# DEVELOPMENT AND VALIDATION OF ACADEMIC ANXIETY SCALE

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**Abstract**

Anxiety amongst university students is a common problem. The academic pressure, expectations from parents, and lack of belief in self often leaves to academic anxiety. Its effect on academic performance and overall life has also been proven by various researchers over time. This study developed a reliable tool to measure academic anxiety in university students. An item pool of 78 items was created and 30 items were finalized through panel assessment and pilot study. Data was collected through both offline and online forms and analyzed using SPSS-20.0 software. The tool can provide valuable insights into the experiences of students, identify individuals at risk of academic anxiety, and inform potential interventions. Standardizing the tool can enable comparisons across different educational settings and populations, contributing to a better understanding of the relationship between academic anxiety and student wellbeing.

**Keywords**: Academic anxiety, reliable tool, university students, anxiety, item, tool.

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## Introduction

Enhancing our understanding of the impact of academic anxiety on students' well-being, academic performance, and long-term outcomes becomes feasible through the advancement and validation of research in this field. Thorough investigation in this area can uncover insights into the origins of academic anxiety, its effects on mental health, and its overall influence on students' quality of life. By conducting comprehensive research, we can establish conducive learning environments, design evidence-based interventions, and develop strategies to manage and mitigate academic stress while promoting positive student well-being. Moreover, verified research findings on academic anxiety are crucial for informing educational policies and practices. This knowledge can be effectively utilized by policymakers, educators, and administrators to establish appropriate support systems, create student-centered curricula, and allocate resources to effectively address and reduce academic anxiety. Ultimately, prioritizing the development and validation of research on academic stress enables us to enhance students' educational experiences, optimize their learning outcomes, and contribute to their long-term success and happiness.

## Definitions:

Before we learn about academic anxiety, we need to know what is anxiety –

The Latin word angor and its accompanying verb ango (to restrict) are the roots of the English term anxiety.

Anxiety is a typical response to stress. The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure."

The Diagnostic and Statistical Manual (DSM-5) specifically describes anxiety as excessive worry and apprehensive expectations, occurring more days than not for at least 6 months, about a number of events or activities, such as work or school performance.

Anxiety is characterised by complex psychological circumstances that have an impact on mental, behaviour, and emotional states (Putnam 2010). "Anxiété" is a dark and terrible emotion of expectation, according to Joseph Lévy-Valensi (1879–1943), a professor of psychiatry in Paris. According to Epstein (1967) "anxiety is a state of undirected arousal following perception of danger. According to Spielberger (1983), anxiety is a sensation of tension, uncertainty, nervousness, and worry that is brought on by stimulation of the nervous system. According to Sarason (1980), anxiety is a conditional behavioural reaction to a perceived hazardous input that can be acquired or inherited. It is a displeasing feeling of uneasiness, nervousness, apprehension, fear, concern or worry (Barlow, 2002). A person's normal life becomes challenging due to their high degree of anxiety, which interferes with their daily activities and social life. One of the many different types of emotional and behavioural problems is anxiety (Rachel and Chidsey, 2005). Putwain (2007) defined anxiety as a complex psychological condition that affects one's cognition, behaviour, and psychological well-being. In some circumstances, it can be helpful as it can warn us about potential threats and assist with planning and attention. Academic anxiety and achievement have a bad association, according to Nadeem et al. (2012). One of the issues that teenagers struggle with the most is anxiety. According to Costello et al. (2003), anxiety is one of the most prevalent psychological illnesses among school-aged children and adolescents globally. Working memory can be significantly impacted by high levels of academic anxiety (Owens et al., 2012). According to Essau et al. (2000), anxiety has a significant negative impact on children's social, emotional, and intellectual achievement. High school students with high exam anxiety performed poorly in school, according to Masson et al. (2004). Even students who perform well on assignments and tests can have test anxiety (2012) Bensoussan. Although its circumstances and expressions are impacted by cultural beliefs and practises, anxiety is thought to be a universal phenomena that exists throughout cultures (Good and Kleinman, 1985; Guarnaccia, 1997).

Anxiety can be classified into three sections in which academic anxiety is situation-specific form of anxiety related to academic circumstances (Tohill & Holyoak, 2000).

## Academic Anxiety

The term academic anxiety is used to describe the worries, stress or fear related to academic activities or environment. Assignments, difficult subjects, exams, peer pressure from parents or other students regarding academics, or simply feeling apprehensive about studying or participating in group projects in class could all be contributing factor.

The feeling of being distressed, fearful, or stressed out as a result of school pressures is called academic anxiety (About Academic Anxiety – Academic Anxiety Resource Center, 2023b). A modest amount of anxiety actually helps academic performance by creating morale and motivation (Garg, 2011). Academic anxiety leads to academic difficulties through irrelevant thoughts, preoccupation and reduce attention and concentration (Eysenck, 2001).

According to Rohen Meetei (2012), academic anxiety is a type of state anxiety that is related to the approaching risk from the surroundings of academic institutions, such as teachers and certain courses like English and mathematics. Academic anxiety can also be brought on by stress and worry brought on by personal or family issues (Mayya et al., 2004). Guerrero (1990) said that different age levels, socioeconomic classes, high activity levels, increased familiarity, gender, and cultural ecosystems can all be used to interpret the roots of anxiety. According to Gourav (2015), academic anxiety is a type of anxiety that is related to educational institutions and that is characterised by a mental insensitivity to worry or by challenges un coping with the demands of school or college.

Anxiety is a usual response to stress. It becomes a problem when its elevated to a level that it starts to interfere with a person's everyday life. Academic anxiety to some degree is needed as without it, one may feel demotivated to study. But high levels of academic anxiety can lead to interference in concentration and memory.

The feeling of stress or fear is quite common in students. One can experience this during an exam they feel underprepared for. A presentation in front of the whole class can also cause this sometimes. Or an assignment that's due soon can also result in feelings of stress and worry.

Academic anxiety most commonly can be seen during times of exams or competitions when high expectations are raised. The pressure of obtaining a good result develops anxiety and fear in students.

Academic anxiety must not be disregarded. If it is not appropriately handled, it may have detrimental and long-lasting effects on a student's performance in school, their ability to interact with classmates, and other areas of their lives (Mattoo, &Nabi, 2012). Toibas (1979) suggests that anxiety has a significant impact on how well students learn and succeed. As a student's academic performance suffers, the anxiety level related to certain academic tasks increases (Huberty, 2012). Teaching students' self-regulation can reduce anxiety and increase academic performance (Ader & Erktin, 2010).

