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The Effect of Stress on Academic Performance among Late Adolescents and the Mental Health

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Abstract

Academic stress has emerged as a critical concern affecting the mental health and educational outcomes of late adolescents. This study investigates the multifaceted relationship between stress and academic performance among late adolescents, with a particular emphasis on its implications for mental health. Adolescence is a pivotal developmental stage marked by significant biological, psychological, and social transitions, rendering this population especially vulnerable to stressors originating from academic environments. Pressures such as examination demands, heavy workloads, peer competition, parental expectations, and fear of failure contribute substantially to elevated stress levels among students. The research adopts a mixed-methods approach, combining quantitative data collection through structured questionnaires—including the Perceived Stress Scale (PSS), Generalized Anxiety Disorder Scale (GAD-7), and Academic Motivation Scale (AMS)—with qualitative insights gathered through semi-structured interviews and focus group discussions. A stratified random sample of 200–300 students from diverse educational institutions was selected to ensure representation across gender, academic performance levels, and socio-economic backgrounds. Findings indicate that while mild stress may occasionally function as a motivational stimulus, chronic and unmanaged stress significantly impairs cognitive functions critical to academic success, including memory retention, concentration, and problem-solving ability. Students experiencing high stress levels demonstrated reduced academic motivation, increased absenteeism, and a greater risk of academic burnout. Furthermore, the study reveals profound psychological consequences of sustained stress, including anxiety, depression, sleep disturbances, social withdrawal, and heightened vulnerability to long-term mental health disorders. The study underscores the urgent need for comprehensive support systems within educational and familial contexts. Recommendations include the integration of mental health programs and stress management workshops in schools, promotion of balanced and experiential learning approaches,

and the cultivation of open communication between students, parents, and educators. Encouraging healthy coping mechanisms such as mindfulness practices, physical activity, and effective time management is also emphasized. This research contributes to the broader understanding of adolescent psychological challenges and advocates for a holistic approach that harmonizes academic achievement with mental well-being, thereby fostering resilient and well-rounded individuals.

Keywords:

Adolescent stress, academic performance, mental health, late adolescence, psychological well-being.

Introduction

Late adolescence, typically defined as the developmental period between 17 and 21 years of age, is widely recognized as a critical transitional phase bridging childhood and adulthood. During this stage, individuals undergo profound biological, cognitive, emotional, and social changes. They begin to establish autonomy, form stable identities, and make decisions that significantly influence their future academic and professional trajectories. However, this period is also characterized by heightened vulnerability to stress due to the simultaneous demands arising from multiple domains of life.

One of the most prominent sources of stress during late adolescence is the academic environment. Students are expected to meet high academic standards, perform well in examinations, manage extensive coursework, and make crucial decisions regarding career paths. These expectations are often compounded by parental pressure, peer competition, and societal norms that equate academic success with personal worth and future stability. As a result, many adolescents experience persistent psychological stress that may exceed their coping capacities.

Psychological stress during this phase is not merely a temporary discomfort but a significant factor that can adversely affect both academic performance and mental health. Chronic stress has been shown to impair attention, reduce working memory efficiency, and hinder problem-solving abilities, all of which are essential for academic success. Furthermore, prolonged exposure to stress can disrupt emotional regulation, leading to increased vulnerability to anxiety, depression, and other psychological disorders.

In recent years, there has been growing concern about the rising levels of stress among adolescents, particularly in academic settings. This concern has intensified in the aftermath of global disruptions such as the COVID-19 pandemic, which introduced additional challenges including remote learning, reduced social interaction, and uncertainty about the future. These factors have collectively amplified stress levels and highlighted the urgent need to understand its impact more comprehensively.

Despite the increasing recognition of stress as a critical issue, there remains a need for context-specific research that examines how stress interacts with academic performance and mental health outcomes, especially within culturally unique settings such as India. Factors

such as collectivist family structures, societal expectations, and limited access to mental health resources may influence how stress is experienced and managed by adolescents.

