

ARTICLE



To Investigate the Relationship between Stress and Academic Procrastination among University Students

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Abstract

The present study explores the relationship between perceived stress and academic procrastination among university students in Khyber Pakhtunkhwa (KPK), Pakistan. A sample of 400 students from various universities participated, using the Perceived Stress Scale (PSS-10) and the Academic Procrastination Scale (APS) to collect data. Perceived stress refers to the degree to which individuals feel their lives are unpredictable, uncontrollable, or overwhelming. Academic procrastination, the intentional delay of academic tasks despite knowing potential negative consequences, is a growing concern in educational settings. Employing a quantitative survey methodology, the study aimed to measure the correlation between perceived stress and academic procrastination. Statistical techniques including correlation analysis, descriptive statistics, and independent sample T-tests were utilized to examine formulated hypotheses. The findings indicate a significant positive correlation between perceived stress and academic procrastination among university students in KPK, Pakistan. Understanding this relationship is crucial for developing strategies and interventions to help students effectively manage stress and reduce procrastination in academic environments.

Key Words

Perceived Stress, Academic Procrastination, University Students, Khyber Pakhtunkhwa, Pakistan

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Introduction

In today's academic atmosphere, students are under growing pressure to satisfy high expectations throughout their educational journeys. While university life is academically stimulating, it also presents a number of psychological and emotional problems that might impede academic performance and personal development. Among these concerns, stress and academic procrastination have emerged as major issues influencing students' mental health, productivity, and academic performance (Misra and McKean, 2000). Stress, which happens when perceived expectations surpass one's coping abilities, is widespread among university students who must balance a variety of duties such as academic workload, exams, time management, financial concerns, and social pressures (Beiter et al., 2015).

At the same time, academic procrastination, defined as the intentional postponing of academic duties despite the possibility of negative repercussions (Steel, 2007), is a common student behavior pattern. Procrastination is generally caused by a lack of self-regulation and is associated with fear of failure, low motivation, and stress. Understanding how these two aspects interact is critical for creating effective support systems in higher education.

Stress

Stress is a frequent psychological response to demanding or difficult events that endanger an individual's well-being or exceed their perceived coping capacities (Lazarus & Folkman, 1984). The move to higher education entails handling additional academic duties, adjusting to new environments, managing time independently, and dealing with future uncertainties—all of which can contribute to heightened stress levels (Misra and McKean, 2000).

Academic stress is one of the most commonly reported types of stress among students. It is caused by a variety of factors, including extensive coursework, frequent exams, competitive grading systems, and the pressure to meet high

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academic standards (Robotham and Julian, 2006). When students are overwhelmed by academic responsibilities, their psychological and emotional resources might be taxed, resulting in cognitive tiredness, emotional depletion, and behavioral disengagement (Pfeifer et al., 2021).

According to research, stress has physiological implications in addition to being an emotional experience. It activates the body's stress response mechanism, resulting in the release of cortisol and other stress chemicals. Prolonged exposure to these hormones can impair concentration, decision-making, and memory functions, all of which are crucial for academic achievement. As a result, elevated stress levels among university students are frequently related with lower academic production, poor time management, and an increased chance of avoidance behaviors such as procrastination (Sirois, 2007).

A number of psychosocial factors, including personality traits, coping styles, and perceived social support, all have an impact on stress. Students who use poor coping strategies, such as avoidance, denial, or an overreliance on digital distractions, are more likely to be stressed (Folkman & Moskowitz, 2004). Adaptive coping strategies, such as problem solving, seeking social support, and time management, have been shown to protect against negative stress effects and promote academic success (Carver et al., 1989). Family pressure, financial constraints, and uncertainty about post-graduate employment prospects all contribute to students' stress levels.

Academic Procrastination

Academic procrastination, while frequently trivialized, is a serious behavioral problem in university settings. Procrastination can result in incomplete assignments, poor grades, increased guilt, and even long-term psychological distress (Tice & Baumeister, 1997). While procrastination is commonly viewed as a simple case of laziness, research shows that it is a complex self-regulation failure influenced by emotional and cognitive factors, including stress (Sirois, Melia-Gordon, & Pychyl, 2003).

Academic procrastination is defined as intentionally delaying academic tasks despite knowing that the delay will have negative consequences (Steel, 2007). This delay is the result of deeper psychological mechanisms such as anxiety avoidance, perfectionist tendencies, and a lack of motivation, rather than simply poor time management. Students who procrastinate may engage in other activities to avoid the discomfort associated with starting or finishing a task (Ferrari et al., 1995). These avoidant behaviors frequently provide temporary relief but eventually lead to increased stress and poor academic performance.