Academic anxiety can have adverse effects on both mental and physical health. When students experience high levels of academic anxiety, it increases the risk of developing mental health problems such as depression and anxiety disorders (Gallagher & Vella-Brodrick, 2008) Additionally, academic anxiety can lead to negative impacts on a student's self-esteem, self-worth, and overall quality of life. In terms of physical health, academic anxiety can also lead to physical symptoms such as headaches, stomach aches, and muscle tension (Kitsantas & Zimmerman, 2009). Prolonged academic anxiety can even increase the risk of developing cardiovascular disease. Since excessive academic worry impairs memory, concentration, and attention span, academic achievement may suffer. Students might even withdraw, avoid talking to their peers, or only participate in things they find fascinating. Alam (2017)

A study by Tamir, M. (2001) found that moderate levels of test anxiety were associated with better exam performance, whereas high levels of test anxiety were associated with poorer exam performance. Similarly, in a study by Tang, and He, W. (2020), moderate levels of anxiety were associated with higher academic achievement in Chinese college students, but high levels of anxiety were associated with lower academic achievement.

- **Causes of academic anxiety**

Academic anxiety can be influenced by various factors. Both internal and external factors can affect students' cognitive, emotional, and behavioural responses to academic tasks.

1. Perceived academic pressure: Students who perceive high academic pressure, such as from parents, teachers, or peers, may experience anxiety related to academic performance (Cheng et al., 2020).
2. Fear of failure: Students who have a fear of failure may experience anxiety related to academic performance, which can negatively impact their performance.
3. Perfectionism: Students who have a perfectionistic mindset may experience anxiety related to academic performance, as they place high expectations on themselves (Tamir, 2005).
4. Self-doubt: Students who doubt their abilities may experience anxiety related to academic performance, as they may worry about not being able to meet expectations (Dohn & Klausen, 2018).
5. Test anxiety: Students who experience anxiety related to tests and exams may experience performance anxiety, which can negatively impact their academic performance (Stöber & Pekrun, 2014).

Anxiety has three interrelated components: cognitive, physical and behavioural (Vye, Welch & Kathlene, 2007).

A. The cognitive aspect of anxiety concerns how we perceive and understand our situation, which typically manifests as critical thinking and judgement. For instance, when students enrol in a new course, they could compare themselves to other students and believe that some are smarter than them.

B. The physical aspect includes physiological adjustments and outward manifestations of anxiety,

such as a rapid heartbeat, tense muscles, trembling hands, etc.

C. The behavioural element is concerned with a person's actions and behaviours when confronted with an anxiety-inducing circumstance. These activities could be:

a) Adaptive that can lessen the severity of a situation; for instance, as a deadline is drawing near, one might consider gathering the materials for an assignment.

b) Avoiding activities that increase anxiety, such as cleaning one's desk the night before a test.

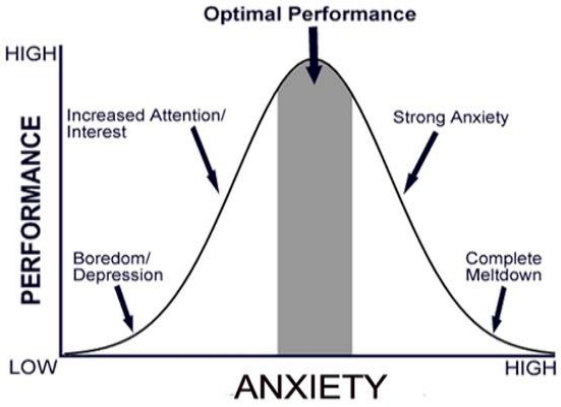
Some studies combine the emotionality of anxiety with its behavioural and physical components (Rana and Mahmood, 2010). The coping strategies include the avoidant and adaptive behaviours. An individual engages in coping when faced with external or internal difficulties during stressful conditions (Tuncay, 2008).

There are three types of coping strategies that students use for dealing with anxiety (Woolfolk, 2004).

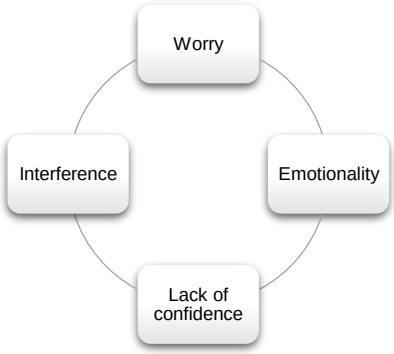
1. Problem-Solving: Students attempt to examine the anxiety-inducing circumstance and come up with possible solutions to the issue.
2. Emotional Management: Students attempt to control their emotions after recognising their emotional states.
3. Avoidance: Students stay away from circumstances that can make them feel anxious. Studies have looked at how anxiety affects students' performance in a variety of ways.

Educational institutions should set up counselling and counselling programmes for the newly admitted students in order to lessen the negative impact that anxiety has on students' academic progress. These pupils should receive instruction on how to deal with stressful situations effectively. Teachers and senior students can help newcomers develop appropriate coping mechanisms.

- **Correlation of academic anxiety and academic achievement:**




- **Dimensions of academic anxiety:**




**1. Lack of confidence**

Academic anxiety and lack of confidence are often interrelated in the context of academic performance. When students experience academic anxiety, they may feel overwhelmed, anxious, and stressed about their ability to perform well. This can lead to a lack of confidence, as students may start to doubt their ability to succeed. Conversely, when students lack confidence, they may experience more anxiety and worry about their performance, which can exacerbate their academic anxiety.

A study published in the Journal of Anxiety Disorders, Lent, R. W., Lopez, F. G., & Bieschke, K. J. (1991) found that there is a significant relationship between academic anxiety and academic self-efficacy (confidence). The study found that students who experience more anxiety about their academic performance also have lower levels of academic self-efficacy.

Another study by Hembree, R. (1988) published in the Journal of Counseling Psychology found that academic self-efficacy is a significant predictor of academic anxiety. The study found that students who have higher levels of academic self-efficacy experience less academic anxiety.

Pekrun, R., Elliot, A. J., & Maier, M. A. (2009) did a study where it was found that there is a reciprocal relationship between academic anxiety and academic self-efficacy. The study found that students who experience high levels of anxiety about their academic performance also experience a decrease in academic self-efficacy, and vice versa.