Therefore, the present study aims to explore the relationship between perceived stress, academic performance (measured through Grade Point Average), and mental health outcomes among late adolescents in an academic context. By doing so, it seeks to contribute to a deeper understanding of how stress affects students and to inform the development of targeted interventions that can promote both academic success and psychological well-being.

2. Literature Review

The concept of psychological stress has been extensively studied within the field of psychology, with foundational contributions from Richard Lazarus and Susan Folkman (1984), who conceptualized stress as a dynamic interaction between an individual and their environment. According to their transactional model, stress arises when individuals perceive environmental demands as exceeding their available coping resources. This framework has been particularly influential in understanding stress within academic contexts, where students frequently encounter high expectations and limited coping mechanisms.

Academic stress has emerged as a major area of concern in adolescent psychology. It encompasses various stressors such as examination pressure, academic workload, time constraints, and fear of failure. Research by American Psychological Association (2022) highlights that adolescents today report higher stress levels than previous generations, with academic demands being one of the primary contributors. These stressors not only affect emotional well-being but also have measurable cognitive consequences.

A growing body of literature has established a strong link between stress and impaired academic performance. A systematic review by Pascoe et al. (2020) found that chronic academic stress negatively impacts concentration, memory consolidation, and motivation. These cognitive disruptions hinder effective learning and lead to lower academic achievement, often reflected in reduced Grade Point Averages (GPA). Additionally, stress has been associated with maladaptive coping strategies such as procrastination, avoidance, and substance use, which further exacerbate academic difficulties.

The relationship between stress and mental health outcomes among adolescents has also been extensively documented. According to the World Health Organization (2021), there has been a significant global increase in the prevalence of anxiety disorders and depressive symptoms among young people. Stress is identified as a key contributing factor in the onset and maintenance of these conditions. Adolescents experiencing high levels of stress are more likely to report symptoms such as irritability, sleep disturbances, emotional instability, and decreased life satisfaction.

In the Indian context, the National Mental Health Survey of India (2016) reported that approximately 9.8% of adolescents meet the diagnostic criteria for at least one mental health disorder. Academic stress, combined with societal expectations and limited mental health

awareness, plays a significant role in these outcomes. The highly competitive educational system in India, along with parental expectations for academic excellence, often intensifies stress levels among students.

The impact of the COVID-19 pandemic has further exacerbated stress among adolescents. Research by Raj Kumar (2020) indicates that the pandemic introduced additional stressors such as social isolation, disruption of daily routines, and uncertainty about academic and career prospects. Remote learning environments, while necessary, often lacked the structure and social support essential for effective learning, thereby increasing both academic stress and psychological distress.

Despite the substantial body of research on stress, gaps remain in understanding how these factors interact within specific cultural and regional contexts. In collectivist societies like India, family expectations, social comparisons, and cultural norms may shape the perception and impact of stress in unique ways. Moreover, limited access to mental health resources and persistent stigma surrounding psychological help-seeking behaviour further complicate the issue.

In summary, existing literature clearly indicates that academic stress is a multifaceted phenomenon with significant implications for both academic performance and mental health. However, there is a need for more localized and context-sensitive studies that examine these relationships in depth. The present study seeks to address this gap by investigating the interplay between perceived stress, academic outcomes, and mental health among late adolescents in an academic setting.

Here is the content separated clearly into **Study Design** and **Methodology** as two distinct sections:

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3. HYPOTHESIS

The Effect of Stress on Academic Performance Among Late Adolescents and Mental Health

Study Title	The Effect of Stress on Academic Performance Among Late Adolescents and Mental Health
Study Type	Cross-Sectional Descriptive Survey
Target Population	Late adolescents aged 17–21 years (N = 200)
Key Variables	Perceived Stress (PSS-10), Academic GPA, Mental Health (GHQ-12)
Statistical Tools	Pearson's Correlation, Multiple Linear Regression (SPSS v26.0)

Background / Rationale

Late adolescence is a critical developmental window during which academic demands, social expectations, and identity formation converge, creating fertile conditions for chronic psychological stress. Stress at this stage has been widely documented to compromise cognitive functioning,

emotional regulation, and academic engagement. Despite mounting evidence of its impact, limited attention has been devoted to understanding how perceived stress simultaneously damages both academic performance and mental health in this population. This study is therefore designed to systematically investigate these relationships and generate evidence to support targeted institutional interventions.