Procrastination can be classified into three types: decisional procrastination (delaying decisions), behavioral procrastination (delaying task initiation), and academic procrastination (delaying studying or submitting assignments) (Schulenburg 2004). Academic procrastination is especially problematic for university students because it has a direct impact on their academic success and future prospects. According to research, students who frequently procrastinate are more likely to struggle academically, feel ashamed, and have lower overall life satisfaction (Seo, 2013).

Furthermore, procrastination is frequently linked to maladaptive personality traits like impulsivity, low conscientiousness, and emotional instability (Steel & Klingsieck, 2016). These characteristics may impair students' ability to plan, organize, and carry out academic tasks effectively. In high-pressure academic settings, procrastination can become a coping mechanism, allowing students to avoid tasks that cause anxiety or self-doubt. However, repeated procrastination as a coping mechanism can lead to chronic stress and impair psychological resilience.

Technological distractions, such as social media and smartphone use, exacerbate the problem by providing an ongoing escape from academic responsibilities. Students may rationalize these distractions as harmless breaks, but they frequently lead to extended delays, increasing the pressure as deadlines approach (Panek, 2014). This behavior not only reduces productivity, but it also perpetuates a cycle of guilt, avoidance, and low academic engagement.

Stress and Academic Procrastination

Stress is a psychological and physiological reaction to external or internal pressures that are perceived as difficult or threatening (Lazarus and Folkman, 1984). Academic stress is one of the most common stressors among university students, caused by factors such as exam pressure, deadlines, academic workload, and the constant pursuit of success

(Robotham & Julian, 2006). In the context of Pakistani universities, particularly in Khyber Pakhtunkhwa (KPK), students face additional challenges such as financial burdens, family expectations, and limited access to academic resources, which can increase stress levels (Khan et al., 2015). High levels of stress not only have an impact on students' mental health, but they can also impair cognitive function and academic performance.

Academic procrastination, defined as the deliberate delay of important academic tasks despite the possibility of negative consequences, is a common problem in higher education (Solomon & Rothblum, 1984). It is frequently associated with low self-esteem, poor time management, perfectionism, and emotional regulation issues. Procrastination is more than just being lazy; it is a complex behavior that is frequently triggered or exacerbated by stress and anxiety. According to research, students who are under a lot of stress are more likely to procrastinate as a way to avoid problems or cope emotionally. This avoidance eventually leads to feelings of guilt, poor academic performance, and increased psychological distress.

While both stress and academic procrastination are common among students, their link is frequently overlooked. Procrastination may temporarily relieve stress, but it eventually leads to a cycle of increased academic pressure and emotional burden. Understanding how these two variables interact can help students improve their academic well-being. As a result, the purpose of this study is to investigate the relationship between stress and academic procrastination among university students in KPK, Pakistan, with the goal of identifying patterns and developing interventions to promote healthier academic habits and emotional resilience.

Theoretical Framework

This theoretical framework investigates the dynamic relationship between stress and academic procrastination in university students, drawing on Lazarus and Folkman's Transactional Model of Stress and Coping (1984) and Steel and Koenig's Temporal Motivation Theory (2006). These psychological theories offer a comprehensive perspective on how stress affects students' motivation, decision-making, and time management behaviors in academic settings.

Transactional Model of Stress and Coping

According to the Transactional Model of Stress and Coping, stress is caused by an individual's interaction with their environment, as well as how they assess and respond to potentially threatening situations (Lazarus and Folkman, 1984). Exams, deadlines, and workloads are common challenges that students face in academic settings. When these demands are assessed as exceeding their coping resources, stress is likely to arise. This process consists of two steps: primary appraisal (determining the significance of a stressor) and secondary appraisal (evaluating one's coping abilities). When students perceive academic tasks as overwhelming and believe they are incapable of completing them, they may experience emotional distress, such as anxiety or helplessness, which contributes to avoidance behavior. Academic procrastination, in this context, becomes a coping strategy to temporarily relieve stress, which ironically increases stress in the long run due to accumulated pressure and guilt (Sirois, 2007).

Temporal Motivation Theory

Temporal Motivation Theory (Steel & König, 2006) explains procrastination in terms of four key variables: expectancy (likelihood of success), value (importance of the task), delay (time until the reward), and impulsiveness. According to this model, tasks perceived as low value or with distant deadlines are more likely to be delayed, particularly by people with higher impulsivity. Stress depletes students' cognitive and emotional resources, reducing their ability to self-regulate and maintain focus (Tice et al., 2001). As a result, they may struggle to initiate or complete academic tasks, especially those perceived as difficult or uninteresting. Stress can also distort their perception of academic goals, resulting in task avoidance and procrastination.