**1. Emotionality**

Studies have shown that emotionality has a variety of effects on academic achievement. For instance, a study by Nadeem and Zaidi (2012) looked at how anxiety affected university students' general performance in the context of Bahawalpur, Pakistan. A descriptive research methodology was adopted, and 97 students were recruited via stratified sampling and given an anxiety assessment questionnaire.

According to results of regressively analysed data, academic success declines as anxiety increases in kids who already have anxiety symptoms. The previous study, which looked at anxiety generally and academic performance, should be viewed with care because the current study focuses explicitly on the impact of academic anxiety on student performance. Although the geographical extent of the two research differs significantly, both have targeted populations with similar academic criteria.

In Kenyan university students, Othieno et al. (2014) looked at the sociodemographic link between academic anxiety prevalence and depression. It was discovered that first-year university students, particularly those who were married, from low-income households, and those living beyond the university's boundaries, were most likely to experience anxiety as it manifested in depression-induced conditions.

Additionally, one's academic performance, religious beliefs, and the university or college they attended all strongly contributed to elevated depression levels. In light of this, the study came to the conclusion that among university students, there is a correlation between depression and academic outcomes

**2. Worry**

Worry is a disruptive thought that prevents someone from focusing and completing their academic task. For instance, predicting failure, feeling inferior, or becoming fixated on the consequences of performing poorly. There are several effective techniques for controlling this element, including self-hypnosis, using positive mental imagery, and fending off negative and self-defeating beliefs with more positive, realistic thinking.

According to Suresh's (2016) research, perceived worry is more frequently linked to poor performance than emotional responses or reactions. In a study conducted in Texas, USA, Brady, Hard, and Gross (2018) found that a certain level of anxiety may enhance performance or productivity. Particularly, early research, mostly based on laboratory discoveries, suggests that moderate anxiety levels are likely to increase children' performance in mathematics.

However, it is an issue worth investigating whether or not such desirable academic outcomes can be replicated or attained in other areas given some regular classroom constraints or difficulties. Students in a preliminary or orientation university course can be inspired by a test to measure the influence of a modest or little worry buried or articulated in an email sent by lecturers or subject in the endeavour to explain this paradox.

To accomplish this, first-year students received an email just the night before the first assessment or exam, with or without an introduction intended to help them understand test or examination anxiety as helpful or destructive to better performance.

Students who typically experience anxiety before or during tests fared better than expected, demonstrating that even low amounts of anxiety in the form of worry improved students' test scores. Indeed, study of the exam data revealed that first-year students who were less worried about tests or exams performed better on the exams.

**3. Interference**

In their 2015 study, Zirk- Sadowski et al. looked into the relationship between test-related anxiety and academic outcomes. The results demonstrated how test anxiety negatively affected students' academic performance. This suggests that students' worry is a major or primary factor affecting their academic performance.

Additionally, pupils with higher levels of anxiety received lower grades than those with lower levels of anxiety. Fiore (2012) investigated how anxiety affected finishing academic assignments. It was discovered that performance suffers as anxiety increases and gets worse as anxiety gets worse. Particularly, such pupils eventually lose up after becoming overwhelmed by the duties they are undertaking and developing a self-deprecating attitude of being incapable.

Since these behaviours can take many different forms and since they can be unproductive and prevent successful performance, the best management technique is to work with a study skills instructor or a counsellor to identify the specific behaviours that cause problems and develop a plan to reduce or change them. Examples of these behaviours include checking the time constantly during an exam or spending a lot of time on a test question that one cannot answer.

**Review of Literature**

Research conducted in last 10 years show that there is an inverse relationship between academic achievement and academic anxiety in students. A descriptive research done by Shakir (2014) found that as the level of academic anxiety increases, the academic achievement decreases and as the level of academic anxiety decreases, the academic achievement increases in students of secondary schools. The study also found out that there was significant amount of difference between the groups of high academic anxiety and low academic anxiety in terms of academic achievement. Males with high academic anxiety show better academic achievement

than males with low academic anxiety and the same is with female students. While female group having high level of academic anxiety show better academic achievement than the male group having high academic anxiety. And in case of female group having low level of academic anxiety and male group having low level of academic anxiety, female group show better academic achievement.

Mirawdali et al. (2018) conducted a quantitative study to investigate the extent of academic anxiety and how it impacts academic anxiety. They conducted the research on masters and undergraduate students of pharmacy in which they found that there is a positive relationship between social and family sources of anxiety and academic performance and stressor. This shows that dealing with these factors can improve academic performance and contribute to academic success in addition to reducing anxiety about particular examinations or evaluating situations. Faculty members and curriculum leaders may want to concentrate on this. The results of this study also supported the existence of differences in academic performance among students of different genders, those with a family history of anxiety, and those with higher and more rigorous educational levels.

There have been many studies conducted to uncover the factors which add to academic anxiety and perfectionism can be one of the reasons. In a study conducted by Fletcher and Speirs (2012), which showed how perfectionism and achievement motivation can affect gifted students. Though the study does not give a clear correlation between perfectionism and academic anxiety but it gives an idea that it can be one of the reasons. Perfectionist students who have high expectations for themselves or others may experience anxiety related to their academic performance. Perfectionism is not just a trait of gifted students. Due to the fact that not all students respond to pressure in the same ways and that study typically focuses on either the positive or negative effects of perfectionism, there is some debate in the research as to whether it is harmful or beneficial. But there are chances that students might develop anxiety problems because they are very stressed about fulfilling others' expectations and their own.

Ahmed et al. (2011) conducted study to find if higher levels of anxiety can be caused by students who have lower self-efficacy. In this quantitative, non-experimental study, 495 seventh graders filled out questionnaires about their math anxiety and math self-concept. According to the findings, lower levels of anxiety were connected with higher levels of self-concept. The relationship between lower self-concept and higher levels of anxiety or between higher levels of anxiety and lower levels of self-concept has not been fully understood by researchers. Each student faces a unique set of circumstances. However, the data imply that low self-concept is a stronger source of anxiety than anxiety is of low self-concept when the data are compared using a chi-square difference test.

There have been researches to find if physical activity can reduce anxiety. A research was conducted if the same can happen with academic anxiety. According to a study conducted in Pakistan by Kayani et al. (2020), students who regularly exercise and engage in physical activity have less academic anxiety than those who do not.

