

The Impact of Academic Stress on Sleep Quality Among Students

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Abstract: *The present study aims to examine the relationship between academic stress and sleep quality among students aged 18-25 years. It focuses on the influence of academic workload, examinations, and parental expectations on students' sleep patterns and overall well-being. A quantitative correlational research design was adopted, using standardized measures, namely the Academic Stress Scale and the Pittsburgh Sleep Quality Index (PSQI). Data were collected from college students through an online Google Form. The findings suggest that examination-related stress and parental expectations are major sources of academic stress among students. Participants reported an average sleep duration of approximately 6.5 hours, with academic stress also being associated with poorer sleep quality. The study concludes that increased academic stress may negatively affect both the duration and quality of sleep, which can contribute to fatigue, reduced concentration, and difficulties in academic functioning. The findings highlight the importance of collaborative efforts among educational institutions, students, and parents to promote healthy coping strategies and supportive academic environments that encourage both academic achievement and student well-being.*

Keywords: Academic Stress, Sleep Quality, Academic Pressure, Examination Stress, Parental Expectations

1. Introduction

Students in the young adult age group of 18-25 years often experience considerable academic demands, frequent evaluations, career-related expectations, and changes in their daily routines. When these academic demands are perceived as exceeding an individual's available coping resources, they may contribute to academic stress. Persistent academic stress can influence students' sleep patterns and may consequently affect cognitive functioning, memory consolidation, emotional regulation, and overall physical and psychological well-being.

Sleep problems and inadequate sleep hygiene are common concerns among college students. Insufficient or poor-quality sleep may interfere with concentration, learning, memory, and academic performance, while also affecting psychological and physiological well-being. Therefore, understanding the relationship between perceived academic pressure and sleep quality is important for identifying factors that may influence students' overall functioning.

Academic stress may have both positive and negative effects depending on how students perceive and manage academic demands. A certain level of stress may encourage motivation and performance, whereas excessive or prolonged stress can become difficult to manage and may negatively affect well-being. The present study is theoretically supported by the Transactional Model of Stress proposed by Lazarus and Folkman (1984). According to this model, stress is influenced by how individuals appraise demands in relation to the resources they believe are available to cope with them. This theoretical perspective provides a suitable framework for examining how students' perceptions of academic demands may be associated with their sleep quality.

2. Literature Survey

Correlation between Insomnia and Academic Stress in Undergraduate Students (2026) by Simran Adlakha, et al. They conducted research on 132 undergraduate science students (18-25 years) at Career Point University, Kota. The method used - Academic Stress Scale (ASS) + Insomnia Severity Index (ISI). The findings were 52.3% reported clinically relevant insomnia. Significant positive correlation between academic stress and insomnia severity. Female students reported higher stress and insomnia than males. Ref. IJFMR Research Paper

The Impact of Academic Pressure on Sleep Quality of College Students (2026) by Soham Saigaonkar, et al. They conducted the study on college students aged 18-25 across multiple disciplines. They used method - Perceived Stress Scale (PSS) + Pittsburgh Sleep Quality Index (PSQI). The findings were elevated academic pressure linked to poorer sleep quality, fatigue, irritability, and reduced attention span. Perceived stress mediates the relationship between workload and sleep disturbances. Sustained sleep problems associated with burnout and decreased academic engagement. Ref. IJNRD Research Paper.

WHO Perspective on Stress (2026): Stress is defined as a state of worry or mental tension caused by difficult situations. WHO emphasizes stress as a public health issue, with sleep disruption being a major consequence among youth. Ref. World Health Organization (2026). Stress - Questions and Answers. WHO Newsroom.

