

Stress Levels among Civil Engineering Students: Practical Strategies for Stress-Related Issues

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ABSTRACT: This study explores the prevalence and contributing factors of stress among 889 civil engineering students. Six primary stress dimensions were identified: academic performance and workload, academic struggles and habits, teaching styles, work-life balance, financial constraints, and environmental conditions. The majority of respondents (90.7%) reported moderate stress, while 5.5% experienced high stress and 3.8% reported low stress. Key stressors included poor time management, fast-paced lesson delivery, tight schedules, and difficulty balancing academic and personal responsibilities. Financial burdens and environmental discomfort, such as classroom heat, also played significant roles. The findings showed a strong relationship between high stress levels and academic, financial, and environmental factors. This study supports the objectives of the United Nations Sustainable Development Goals—particularly SDG 3 (Good Health and Well-being) and SDG 4 (Quality Education)—by highlighting the need for improved mental health support and learning conditions. Recommended interventions include time management workshops, better coordination of academic workloads, and increased mental health awareness. By addressing these factors, educational institutions can foster a more supportive academic environment, alleviate student stress, and contribute to student well-being and academic success.

KEYWORDS: Stress, Workload, Struggles, Teaching Style, Work-life Balance

I. INTRODUCTION

Civil Engineering students are often seen as disciplined and hardworking individuals. However, many of them silently face mental health challenges due to the demanding nature of their academic program. The pressure to succeed, meet deadlines, and handle a heavy workload can lead to high levels of stress, which may affect their emotional well-being and academic performance.

With the increasing prevalence of mental health issues among college students, academic institutions are being called upon to place greater emphasis on student wellness. Civil Engineering students, in particular, are exposed to distinct stressors arising from the intensive nature of their coursework, practical requirements, and field-related obligations. When compounded by financial difficulties, academic pressure, and an imbalance between academic responsibilities and personal life, these stressors can profoundly affect students' academic performance and overall health.

This study aims to explore the relationship between stress and various contributing factors, including academic workload, instructional methods, financial constraints, and the broader learning environment among Civil Engineering students at the Nueva Ecija University of Science and Technology (NEUST). By identifying key stressors and evaluating their effects, the research seeks to contribute to a

deeper understanding of student mental health and inform the development of targeted strategies and institutional interventions that foster a healthier and more supportive academic environment.

II. OBJECTIVES

A. General Objective

This study aims to assess the level and prevalence of stress among Civil Engineering students at NEUST during the current academic year. It seeks to identify the primary academic, financial, and environmental factors contributing to their stress. The purpose of this research is to better understand the extent to which these stressors impact students' mental health and academic performance. Utilizing surveys and statistical analysis, the study will examine the correlation between stress levels and these contributing factors, ultimately proposing evidence-based strategies to support student well-being and promote a healthier academic environment.

B. Specific Objective

1. To determine the academic profile of Civil Engineering students in terms of:
 - Age
 - Year level
 - Units enrolled
 - Student type (e.g., full-time, part-time)

2. To identify the prevalence of stress issues among Civil Engineering students in relation to:
 - Academic performance and workload
 - Academic struggles and study habits
 - Academic teaching methods
 - Academic work-life balance
 - Financial concerns
 - Environmental factors
3. To examine the significant correlation between stress levels and the identified stress-inducing factors among Civil Engineering students.
4. To recommend appropriate strategies and interventions that can help manage student stress, improve mental health, and support academic and emotional well-being.

III.METHODOLOGY

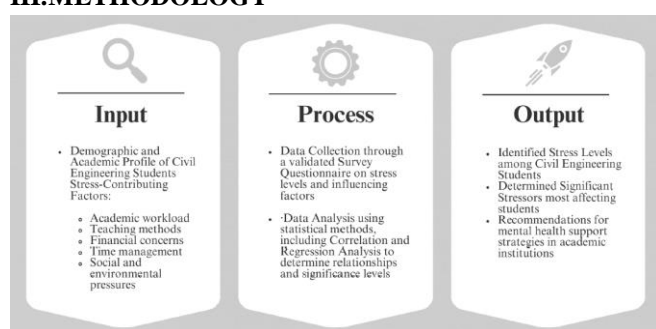


Figure 1 Conceptual Framework

This study utilized a Quantitative Descriptive Research Design to assess stress levels among Civil Engineering students at NEUST during the First Semester of the academic year 2024–2025. The target population consisted of 889 students across five-year levels, as shown below:

Table 1 Population of Respondents from the Civil Engineering Department

Year Level	Respondents
First Year	208
Second Year	176
Third Year	184
Fourth Year	208
Fifth Year	113
Total	889

A Stratified Random Sampling method was applied to ensure each year level was proportionally represented. Sample size was determined using the Raosoft Sample Size Calculator at a 95% confidence level and 5% margin of error.