The result of a study conducted by Situmorang (2018) was that millennial college students were expected to independently maximise their potential in order to reduce academic anxiety and successfully complete their undergraduate thesis because CBT-Based Music could help them recover their cognitive, affective, and behavioural functions and make them adaptive once more. The study came to the conclusion that the academic worry felt by millennial students was a cognitive distortion brought on by underlying beliefs that were not healthy. To help millennial students regain their cognitive, emotional, and behavioural capabilities so they may once again be adaptable, educational counsellors or psychologists may provide counselling services using CBT-Based Music. After the intervention, it was intended that millennial students would be able to autonomously maximise their ability to lower their academic anxiety and successfully finish their undergraduate thesis.

The purpose of a study conducted by Shahrouri (2016) was to define Academic Anxiety and identify some of its major sources among undergraduate students from Private and Government Universities in Dubai, and to compare the identified Anxiety Sources. Furthermore, to examine significant Academic Anxiety differences. The study sample included (150) undergraduate students, (74) male and (76) female, from both private and public universities. The information was gathered via a paper-based questionnaire with 43 items divided into five categories: academic anxiety, emotional stress, social pressure, foreign language proficiency, and parental expectations. The results indicated that the five recognized dimensions of academic anxiety were study anxiety, anxiety related to foreign languages, anxiety related to social situations, emotional stress, and anxiety linked to parental expectations. Means and Std. Deviation, and T-test were calculated to analyze data. The results showed that the Study Anxiety Source predominated in Private Universities when compared to Government

Universities, whereas the Emotional and Social Sources did not show any statistical significance. When compared to government universities, parental expectations were significantly higher in private universities. The study offers some suggestions that are taken into account to assist undergraduate students in coping and addressing the main Academic Anxiety Sources.

A student's academic performance may suffer as a result of academic worry. Parents and teachers can learn to spot the symptoms of anxiety in schoolchildren. More significant academic issues connected to anxiety can be prevented if instructors and parents assist kids in learning to regulate their anxiety early on. Over time, anxiety may grow more harmful. It is important to understand academic anxiety since early detection of the condition helps pupils perform better. A research was done by Hooda and Saini (2017) which elaborates in detail about the components of academic anxiety & way to reduce academic anxiety in detail. It is necessary to control academic anxiety to enhance academic performance because it is one of the significant elements that hinders students' academic progress. There are so many things that make children more anxious, and this has a huge impact on their academic performance. The next generation will succeed in their goals and be able to face their lives with bravery if parents, instructors, and students are aware of and use the methods to lessen students' nervousness. The document provides information on the causes of academic anxiety, its components, and classroom management strategies.

Millions of students at universities and schools throughout the world experience academic anxiety every year, which is a significant educational issue. High levels of anxiety can impair focus, attention, memory, information storage, and learning, despite the fact that modest levels of worry might encourage students to enhance their academic performance. Additionally, it has recently been discovered that assertiveness and anxiousness are related. Therefore, Mohebi et al. (2012) conducted a study in an attempt to determine the effect of assertiveness training on reducing anxiety levels in pre-college academic students in Gonabad city in 2008. All of the Gonabad City's pre-college students were asked to participate in this clinical trial investigation, and 89 individuals were split into experimental and control groups. The validity and reliability of three questionnaires—the demographic, academic anxiety, and assertiveness Rathus questionnaires—were determined and accepted. The experimental group's intervention consisted of 5 sessions of PRECEDE-based assertiveness training and 1 session for parents and teachers to assist and support the intervention programme. Eight weeks after the last training session for each group was held, we conducted a post-test. SPSS was used to analyse the data. The outcomes also demonstrated a substantial reduction in anxiety in the experimental group following the intervention. However, there was no statistically significant difference in academic anxiety and assertiveness in the control group before and after the intervention. On the one hand, there was a considerable rise in decisiveness for both groups. It can be said that assertiveness training is a successful non-pharmacological strategy for lowering academic anxiety and it can improve academic performance since the experimental group showed a substantial drop in anxiety and an increase in decisiveness.

Academic anxiety and emotional intelligence are strongly related. A student with strong emotional intelligence would likely have less academic anxiety, and vice versa, according to the published literature. Similar to this, students' academic performance is also impacted by library anxiety, which is an academic anxiety. Students' fear of the library may rise or fall in correlation with their capacity to comprehend and control their own emotions as well as those of others. The literature on the connection between these two ideas is scarce, nevertheless. University freshmen were asked for information on these ideas. Significant correlations between emotional intelligence, anxiety in libraries, and participants' academic achievement were found. A study was conducted by Jan et al. (2020) which had practical implications for academicians and professional librarians to deal with the library anxiety of students and their academic performance. The current research's findings and those from other studies clearly imply that emotional intelligence is a crucial component of success in both academic and non-academic life. Students with high EI have very low academic anxiety, which helps them function better in terms of their mental and cognitive health, especially academically. The above findings imply that enhanced emotional awareness and other EI abilities may be beneficial in reducing LA as a whole. These findings can help academics and library workers comprehend the crucial impact that students' EI skills play in their learning outcomes. Because they may plan and implement strategies for decreasing kids' LA more successfully the more, they are aware of the EI skills of their pupils. Further, it was deduced that by boosting or lowering one, the other will do the same because there is a strong negative correlation between emotional intelligence and library anxiety. In other words, kids who are better at sensing, controlling, and regulating their emotions would have lower LA and vice versa. It is recommended that improved programmes for

information literacy and emotional intelligence be developed, since they would have a larger favourable impact on students' academic activities.

Dobson (2012), conducted a research to find out the effect of academic anxiety on the performance of student with and without learning disability and how student cope with anxiety at school. In this research, it is found out that students without disabilities are also susceptible to academic anxiety. Academic anxiety affects students of all academic abilities. Even students who perform well on their assignments and tests can have test anxiety and perform poorly (Bensoussan, 2012). Regularly performing poorly in school might make anxiety levels rise. Perfectionists are not always gifted, but gifted students who are perfectionists often experience high levels of anxiety. Even if perfectionist students are high performers, they may nevertheless experience significant levels of stress due to their fear of failure (Fletcher & Speirs, & Neumeister, 2012). Without a sense of control over the reasons, whether internal or external, students will not believe that success and change are feasible (Vockell, n.d.). Students can feel more in control of the result of academic assignments by using problem-based learning, talking with them about test procedures, and learning study and test-taking techniques. Students can learn the skills they need to feel in charge of their education from teachers and parents. Parents and teachers can assist children manage their anxiety by educating them about the learning process and how to manage it.