Rumination and Worry in Stress-Sleep Relationship (2025) by Ana Petak, Jelena Maričić (University of Zagreb). They conducted study on 302 undergraduate students (18-33 years, majority female). They used method - Two wave longitudinal study, mediation analysis. The findings were stress and sleep quality have a bidirectional relationship. Rumination partially

mediates the link; worry amplifies stress when sleep quality is poor. Stress impacts sleep problems more strongly than sleep problems impact stress. Ref. - IJERPH Open Access Article

Dr. Suresh Prabhu (2019) conducted a study on academic stress among higher secondary students. A total sample comprised of 250 students of XI standard studying in various higher secondary schools from Namakkal district, Tamil Nadu, India were selected for this study randomly in this study. An effective tool of academic stress scale developed by R. Balaji Rao was applied to data collection. The obtained data was analyzed by using standardized statistical techniques of mean, SD and 't' test. The result found that there is no significance difference between gender, locality, management, subject and parents education in relation to academic stress.

Reddy et al. (2018) explored a study on academic stress and its sources among university students. Participants of general pool students involved which was selected using random sampling method in this study. A tool of academic aggressive scale prepared by Rajendran and Kaliappan (1991) was applied for the data collection and standardized statistical techniques such as mean, SD and ANNOVA was adopted for analyze the obtained data. The major finding of the study is gender and stream significantly differs on academic stress.

Aikens et al., (1992) The study of stress hypothesized stress as the interaction between the three fundamentals perceived as the perception of coping ability, and the perception of the importance of being able to cope with its demand. Different from many previous definitions of stress, this formulation clearly integrates the transactional process that is believed to be central to current theories of academic assessment. Stress is simply seen as a mismatch between demand and capacity on the difference, the insight of these two elements, and the most important the desire or the motivation that one feels to answer all the requests are at the heart of the construction.

Lazarus & Folkman's Transactional Model (1984): Stress arises when perceived academic demands exceed coping resources. This model underpins much of the modern research linking stress appraisal to sleep disturbances. Ref. Lazarus, R.S., & Folkman, S. (1984). Stress, Appraisal, and Coping. Springer.

Research Gap: Many studies focus on medical or psychology students, or small groups from single institutions. Diverse populations (different disciplines, socio-economic backgrounds, and cultural contexts) remain underrepresented.

3. Aim, Objective, Hypotheses

3.1 Aim/ Purpose of the Study

The purpose of the study is to assess the effect of academic stress on sleep quality among students aged 18-25 years.

3.2 Objectives of the Study

- To measure the level of academic stress among students aged 18–25 years.

- To assess the sleep quality of students using standardized tools.
- To examine the relationship between academic stress and sleep quality.

3.3 Hypotheses / Research Question

- There will be significant positive correlation between academic stress and sleep quality among college students aged 18-25 years.
- Which specific stressors (e. g. examination, parental expectations, and teacher's demands) strongly affect sleep duration and sleep quality?

4. Method/ Approach

4.1 Research Design

Quantitative, correlational research design with a cross-sectional survey method. Focused on examining the relationship between academic stress and sleep quality among students aged 18-25 years.

4.2 Participants and Sampling:

50 college students aged 18 – 25 years. The target population consists of undergraduate students aged 18-25 years who are most likely to experience academic stress and sleep-related issues. Sampling ensures that only participants meeting the inclusion criteria (age, enrolment status, consent) are selected.

4.3 Measures

Academic Stress Scale by R. Balaji Rao – standardized tool to measure stress levels. Sleep Quality Scale (PSQI) – standardized tool to measure sleep disturbances. Demographic Questionnaire – age, gender, stream, locality, parental education.

4.4 Procedure

The data collection was done by Google Forms survey that included informed consent, socio-demographic questions, and the three standardized tools. It took about 10–15 minutes to complete the survey. The survey link was distributed through email and social networking platforms, and early respondents were encouraged to share it with eligible contacts. Responses were collected anonymously and screened against the inclusion and exclusion criteria before analysis.

4.5 Ethical Considerations

Participation was voluntary and based on informed consent. Participants were informed that they could discontinue participation without penalty and that responses would be treated confidentially and analysed at the group level. No identifying information was retained in the research dataset.