Data were gathered using a structured survey questionnaire focused on stress-related factors such as academic workload, teaching methods, financial concerns, work-life balance, and environmental influences. A 4-point Likert Scale was used to quantify student responses.

The survey responses were analyzed using descriptive statistics (mean, median, mode, frequency, and percentage)

and correlation analysis via Microsoft Excel’s Data Analysis ToolPak. To classify stress levels, a Quartile Division method was used based on the total survey scores. This method is supported by literature that recognizes Likert-based instruments as effective tools for measuring psychological stress (Likert, 1932; Babbie, 2010).

Table II Criteria for Stress Levels

Stress Level	Score Range
Low Stress	30 – 62
Moderate Stress	63 – 88
High Stress	89 – 120

- **Low Stress (30–62):** Minimal impact on daily functioning.
- **Moderate Stress (63–88):** Noticeable difficulty balancing tasks.
- **High Stress (89–120):** Severe stress likely to interfere with academic and personal life.

IV.RESULTS AND DISCUSSION

The study explored the academic profiles, stress levels, and contributing stress factors among 889 Civil Engineering students at NEUST. The respondents varied in age, year level, units enrolled, and student type. Most were aged 20–21 (39.6%), enrolled in 19 or more units (76.7%), and identified as regular students (76.7%).

The data for stress factors showed that students "sometimes" experience stress across most categories, with notable peaks in specific areas;

- Academic Performance and Workload - Students “often” find it difficult to prioritize tasks due to tight schedules. However, overall stress from workload is only sometimes felt, with a mean of 2.51.
- Academic Struggles and Habits - Lack of sleep and pressure to maintain grades contribute significantly, though the overall interpretation remains sometimes stressed (mean = 2.51).
- Academic Teaching Style - Fast lesson pacing emerged as a major stressor. Teaching styles are interpreted as sometimes stressful (mean = 2.51)
- Academic Work-Life Balance: Poor time management was a key issue. However, students sometimes struggle in balancing responsibilities (mean = 2.48).
- Financial Factors: Concerns like affording materials or balancing tuition with expenses contribute to sometimes experiencing financial stress (mean = 2.43).
- Environmental Factors: Heat in the classroom was identified as the most significant environmental stressor, though overall stress remains sometimes (mean = 2.49).

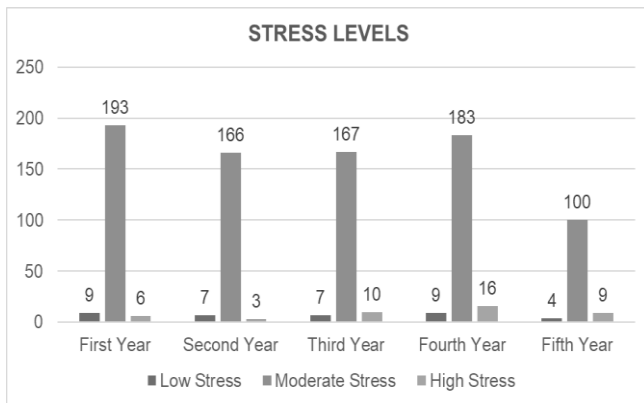


Figure II Stress Levels among Civil Engineering Students

Table III - Overall Stress Levels of Civil Engineering Students

STRESS LEVEL	Frequency (n = 889)	Percent
High	49	5.5%
Moderate	806	90.7%
Low	34	3.8%
Total	889	100.0%

Majority of respondents (90.7%) experience moderate stress, with 5.5% reporting high stress, and only 3.8% experiencing low stress.

The correlation between stress levels and stress factors revealed meaningful patterns;

- Academic Performance and Workload: Significantly affects students with high stress levels ($p = 0.000$), but not those with low or moderate stress.
- Academic Struggles and Habits: Significantly correlated with both moderate and high stress ($p = 0.002$ and $p = 0.000$).
- Academic Teaching Style: A significant factor for students with moderate and high stress ($p = 0.000$ and $p = 0.005$).
- Academic Work-Life Balance: Only significantly affects those with high stress ($p = 0.000$)
- Financial Factors: Stress due to financial issues significantly impacts those under moderate and high stress ($p = 0.000$).
- Environmental Factors: Significantly influence both low and high stress levels ($p = 0.000$), but not moderate.