There's a study done by Parvez and Shakir (2014), to study the relationship and effect of academic anxiety on academic achievements of the adolescents. Purposive sampling was used to get a sample of 361 adolescents. Data were gathered using a credible and dependable academic anxiety measure that Singh and Gupta (2009) had standardized. Through this study, it was found that a modest amount of academic anxiety is crucial for motivating pupils to achieve excellent levels in their education. High levels of academic anxiety can hinder performance in a number of ways. It might lead to a meagre accomplishment. Therefore, it is important to take academic anxiety seriously because it impairs adolescents' learning capacity and prevents them from performing well in school.

In their study, Mahajan (2015) discovered that there was no discernible difference between the academic anxiety of male and female secondary school students. In addition, there was a discernible difference between the academic anxiety of government and private secondary students. Additionally, he claimed that parental support was strongly and negatively connected with academic stress.

This study done by Nasir (2020), investigated the relationship between university students' academic achievement and their academic anxiety. Additionally, it was intended to examine how academic anxiety affected academic achievement. At the Institute of Education, University of Azad Jammu and Kashmir, 150 students enrolled in pre-service teacher training programs during the first semester were surveyed. It was discovered that academic anxiety significantly and negatively correlated with students' academic achievement. Students with lower academic anxiety ratings performed better than those with higher academic anxiety levels. Additionally, it was discovered that academic anxiety significantly predicted academic success, and that the behavioral and physiological aspects of this anxiety contributed significantly to the variation. Students' performance is impacted by the behaviors they exhibit in anxious situations and their body's physiological responses. The actions students take (the behavioral component) and the bodily reactions they experience (the physiological component) are what determine their level of performance, not the negative thoughts (the cognitive component) or feelings (the emotional component) that affect academic performance. When students fail to take the proper course of action, indulge in distractions, or experience reflexive physiological reactions in anxiety-provoking situations, their performance suffers.

Zega (2020), conducted a research to identify gender-specific differences in student academic anxiety prior to the Preparing for Final Project. The test was amounted on 50 research participants, ensuring that each of the faculties would be represented. It shows there is no discernible difference between male and female students' levels of academic anxiety. Before the final semester exam, academic anxiety affects both male and female students equally, therefore there is no difference in this aspect.

In order to determine the levels of anxiety among 400 Himachal Pradesh senior secondary school boys and girls, Banga (2016) conducted a study. The study's results unmistakably demonstrated that there was a considerable difference in the degrees of anxiety between boys and girls, with girls being more susceptible to worry than boys.

Rimonda et al. (2020), conducted a research to determine whether cinematherapy can help students feel less anxious about their academic performance. A total of 7 SMP Metro 1 students in total served as the study's subjects. According to statistical analysis, it was found that cinematherapy can help pupils feel

less anxious about their academic performance. The results of this study demonstrate that watching films helps students at SMPN 1 in Metro, Lampung feel less anxious about their academic performance. In addition to junior high school, cinematherapy can also be practiced in other cultures and at other levels of education, such high school, or a vocational program.

The goal of the study was to examine how adolescents' levels of academic anxiety relate to the socioemotional climate of their schools. The study's findings Indicated that among adolescents in the Ludhiana area, there is a link between academic anxiety and the socioemotional climate of the classroom. This suggests that teenagers who perceive their socioemotional school climate more positively report less anxiety about their academic performance. The findings also indicate that while gender did not significantly affect academic anxiety, demographic location did considerably affect it. Since lower levels of academic anxiety are indicated by higher scores on a scale, the fact that urban adolescents have significantly lower mean scores than rural adolescents in terms of academic anxiety suggests that urban adolescents have significantly lower levels of academic anxiety than their rural counterparts. The outcome also demonstrates that, while gender did not considerably affect academic anxiety, demographic location did significantly affect it.

A study was done by Jabeen & Andrabi (2018), to examine the patterns of academic anxiety in adolescents in Rajouri, Jammu & Kashmir, India, as well as the links between academic anxiety and academic accomplishment in Rajouri youth., which included 312 teenagers from the area found that academic anxiety is common among the district's teenagers, with the majority of them reporting moderate to severe levels of worry. Based on the findings, it can be said that gender and the type of school attended by teenagers are major predictors of academic anxiety, and that anxiety is inversely connected with academic achievement. The study's conclusions showed how important it is to support efforts to minimize anxiety at the family and school levels because it can impede teenagers' academic development

**Objectives of the study:**

1. To identify different dimensions of academic anxiety experienced by students, such as lack of confidence, worry, emotionality, and interference.
2. To provide insights into the specific factors that contribute to academic anxiety,
3. To provide a standardized and reliable tool for researchers and practitioners to use in studying and addressing academic anxiety.

**Methodology**

The objective of this study was to construct a valid tool to measure academic anxiety. This study executes through a four-step tool development process:

**1. Planning**

The purpose of the first phase was to fully develop the research questions and objectives targeted by the tool. The first step was to study and evaluate the existing research and the related tools.

Variables:

Lack of confidence – In the context of academic success, academic anxiety and of confidence frequently go hand in hand. Academic anxiety can make students feel stressed, frustrated, and worried about their ability to perform effectively. Students may start to doubt their capacity to succeed as a result, which might cause them to lack confidence.

Emotionality – Emotionality has been linked to a number of negative effects on academic performance, according to studies. Results of regressively analysed data show that in children who already exhibit anxiety symptoms, academic success decreases as anxiety rises.

Worry – Worry is a distracting thought that makes it difficult to concentrate and finish an academic job. Imagining failure, feeling inferior, or becoming obsessed on the negative

Interference – Academic performance is significantly impacted by anxiety in students. This implies that one of the main or key factors affecting pupils' academic performance is their concern.

**2. Construction**

The main purpose of the second step was to construct an item pool and check for reliability and validity:

An item pool of 50 items including all four dimensions was prepared. A minimum of 12 questions of each dimension was designed. The 50-item questionnaire was developed out of which 31 were finalized on the recommendation of the panel of experts and pilot study. Grammatical errors were corrected.