Finally, these theoretical frameworks provide a multidimensional understanding of the relationship between stress and procrastination. The former explains how stress is processed emotionally and cognitively, whereas the latter explains the motivational dynamics that drive procrastination. Together, they provide a solid theoretical foundation for investigating the mutually reinforcing relationship between stress and procrastination in university students.

The link between university students and academic stress is complex and deeply ingrained in the demands of higher education. While academic life provides opportunities for growth, learning, and achievement, it also presents challenges such as heavy workloads, tight deadlines, and performance expectations. These pressures frequently contribute to academic procrastination— putting off important tasks despite knowing the consequences. Stress and procrastination have a cyclical relationship, not a one-way street. Procrastination can be both the cause and the result of stress. This literature investigates how these two variables interact to influence students' academic experiences and well-being (Sirois, 2014; Tice and Baumeister, 1997).

Academic procrastination has been identified as a common problem among students, particularly in the university setting. It is the deliberate delay in beginning or completing academic tasks and is frequently associated with negative emotions such as guilt, anxiety, and stress. Steel (2007) defined procrastination as a deliberate delay in carrying out a planned course of action despite expecting to be worse off as a result. Several studies have found that students who procrastinate frequently experience increased stress as deadlines approach, creating a cycle of avoidance and anxiety (Tice & Baumeister, 1997).

Lazarus and Folkman (1984) define stress as the result of a demand-resource imbalance. Academic stress is defined as pressures related to grades, time management, expectations from family or instructors, and peer competition. Misra and McKean (2000) found that high levels of academic stress can have an impact not only on mental health but also on motivation, concentration, and decision-making. When students are overwhelmed by academic tasks, they are more likely to procrastinate as a temporary relief from the discomfort.

Several studies show a link between stress and academic procrastination. According to Sirois (2014), people who are stressed often struggle with self-regulation, which makes it difficult to initiate or complete tasks. Similarly, Balkis and Duru (2017) discovered a significant positive relationship between perceived academic stress and procrastination among university students. This suggests that stress can cause students to postpone their academic responsibilities, increasing their stress as deadlines approach.

Cognitive and emotional factors both play a role. Students with low self-efficacy, perfectionism, or fear of failure are more likely to procrastinate when confronted with difficult academic task (Schraw et al., 2007). Furthermore, Rabin et al. (2011) demonstrated that stress impairs executive functioning, such as planning and focus, leading to increased procrastination. Procrastination may temporarily relieve anxiety, but it frequently leads to increased long-term stress and poor academic performance.

In conclusion, research has revealed a consistent pattern of interaction between academic stress and procrastination. While stress causes avoidance and delay, procrastination exacerbates stress, creating a vicious cycle. Despite the growing body of research, more region-specific studies are needed, particularly in South Asian contexts such as Pakistan. Investigating the link between academic stress and procrastination among university students in Khyber Pakhtunkhwa (KPK) can provide new insights and inform mental health interventions and academic support programs.

Rationale

The purpose of this study is to investigate the relationship between stress and academic procrastination among university students in Karachi, Pakistan. Academic life is frequently associated with a variety of stressors, such as academic pressure, deadlines, and social expectations, all of which can have a negative impact on students' mental health and performance. Procrastination, defined as the deliberate delay of tasks despite knowing the consequences, is a common student behavior that can lead to poor academic performance.

Several studies have found that stress and procrastination are inextricably linked, with stress either causing avoidance behavior or being the result of procrastination. According to Sirois (2016), higher stress levels are associated with greater academic procrastination. Understanding this relationship is especially important for university students, as prolonged stress and delays in academic responsibilities can impair learning, reduce motivation, and induce feelings of guilt or anxiety. This study will shed light on how stress influences procrastination behavior in the academic setting, allowing educators and mental health professionals to develop effective interventions. The findings can be used to

promote time management, stress reduction strategies, and student support services aimed at improving academic habits and mental health.

Objectives

- To investigate the link between stress and academic procrastination among university students.
- To investigate gender differences in academic procrastination among university students.

Hypothesis

H1: There is a significant positive relationship between stress and academic procrastination among university students.

H2: There is significant gender differences in academic procrastination among university students.