Study Objectives

1. To assess the level of perceived stress among late adolescents in academic settings.
2. To evaluate the relationship between perceived stress and academic performance (GPA).
3. To examine the association between stress and mental health outcomes (anxiety, depression).
4. To identify key stressors reported by students and explore gender-based differences.
5. To propose institutional recommendations for stress management and mental health support.

Research Hypotheses

Null Hypotheses (H_o)

H_{o1}: There is no significant relationship between perceived stress levels and academic performance (GPA) among late adolescents.

$H_{o1}a$: *There is a significant negative relationship between perceived stress and academic performance (GPA) among late adolescents.*

H_{o2}: There is no significant relationship between perceived stress and mental health outcomes among late adolescents.

$H_{o2}a$: *There is a significant positive relationship between perceived stress and poor mental health outcomes among late adolescents.*

H_{o3}: There is no significant gender difference in the experience of academic stress among late adolescents.

$H_{o3}a$: *There is a significant gender difference in the experience of academic stress among late adolescents.*

H_{o4}: Mental health outcomes do not significantly mediate the relationship between stress and academic performance.

$H_{o4}a$: *Mental health outcomes significantly mediate the relationship between perceived stress and academic performance.*

Expected Outcomes

It is anticipated that higher perceived stress will be significantly and negatively correlated with academic GPA, and positively correlated with psychological distress scores. The study is expected to demonstrate that mental health functions as a partial mediator in the stress–performance pathway. Gender-based differences in stress experiences are also predicted, with female participants more likely to report emotional exhaustion and male participants more likely to report performance anxiety. These outcomes are expected to provide a robust empirical basis for advocating structured mental health resources within educational institutions.

Significance of the Study

The findings of this study will contribute to the growing body of literature on adolescent stress and academic functioning. Practically, the results are expected to inform school counsellors, academic administrators, and policymakers in designing and implementing evidence-based mental health interventions tailored to the unique stressors faced by late adolescents. The study also adds cultural specificity by focusing on an underrepresented demographic in existing stress-performance research.

4. Study Design

A **descriptive cross-sectional research design** was employed to examine the relationship between stress and academic performance among late adolescents. The study was conducted at two educational institutions — one senior secondary school and one undergraduate college — located in an **urban setting**.

Sample: The study sample comprised **200 participants (N = 200)**, selected through **stratified random sampling**. Participants ranged in age from **18 to 21 years**, with a gender distribution of **52% female** and **48% male**.

Inclusion & Exclusion Criteria:

- *Inclusion:* Currently enrolled in an academic programme; voluntary willingness to participate.
- *Exclusion:* Students on medical leave or those who had experienced bereavement within the preceding three months.

Ethical Considerations: Ethical clearance was obtained from the institutional review board, and informed consent was secured from all participants prior to data collection.

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5. Methodology

Instruments Used:

Three validated instruments were administered:

1. **Perceived Stress Scale (PSS-10; Cohen et al., 1983)** — assessed subjective stress levels; scores range from 0 to 40, with higher scores indicating greater perceived stress.
2. **Self-reported cumulative GPA** — operationalized academic performance using Grade Point Average from the most recent semester.
3. **General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988)** — a widely validated screening tool used to assess psychological distress and mental health outcomes.
4. **Structured Demographic Questionnaire** — collected background information from participants.

Data Collection Procedure: Data were collected over a **four-week period** through printed questionnaire booklets distributed during regular class sessions.

Statistical Analysis: Statistical analyses were performed using **SPSS Version 26.0**. The following methods were applied:

- Descriptive statistics
- Pearson's correlation coefficient
- Multiple linear regression analyses

The level of statistical significance was set at **$p < 0.05$**.