**3. Qualitative Evaluation**

The third step focused on the data collection for this study. Data from 413 students of Lovely Professional University, Phagwara was collected. The random

probability research design was used to select the sample of students from Lovely Professional University. The participants aged from 18 to 26 years of age. The sample consists of university students of graduation and post-graduation. The data was collected through offline forms and online google forms.

## 4. Validation

The fourth step focused on the standardization of the tool. In line with this the validity and reliability of the test was measured.

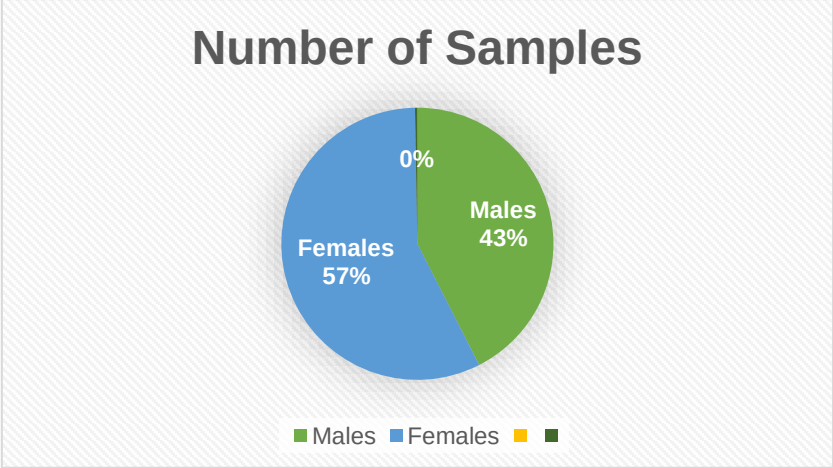
**Design of the study:**

The random probability sampling research design was used in the present study.

**Sample**

In this study, 413 have been selected. The random probability sampling was used to select the sample of students from Lovely Professional University. The participants aged from 18 to 26 years of age. The sample consists of university students of graduation, post-graduation, and masters. The students belong to varying cultural backgrounds.

**Sample Structure:**




Males: 176 Females:237

**Tools used:** A self-constructed tool to measure academic anxiety, LAAS, was used in the study.

**Tool Design:**

**Table-1:** Item total Statistics

| 1st Draft | | | | | |
|---|---|---|---|---|---|
| Item No | Item Selection | Item No | Item Selection | Item No | Item Selection |
| Item 1 | Taken | Item 12 | Taken | Item 23 | Taken |
| Item 2 | Taken | Item 13 | Deleted | Item 24 | Taken |
| Item 3 | Taken | Item 14 | Taken | Item 25 | Taken |
| Item 4 | Taken | Item 15 | Taken | Item 26 | Taken |
| Item 5 | Taken | Item 16 | Taken | Item 27 | Taken |
| Item 6 | Taken | Item 17 | Taken | Item 28 | Taken |
| Item 7 | Taken | Item 18 | Taken | Item 29 | Taken |
| Item 8 | Taken | Item 19 | Taken | Item 30 | Taken |
| Item 9 | Taken | Item 20 | Taken | Item 31 | Taken |
| Item 10 | Taken | Item 21 | Taken | | |
| Item 11 | Taken | Item 22 | Taken | | |

**Reliability**

Reliability refers to the consistency of a measure. It refers to how consistently a method measures something. If the same result can be consistently achieved by using the same methods under the same circumstances, the measurement is considered reliable. There are three types of consistency: over time (test-retest reliability), across items (internal consistency), and across different researchers (inter-rater reliability). Cronbach's alpha is a statistical measure commonly employed to assess the internal consistency reliability of a scale.

**Table 2:** Reliability of the Assessment Lovely Academic Anxiety Scale

| Cronbach's Alpha | N of Items |
|---|---|
| .943 | 30 |

The above table shows the result of .943, this denotes excellent reliability (94%).

Table 3 gives the statistics of the items. Based on the information provided by Cronbach alpha, it is suggested that question number 13 be removed since it is a positively worded question and scoring was done according to the negative scoring system.

**Table 3:** Final selected Item Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|
| Item 1 | 84.97 | 319.999 | .419 | .943 |
| Item 2 | 84.52 | 317.425 | .502 | .942 |
| Item 3 | 84.46 | 323.108 | .352 | .944 |
| Item 4 | 85.00 | 322.070 | .376 | .944 |
| Item 5 | 84.62 | 319.966 | .444 | .943 |
| Item 6 | 84.52 | 312.697 | .601 | .941 |
| Item 7 | 84.69 | 312.860 | .613 | .941 |
| Item 8 | 84.67 | 309.790 | .693 | .940 |
| Item 9 | 84.13 | 315.575 | .578 | .942 |
| Item 10 | 84.45 | 313.165 | .618 | .941 |
| Item 11 | 84.21 | 321.780 | .396 | .943 |
| Item 12 | 84.43 | 315.502 | .584 | .942 |
| Item 14 | 84.96 | 313.863 | .605 | .941 |
| Item 15 | 84.64 | 312.013 | .647 | .941 |
| Item 16 | 84.61 | 311.215 | .677 | .941 |
| Item 17 | 84.48 | 317.454 | .531 | .942 |
| Item 18 | 84.73 | 319.319 | .459 | .943 |
| Item 19 | 84.42 | 320.531 | .463 | .943 |
| Item 20 | 84.85 | 308.806 | .666 | .941 |
| Item 21 | 84.47 | 308.405 | .732 | .940 |
| Item 22 | 84.62 | 310.061 | .702 | .940 |
| Item 23 | 84.76 | 309.177 | .679 | .941 |
| Item 24 | 84.88 | 309.862 | .659 | .941 |
| Item 25 | 84.43 | 310.580 | .664 | .941 |
| Item 26 | 84.62 | 311.061 | .596 | .942 |
| Item 27 | 84.62 | 309.857 | .656 | .941 |
| Item 28 | 84.85 | 309.974 | .660 | .941 |
| Item 29 | 84.70 | 309.391 | .671 | .941 |
| Item 30 | 84.17 | 317.345 | .545 | .942 |
| Item 31 | 84.42 | 314.011 | .552 | .942 |

## Validity

The degree to which theory and evidence support how test results are interpreted considering suggested uses is referred to as validity. A body of studies showing the connection between the test and the behaviour it is meant to assess, as opposed to a single number, determines validity, not a single statistic. Validity comes in four flavors: face validity, criterion-related validity, construct validity, and content validity. These different validity types assess distinct aspects, such as representativeness of test content, the relationship between test scores and external criteria and the underlying theoretical contructs being measured.