Methodology

Research design

This study used a correlational survey research design to look at the link between stress and academic procrastination among university students. The study used a quantitative method, which involved collecting and analyzing numerical data using standardized questionnaires. According to Creswell (2002), quantitative research is used to test objective theories by examining relationships between variables that are measured and statistically analyzed. This design assisted in determining the degree to which stress levels are associated with academic procrastination. The final written report is structured as follows: introduction, literature and theory, methods, results, and discussion (Creswell, 2008).

Survey

Survey research analyzes a sample of a population to provide a quantitative or numerical description of its trends, attitudes, or opinions. It includes cross-sectional and longitudinal studies that collect data through questionnaires with the goal of generalizing from a sample to the population (Babbie, 1990). The survey instruments to be used, the relationship between the variables, the research questions, specific survey items, and the steps to be taken in analyzing and interpreting survey data (Creswell 2002). The survey method was chosen for data collection because it provides a structured and standardized approach to gathering responses from a large sample. Structured questionnaires were distributed to university students via online platforms. The survey method is useful for assessing attitudes, behaviors, and psychological states such as stress and procrastination.

Sample

The sample included 400 university students (both males, females) selected through purposive sampling from various public and private universities. Participants were aged 18 to 25 years, representing typical undergraduate and postgraduate students enrolled in university. This method allowed the researcher to target individuals who are likely to experience both stress and procrastination due to academic pressures.

Khyber Pakhtunkhwa (KP) is home to a diverse population of university students enrolled across over 30 public and several private universities. While exact total enrollment figures are limited, data from major universities suggests a student's population exceeding 100,000 using cochran's formula for large population with 95% confidence level and 5% margin of error, the required sample size was calculated to be approximately 384 (Cochran 1977).

Inclusion Criteria: Including those whose Age are between 18 and 25 years, Enrolled in a university program are able to read and understand English.

Exclusion criteria: Except from the above all are excluded.

Operational Definitions

Stress

Stress is defined as the mental and emotional strain that individuals feel in response to academic pressure, workload, exams, and other university-related challenges. It was measured using Cohen et al.'s (1983) Perceived Stress Scale (PSS), a reliable and widely used instrument for assessing perceived stress levels.

Academic Procrastination

Academic procrastination is defined as the deliberate delay in beginning or completing academic tasks despite knowing that the delay may result in negative outcomes. It was measured using the Academic Procrastination Scale (APS) developed by Justin McCloskey and Shannon A. Scielzo, which assesses the frequency and severity of procrastination behaviors in an educational setting.

Instruments Demographic Sheet

The demographic information sheet comprises of gender and age. Study program and socioeconomic status

Perceived Stress scale (pss10)

The PSS 10 is a 10 item questionnaire developed by Sheldon Cohen, Thomas Kamarck and Robert mermelstien (1983). The PSS 10 is a 10 item self-report questionnaire that measure the degree to which situation's in one's life are appraised as stressful.

It consists of 10 questions, with 6 negatively worded and 4 positively worded items. Each item is rated on a 5-point Likert scale (0–4). Positive items are reverse-scored prior to calculating the total score. The PSS has been demonstrated to be reliable, with test-retest reliability coefficients ranging from 0.70 to 0.80. This means that if a person takes the PSS twice in a short period of time, they are likely to receive similar results both times.

Academic Procrastination Scale (Aps)

McCloskey and Scielzo developed the Academic Procrastination Scale (APS) to assess procrastination behavior, particularly in the academic setting. Academic procrastination is a common problem among students, negatively impacting academic performance, stress levels, and overall well-being. The APS consists of 25 items that were scored on a 5-point likert scale, with 1 indicating disagreement and 5 indicating agreement. The APS has high reliability (Cronbach's alpha = .95).

Ethical Consideration

This study was approved by the Psychology Department at Swabi Women's University. Participants provided informed consent prior to participating in the study and were informed that they could withdraw at any time during the data collection process. Participants were assured of their privacy and told that any information gathered would be kept private and used only for research purposes.

Procedure

To meet the requirements of the current study, 400 participants were chosen from various Khyber Pakhtunkhwa universities. The perceived stress scale (PSS-10) and the academic procrastination scale (APS) were administered to male and female participants. The students' consent was obtained prior to participation. The method and purpose of the study were briefly described. Participants were given instructions for the questionnaire. They were free to withdraw whenever they wanted. It was ensured that all information would be kept confidential and only used for research purposes. The results were generated to draw conclusions based on the analysis performed using SPSS.