Here are the two sections separated clearly:

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6. Results

Descriptive Statistics:

The majority of participants (**68%**) reported moderate to high levels of perceived stress, with a mean PSS-10 score of **22.4 (SD = 4.7)**, indicative of elevated psychological burden. Academic performance across the sample showed a mean GPA of **6.8 out of 10.0 (SD = 1.2)**. A significant proportion of participants (**43%**) scored above the GHQ-12 threshold of 3, suggesting clinically meaningful levels of psychological distress.

Correlation Analysis:

Pearson's correlation analysis revealed:

- A statistically significant **negative correlation** between perceived stress scores and GPA **($r = -0.54, p < 0.001$)** — higher stress was associated with lower academic performance.
- A statistically significant **positive correlation** between perceived stress and GHQ-12 scores **($r = 0.61, p < 0.001$)** — greater stress corresponded to poorer mental health outcomes.

Regression Analysis:

Multiple linear regression analyses indicated:

- Perceived stress was the **strongest predictor of GPA ($\beta = -0.48, p < 0.001$)**, accounting for approximately **29% of variance** in academic performance when controlling for age, gender, and year of study.
- GHQ-12 scores (mental health distress) explained an **additional 11% of variance** in GPA.

Qualitative Findings:

Open-ended survey responses revealed that students commonly cited the following as primary sources of stress:

- Examination pressure
- Parental expectations
- Financial constraints
- Difficulties in time management

Gender-differentiated patterns were also observed:

- **Male students** reported higher rates of academic performance anxiety.
- **Female students** more frequently reported emotional exhaustion and interpersonal stress.

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7. Discussion

The finding that **68% of participants experienced moderate to high stress**, with a mean PSS-10 score of 22.4, reflects a substantial psychological burden among late adolescents in academic settings. The significant negative correlation between stress and GPA ($r = -0.54$) aligns with prior research by **Pascoe et al. (2020)** and **Saleh et al. (2017)**, both of which documented inverse relationships between stress and academic functioning in university populations.

The regression model further strengthens this evidence — perceived stress alone accounted for **29% of the variance in GPA**, establishing it as a powerful and independent predictor of academic performance. The additional **11% variance** explained by GHQ-12 scores suggests that stress does not operate in isolation; rather, it **interacts with and amplifies mental health vulnerabilities**, producing compounded adverse effects on academic functioning.

The qualitative findings provide important contextual depth. The identification of **examination pressure, parental expectations, financial constraints, and time management difficulties** as dominant stressors reflects the unique socio-academic pressures faced by students in competitive educational environments. The **gender-differentiated patterns** observed — with male students reporting higher performance anxiety and female students reporting greater emotional exhaustion and interpersonal stress — resonate with findings documented by **Verma et al. (2011)** in comparable South Asian academic environments, suggesting that stress is experienced and expressed differently across genders.

Collectively, these results underscore the **bidirectional relationship between stress and mental health** — each amplifying the other's detrimental impact on academic outcomes. This has significant implications for institutional policy and student support services. Institutions must consider **holistic support frameworks** that simultaneously address academic demands and psychological well-being, rather than treating these concerns as separate domains.

8. Conclusion

This study provides robust evidence that elevated perceived stress significantly impairs academic performance and is strongly associated with deteriorating mental health among late adolescents. The findings confirm that stress is not merely a transient emotional inconvenience but a systemic challenge with measurable consequences for educational attainment and psychological well-being. Institutions must prioritize the development of accessible, culturally sensitive mental health services, including counselling centres, peer support programmes, and stress management workshops embedded within academic curricula.

Future research should employ longitudinal designs to better understand causality and examine the moderating roles of resilience, social support, and coping styles. Expanding the sample to include rural and semi-urban populations would further strengthen the generalizability of findings. Collaborative efforts between educators, mental health professionals, and policymakers are essential to cultivate academic environments where late adolescents can thrive both intellectually and emotionally.

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