**Table-4:** Relationship of items

| | Item 1 | Item 2 | Item 3 | Item 4 | Item 5 | Item 6 | Item 7 | Item 8 | Item 9 | Item 10 | Item 11 | Item 12 | Item 13 | Item 14 | Item 15 | Item 16 | Item 17 | Item 18 | Item 19 | Item 20 | Item 21 | Item 22 | Item 23 | Item 24 | Item 25 | Item 26 | Item 27 | Item 28 | Item 29 | Item 30 | Academic |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item 1 | 1 | .311** | .303** | .226** | .212** | .309** | .318** | .324** | .261** | .244** | .140** | .349** | .320** | .294** | .303** | .288** | .299** | .186** | .277** | .298** | .257** | .220** | .202** | .236** | .230** | .245** | .248** | .280** | .185** | .193** | .462** |
| Item 2 | | 1 | .306** | .236** | .442** | .464** | .370** | .365** | .301** | .425** | .139** | .369** | .384** | .380** | .386** | .442** | .258** | .321** | .345** | .299** | .245** | .200** | .256** | .292** | .215** | .278** | .260** | .273** | .270** | .216** | .537** |
| Item 3 | | | 1 | .183** | .301** | .359** | .297** | .185** | .252** | .283** | .136** | .244** | .191** | .338** | .317** | .248** | .182** | .158** | .187** | .256** | .203** | .163** | .148** | .182** | .122* | .147** | .167** | .266** | .179** | .100* | .395** |
| Item 4 | | | | 1 | .284** | .236** | .272** | .307** | .150** | .165** | .149** | .241** | .286** | .307** | .266** | .217** | .304** | .216** | .224** | .251** | .217** | .228** | .233** | .234** | .213** | .211** | .306** | .260** | .157** | .204** | .419** |
| Item 5 | | | | | 1 | .422** | .331** | .306** | .251** | .371** | .130** | .330** | .309** | .357** | .279** | .365** | .244** | .322** | .214** | .252** | .242** | .235** | .242** | .241** | .191** | .187** | .202** | .292** | .230** | .246** | .483** |
| Item 6 | | | | | | 1 | .616** | .445** | .325** | .459** | .239** | .506** | .457** | .464** | .408** | .340** | .308** | .276** | .402** | .440** | .344** | .310** | .310** | .346** | .261** | .354** | .379** | .423** | .277** | .255** | .635** |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| .648** | .722** | .611** | .651** | .441** | .617** | .638** | .682** | .706** | .565** | .500** | .500** | .696** | .757** | .728** | .710** | .691** | .694** | .635** | .688** | .690** | .701** | | | | |
| .243** | .351** | .394** | .338** | .236** | .228** | .346** | .363** | .368** | .303** | .211** | .240** | .437** | .424** | .432** | .468** | .473** | .462** | .535** | .438** | .410** | .432** | | | | |
| .272** | .329** | .450** | .424** | .293** | .310** | .232** | .352** | .375** | .278** | .249** | .329** | .380** | .428** | .413** | .401** | .392** | .526** | .399** | .361** | .334** | .442** | | | | |
| .363** | .521** | .342** | .446** | .271** | .348** | .390** | .446** | .450** | .271** | .312** | .274** | .513** | .524** | .525** | .534** | .508** | .480** | .419** | .569** | .629** | 1 | | | | |
| .422** | .480** | .303** | .392** | .250** | .365** | .400** | .405** | .426** | .321** | .315** | .262** | .566** | .557** | .557** | .540** | .527** | .492** | .441** | .634** | 1 | | | | | |
| .386** | .468** | .391** | .417** | .255** | .385** | .417** | .380** | .442** | .262** | .296** | .219** | .572** | .525** | .559** | .521** | .520** | .535** | .534** | 1 | | | | | | |
| .326** | .463** | .370** | .363** | .278** | .249** | .318** | .310** | .354** | .242** | .253** | .278** | .462** | .495** | .496** | .557** | .612** | .514** | 1 | | | | | | | |
| .355** | .476** | .502** | .406** | .252** | .326** | .361** | .394** | .423** | .333** | .229** | .298** | .539** | .548** | .538** | .614** | .552** | 1 | | | | | | | | |
| .336** | .496** | .309** | .378** | .257** | .319** | .405** | .406** | .481** | .325** | .251** | .301** | .551** | .525** | .575** | .675** | 1 | | | | | | | | | |
| .333** | .491** | .383** | .449** | .265** | .301** | .365** | .372** | .481** | .331** | .282** | .353** | .564** | .629** | .642** | 1 | | | | | | | | | | |
| .395** | .548** | .402** | .390** | .278** | .391** | .453** | .406** | .517** | .329** | .284** | .347** | .603** | .718** | 1 | | | | | | | | | | | |
| .446** | .526** | .436** | .434** | .350** | .441** | .437** | .467** | .484** | .373** | .371** | .426** | .512** | 1 | | | | | | | | | | | | |
| .391** | .490** | .378** | .395** | .124* | .318** | .477** | .383** | .483** | .326** | .263** | .321** | 1 | | | | | | | | | | | | | |
| .273** | .298** | .372** | .316** | .233** | .332** | .248** | .257** | .316** | .364** | .203** | 1 | | | | | | | | | | | | | | |
| .354** | .326** | .282** | .234** | .279** | .378** | .325** | .313** | .386** | .268** | 1 | | | | | | | | | | | | | | | |
| .316** | .365** | .371** | .372** | .225** | .382** | .421** | .409** | .452** | 1 | | | | | | | | | | | | | | | | |
| .466** | .539** | .402** | .459** | .256** | .443** | .478** | .545** | 1 | | | | | | | | | | | | | | | | | |
| .494** | .502** | .428** | .470** | .302** | .435** | .535** | 1 | | | | | | | | | | | | | | | | | | |
| .450** | .439** | .305** | .391** | .209** | .391** | 1 | | | | | | | | | | | | | | | | | | | |
| .549** | .434** | .345** | .422** | .321** | 1 | | | | | | | | | | | | | | | | | | | | |
| .339** | .314** | .354** | .277** | 1 | | | | | | | | | | | | | | | | | | | | | |
| .367** | .455** | .447** | 1 | | | | | | | | | | | | | | | | | | | | | | |
| .342** | .466** | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| .509** | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Item 7 | Item 8 | Item 9 | Item 10 | Item 11 | Item 12 | Item 13 | Item 14 | Item 15 | Item 16 | Item 17 | Item 18 | Item 19 | Item 20 | Item 21 | Item 22 | Item 23 | Item 24 | Item 25 | Item 26 | Item 27 | Item 28 | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Item 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | .431** | .578** |
| Item 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | .592** |
| Academic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

## RESULT

**Data analysis** –

The total number of respondents were 413. 176 Males and 237 Females between the age groups of 18 to 26 years.