Results

Table I

Psychometric Properties of the Study Major Variables/Scales (N=400)

Variable	α	M (SD)	Range	Skew	Kurt
PSS	.607	19.46(4.05)	8-29	.018	.110
APS	.849	76.45(15.59)	30-125	-.093	1.658

Note. PSS-10= Perceived Stress Scale, APS=Academic Procrastination Scale

Table I shows psychometric properties for the scale used in present study. The Cronbach's α for Perceived Stress Scale (PSS-10) was .60 (<.70) which indicating relatively normal internal consistency. The Cronbach's α value for Academic Procrastination Scale (APS) .87 (>.70) which indicated higher internal consistency.

Table 2*Correlation of study variables (N=400)*

S#	Variable	PSS	APS
1	PSS	--	.129**
2	APS	.129**	--

Note: Correlation is significant at 0.01 level (2-tailed).

Table 2 shows the Pearson-correlation of Perceived stress scale PSS-10 and Academic procrastination Scale APS among university students. As table results reveals that there is a significant positive correlation ($r = .129^{**}$) between stress and academic procrastination. Hence H1 was accepted

Discussion

The present research was conducted to explore the relationship between Perceived Stress and Academic Procrastination among university students. In this research study, correlational survey research design was used to collect data. The data was quantitative in nature as the researcher obtained quantified information. A total of 400 participants (M = 66, F = 334) were recruited through purposive sampling technique to draw the sample from the normal population of university students. The age range of the respondents was 18 to 25. The demographic information sheet comprised of gender, study program, age and socioeconomic status.

The Perceived Stress Scale (PSS-10) and Academic Procrastination Scale (APS) were administered on 400 participants including 66 males and 334 females. The results were interpreted and analyzed by Statistical Package for Social Sciences (SPSS).

This study hypothesized that there is a significant positive correlation between Perceived Stress and Academic Procrastination among KPK university students. The correlation between Perceived Stress and Academic Procrastination was determined by Pearson correlation. Correlation is significant at the 0.01 level (2-tailed). Table 2 in the results shows that the Pearson correlation of Perceived Stress and Academic Procrastination was found to be positive and statistically significant ($r = .129$, $p < .01$). Hence, H1 was accepted. The outcomes are consistent with earlier research showing that higher levels of stress are associated with greater academic procrastination tendencies among students (Sirois, 2014; Steel, 2007).

This study also hypothesized that there is a significant gender difference in academic procrastination. The significance of gender differences in Academic Procrastination was determined by using an independent sample t-test. An independent sample t-test comparing Academic Procrastination scores for males and females shows that there were significant differences ($t(df) = 79.79$, $p = .007$) in scores for group 1 (Male) (M = 82.33, SD = 19.45) and group 2 (Female) (M = 75.28, SD = 14.46). The magnitude of the difference in the means (7.04, 95% confidence interval 2.02 to 12.06) was statistically significant. Hence, H2 was accepted. The results of the current study support the hypothesis that male students exhibit significantly higher levels of academic procrastination than female students.

The results align with previous literature highlighting that procrastination tendencies are often higher in males compared to females due to differences in self-regulation, time management, and academic attitudes (Özer et al., 2009; Balkis & Duru, 2016).

Limitations and Suggestions

Some limitations and suggestions of this research study are as follows:

The present study only focused on university students, while individuals from other age groups or educational backgrounds may also experience academic procrastination due to stress, which was not explored in this study and can be further investigated in future research.

The study examined the relationship between perceived stress and academic procrastination, but it did not explore other potential contributing factors such as personality traits, time management skills, or motivation, which could be considered in future studies.

The research was limited to university students from KPK, so the findings cannot be generalized to students from other province of the country. Future research should consider recruiting a more diverse and representative sample, and data collection tools may be translated into Urdu or other regional languages to improve understanding and inclusivity.

Implications

The findings of this study can provide foundational data on perceived stress and academic procrastination among university students.

The information can assist parents, teachers, and counsellors in understanding how stress contributes to academic procrastination and guide them in supporting students effectively.

The study can inform the development of stress management and time management programs that help students reduce procrastination.

The results can advocate for universities to implement awareness campaigns and workshops that address stress coping mechanisms to minimize procrastination tendencies.

Conclusion

Keeping in view the findings of the current study, it is concluded that there exists a positive correlation between perceived stress and academic procrastination among university students of KPK. It has also been found that male students report significantly higher levels of academic procrastination as compared to female students.

However, considering the limitations of the current study, it is recommended that in future studies, data may be increased, and random sampling techniques may be used to obtain more accurate and generalizable results. Moreover, the inclusion of other variables such as personality traits, motivation may also be explored to gain a broader understanding of academic procrastination.

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