the following 5 point scale.

Not at all/ never true	Slightly/seldom true	Moderately /sometimes true	Highly /usually true	Extremely /always true		
1	2	3	4	5		
No:	Items	1	2	3	4	5
1	The closer I am to a major exam, the harder it is for me to concentrate on the material.					
2	When I study, I worry that I will not remember the material on the exam.					
3	During important exams, I think that I am doing awful or that I may fail.					
4	I lose focus on important exams, and I cannot remember material that I knew before the exam.					
5	I finally remember the answer to exam questions after the exam is already over.					
6	I worry so much before a major exam that I am too worn out to do my best on the exam.					
7	I feel out of sorts or not really myself when I take important exams.					
8	I find that my mind sometimes wanders when I am taking important exams.					
9	After an exam, I worry about whether I did well enough.					
10	I struggle with writing assignments, or avoid them as long as I can. I feel that whatever I do will not be good enough.					

Part six: GAD-7:

Over the last two weeks, how often have you been bothered by the following problems?

Numeric scores assigned to each of the items					
Not at all	Several days	More than half the days	Nearly every day		
0	1	2	3		
Over the last two weeks, how often have you been bothered by the following problems?					
No:	Items	0	1	2	3
1	Feeling nervous, anxious, or on edge				
2	Not being able to stop or control worrying				
3	Worrying too much about different things				
4	Trouble relaxation				
5	Being so restless that it is hard to sit still				
6	Becoming easily annoyed or irritable				
7	Feeling afraid, as if something awful might happen				

Appendix-3:

Forward and backward translation

Westside Test Anxiety Scale:

Forward to Amharic	Backward to English
ወላኝ ፈተና በቀረበ ቁጥር በጉዳዩ ላይ ማተኮር ይከብደኛል።	It gets harder for me to focus on the subject matter when the exam gets closer.
በጥናቴ ወቅት በፈተና ውስጥ ያለውን መረጃ አላስታውስም ብዬ እጨነቃለሁ።	During my study, I worry that I won't remember the information in the exam
በወላኝ ፈተናዎች ላይ ጥሩ አፈጻጸም አላደረግም እና አላልፍም ብዬ እጨነቃለሁ።	I worry that I'm not performing well on critical tests and that I will not pass.
ወላኝ ፈተና ላይ ትኩረት ማጣት እና አስቀድሜ የተረዳሁትን ይዘት ለማስታወስ ይከብደኛል።	I lose focus on an important exam and have trouble remembering concepts I already understood.
ፈተና ከተጠናቀቀ በኋላ ለጥያቄዎቹ መልሱን አስታውሳለሁ።	After the exam is over, I remember the answers to the questions.
ከዋና ፈተና በፊት በጣም ስለምጨነቅ በፈተና ላይ የተቻለኝን ለማድረግ በጣም ይደክመኛል።	Since I get so nervous before a major exam I'm too exhausted to do my best on the exam.
አስፈላጊ ፈተናዎች ስወስድ እኔ ራሴ እንዳልሆንኩ ይሰማኛል።	I feel that I'm not myself when I take mandatory exams.
አስፈላጊ ፈተና በምወስድበት ጊዜ፣ አልፎ አልፎ ሀሳቤ ሲጠፋ አስተውላለሁ።	When I take an important exam, I occasionally find myself losing my mind.
ከፈተና በኋላ፣ በበቂ ሁኔታ አልሰራሁም ብዬ እጨነቃለሁ።	After an exam, I worry that I didn't do well.
የቤት ስራዎችን ለመስራት እታገላለሁ፣ ወይም እስከምችለው ድረስ አስወግዳቸዋለሁ። የማደርገው ማንኛውም ነገር በቂ እንደማይሆን ይሰማኛል።	I struggle to do homework, or avoid them as much as I can. I feel that whatever I do will never be enough.

Declaration

I hereby declare that this thesis, “Prevalence of test anxiety and associated factors among Addis Ababa University graduating students,” is the result of my own research and has not been submitted for any degree of diploma at any other university or institution. I have acknowledged all information that was used in the completion of this work.

I further declare that this thesis complies with the ethical guidelines set by the institution.

Name: _____

Signature: _____ Date: _____