**Statistical analysis:**

SPSS-20 software was used to analyze the data. The Cronbach's alpha was reported and interpreted. The Cronbach's Alpha data were also used to create an item-total statistics table in the event that an item was deleted. Items whose elimination raised the Cronbach's Alpha score or had a low connective item correlation were taken into consideration for removal from the tool.

Sample descriptive statistics like mean and standard deviation for the measurements are depicted in the below table –

**Table-5:** Descriptive Statistics of Lovely Academic Anxiety Scale

| N | Range | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| 413 | 90.00 | 30.00 | 120.00 | 88.5714 | 18.83649 |

The following table shows the item statistics for all 30 questions. Considering the usage of a 4-point Likert scale, a mean score of around 2.9 is considered acceptable. The table indicates that there is only a minor positive or negative deviation from this average score of 2.9 for al 30 items, which is relatively small.

**Table-6:** Descriptive Statistics of scale items

| Items | Mean | Std. Deviation | Analysis N |
|---|---|---|---|
| I feel like I don't have enough time to do anything. | 2.54 | .979 | 413 |
| I tend to compare myself with others. | 3.00 | .965 | 413 |
| I feel like my teachers/parents don't appreciate my efforts. | 3.06 | .921 | 413 |
| I usually find myself zoned out in class thinking of other things I have to complete. | 2.51 | .939 | 413 |
| I feel like I'm being judged by everyone. | 2.90 | .932 | 413 |
| I fear that my future is not as bright as others. | 3.00 | 1.029 | 413 |
| I feel less confident about academic tasks. | 2.82 | 1.003 | 413 |
| I get frustrated before or during a test. | 2.85 | 1.017 | 413 |
| I experience difficulty in breathing before appearing for a test. | 3.38 | .934 | 413 |
| I worry about what my peer will think of me if I perform badly on a test. | 3.07 | .983 | 413 |
| I have had to exit a testing area before I finish. | 3.30 | .915 | 413 |
| I hold myself back from academic opportunities fearing I might fail. | 3.09 | .928 | 413 |
| I feel worried about my academic performance. | 2.55 | .971 | 413 |
| I experience negative self-talk related to my academic performance. | 2.87 | .990 | 413 |
| I feel physically tensed related to my academic performance. | 2.91 | .982 | 413 |
| I seek reassurance or validation from others regarding my academic abilities. | 3.03 | .916 | 413 |
| I experience a loss of interest or motivation in academic pursuits. | 2.78 | .940 | 413 |
| I have hard time accepting constructive criticism or feedback. | 3.09 | .864 | 413 |
| I worry a lot about exams. | 2.67 | 1.095 | 413 |
| I feel helpless before any test or exam. | 3.04 | 1.018 | 413 |
| I feel immense pressure and overwhelmed from exams. | 2.89 | .994 | 413 |
| I am unable to relax before any exam. | 2.75 | 1.060 | 413 |
| I feel worried at night before exams. | 2.63 | 1.061 | 413 |
| I feel my heart beating very fast during an exam. | 3.09 | 1.025 | 413 |
| I am unable to sleep properly a night before an exam. | 2.89 | 1.110 | 413 |
| I feel worried about failing the test/exam even after preparing for it. | 2.89 | 1.066 | 413 |
| I get worried that I'll forget everything I studied during test/exam. | 2.66 | 1.055 | 413 |
| I tend to overthink about everything while attempting a test/exam. | 2.82 | 1.064 | 413 |
| I experience cramps and tension in muscles while attempting a test/exam | 3.34 | .899 | 413 |
| I am unable to eat properly during my test/exam period. | 3.10 | 1.048 | 413 |

**Discussion**

The tool under consideration is highly reliable, with a reliability value that is measured by Cronbach's Alpha. The high reliability value indicates that the tool is consistent and stable in measuring the construct it is designed to assess. Additionally, there is a high correlation between the items in the tool, which further strengthens its reliability. This high correlation between the items indicates that they are measuring the same construct, and there is minimal variability between them. Overall, the tool can be considered reliable and valid, as it consistently measures the construct it is designed to assess, making it a trustworthy and effective tool for its intended purpose.

**Conclusion**

The main purpose of this study was to create a tool to measure academic anxiety in university students. Through literature review an extensive understanding of the topic was established which further helped in the construction of the tool.

An item pool 78 items was created for four dimensions, out of which only 30 items were finalized through panel assessment and pilot study. The data was collected with the help of both offline and online forms and the analysis was done using the SPSS-20.0 software.

Despite the construction of a reliable tool, there were some limitations. The analyzed data was collected from a limited set of samples. The analysis of a more diverse set of data with more numbers of sample will possibly provide a better result. Another limitation is the higher number of data collection. A large population of varied data will help in proper understanding of each dimension and their correlation with academic anxiety.

This study will assist people in understanding academic anxiety in day-to-day life during examinations. Measuring academic anxiety through the development of a psychometric tool can provide valuable insights into the experiences of students. The tool was designed to measure various aspects of academic anxiety, such as workload, academic pressure, and satisfaction. Its use in research and practice can help identify individuals who may be at risk of academic anxiety and inform potential interventions to alleviate its negative effects. Standardizing the tool can also enable comparisons across different educational settings and populations, ultimately contributing to a better understanding of the relationship between academic anxiety and student wellbeing. With the information gathered, counseling services, mental health education, and campus policies that promote positive mental health can be implemented. This tool will help us to assess the levels of pressure among the university students. Individual help can be provided to students with high levels obtained in the tool. Direct interventions or counselling and therapies can be provided to the students undergoing high levels of academic anxiety.

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