4.6 Statistical Analysis

Descriptive Statistics: Mean, SD, frequency distribution of stress and sleep scores. Frequency & Percentage Distribution

→ to summarize demographics (age, gender, stream, locality, parental education). Measures of Central Tendency → mean, median, mode for stress scores and sleep duration. Measures of Dispersion → standard deviation, variance, range for stress and sleep variables.

Table 1: Demographic Overview

Variable	Categories	Frequency	Percentage
Age Groups	18-20, 20-22, 22-25	12, 8, 10	32%, 21%, 27%
Gender	Male, Female, Other/prefer not to say	14, 15, 2	37%, 40%, 5%
Academic Stream	Science, Commerce, Arts, Professional	10, 7, 6, 8	26%, 18%, 16%, 21%
Locality	Urban, Rural	22, 8	58%, 21%
Parental Education	Secondary, Undergraduate, Postgraduate	6, 12, 14	16%, 32%, 37%

Table 2: Stress Levels

Stress Item	Mean Score	SD	Most Frequent Category
Teacher's demands	3.2	1.1	Moderate stress
Worrying about examinations	3.8	1.2	High stress
Conflict with friends/authorities	2.5	1.1	Mild stress
Lack of time for recreation	3.4	1.1	Moderate stress
Pressure to meet parental expectations	3.4	1.1	Moderate stress

Table 3: Sleep Quality Indicators

Variable	Mean	SD	Notes
Bedtime	12:15 AM	+ 1 hr	Many students sleep late
Sleep Latency	28 min	+ 15 min	Several report > 30 min latency
Wake-up time	7:15 AM	+ 1 hr	Consistent across groups
Sleep duration	6.5 hrs	+ 1.2 hrs	Below recommended 8 hrs
Overall sleep quality	Fairly good (avg)	-	But extreme exist

Table 4: Correlational Analysis

Variable pair	Correlation	Interpretation
Stress (Exams) ↔ Sleep Duration	-0.42	Higher exam stress → shorter sleep
Stress (Parents) ↔ Sleep Quality	-0.48	Parental pressure strongly linked to poor sleep
Stress (Teachers) ↔ Sleep Latency	0.35	More teacher demands → longer time to fall asleep
Total Stress Index ↔ PSQI Score	0.51	Higher stress → worse sleep quality

4.7 Findings of the Study

The findings of the study indicate a positive relationship between academic stress and sleep-related difficulties among students aged 18–25 years. Examination-related stress and parental expectations were identified as major sources of academic stress and were associated with poorer sleep. Students reported an average sleep duration of approximately 6.5 hours, along with increased difficulty in falling asleep when experiencing higher levels of academic stress. The findings suggest that elevated academic stress may negatively affect both the duration and quality of sleep, contributing to fatigue, reduced concentration, and difficulties in academic performance. The study also indicates that gender and academic stream may influence the way academic stress affects students' sleep patterns.

5. Results and Discussion

5.1 Comparison with Previous Literature

The findings align with Adlakha et al. (2026), who found a significant correlation between academic stress and insomnia, particularly among female students. Similarly, Saigaonkar et al. (2026) the findings were elevated academic pressure linked to poorer sleep quality, fatigue, irritability, and reduced attention span. The present study supports these observations, showing that exam stress and parental expectations are major contributors to poor sleep.

5.2 Implications of the Study

Findings shows the urgent need for education institutes to implement stress-management workshops, counselling services and sleep hygiene programs. The link between parental expectations and poor sleep suggests that family support is important for student well-being. Coping strategies like time management, meditations, relaxation techniques should be part of academic routine in education institutes.

6. Conclusion

The study concludes that academic stress is associated with poorer sleep quality among college students aged 18-25 years. The findings emphasize the importance of recognizing academic stress as a concern that can affect students' psychological and physiological well-being, as well as their academic functioning. Therefore, educational institutions, students, and parents should work together to promote effective coping strategies and supportive environments that can help students manage academic stress while maintaining healthy sleep patterns and overall well-being.

7. Future Scope

Larger sample size from diverse disciplines and socio-economic backgrounds. Intervention based research to test the effectiveness of stress management and sleep hygiene programs,

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