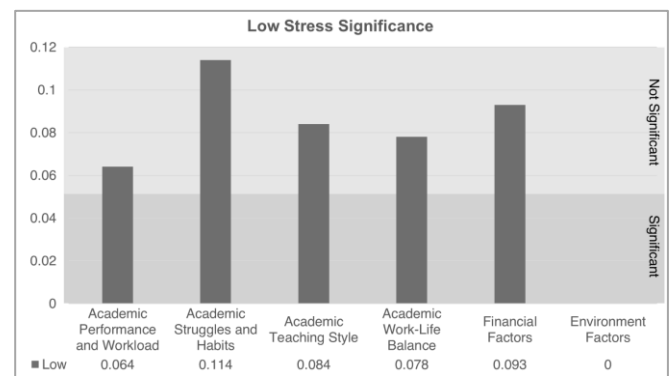


Figure III Low Stress Significance

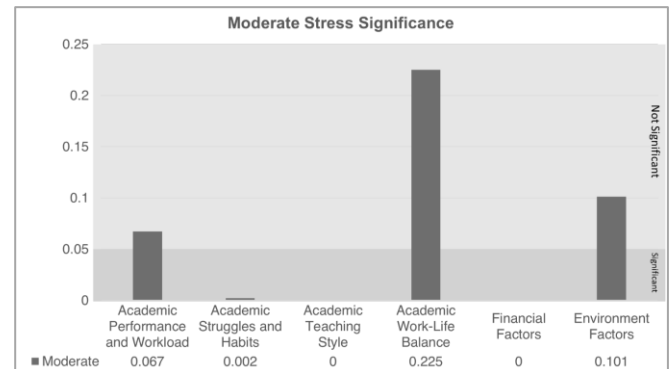


Figure IV Moderate Stress Significance

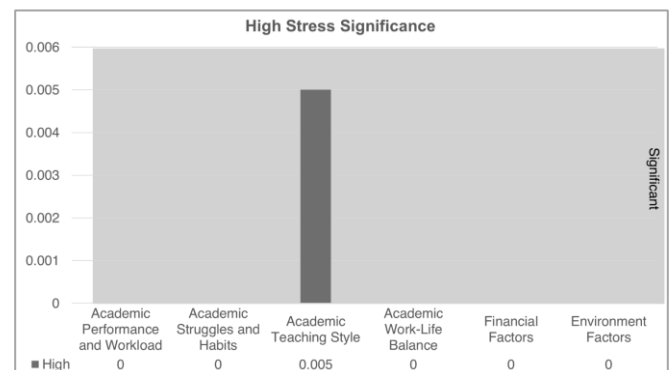


Figure V High Stress Significance

The findings indicate that most Civil Engineering students experience stress at a moderate level, with the greatest contributors to higher stress levels being academic workload, teaching style, financial concerns, and environmental conditions. Notably, even those under low stress are influenced by environmental factors. These stressors, when unmanaged, can escalate and potentially hinder students' academic success and overall well-being.

CONCLUSIONS

The study revealed that most Civil Engineering students experienced **moderate to high levels of stress**, primarily due to academic challenges such as heavy workloads, time management difficulties, and ineffective teaching strategies. While academic pressures were the most dominant contributors, financial burdens and environmental conditions—such as poor classroom settings and noise—also

added to students' stress, though to a lesser extent. Statistical correlations showed that all stress factors significantly affected students at high stress levels, with environmental factors being more influential at low stress levels, and academic and financial concerns more significant at moderate levels.

Based on these findings, the study concludes that tailored solutions are essential to support students' mental health and academic success. Proposed strategies include implementing **effective time management workshops**, such as:

- **The 52/17 Rule (Pomodoro Technique)** – working for 52 minutes and taking a 17-minute break to maintain productivity and focus;
- **Simulated Deadline Compression** – setting deadlines earlier than needed to create urgency and reduce last-minute pressure;
- **The Construction Blueprint Method** – breaking tasks into phases (foundation, structure, finishing) to keep work organized;
- **Capacity Buffer Scheduling** – building a 10–20% time buffer to account for unexpected delays;
- **The "Site Visit Mindset"** – treating study sessions like site visits by preparing ahead, staying focused, and leaving with action points.

In addition, the study recommends inter-departmental coordination among instructors to avoid overlapping deadlines and excessive academic load, which can overwhelm students. It also promotes mental health awareness programs to foster a safe and supportive environment where students can openly discuss emotional challenges. Furthermore, conducting annual mental health surveys is suggested to continuously monitor students' well-being and adjust support strategies as needed.

Finally, future research should expand the sample size for broader generalizability, test the effectiveness of these student-centered interventions, and conduct follow-up studies to evaluate their long-term impact on reducing academic stress.

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