

The Impact of Stress on Academic Performance Among CCNY Undergraduate Students

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**The impact of stress on academic performance among
CCNY undergraduate students.**

SUMMARY

- A) Overview of the effects of stress observed in college students
 - 1) Common causes and reasons: pressure, lack of sleep, workload and competition.
 - (a) Mirabelli et al.— Engineering students stress culture.
 - (b) Atif et al. — dental students’ stress in Pakistan.
 - 2) Impact of stress on sleep and health
 - (a) Huang et al.— Stress results in poor sleep patterns and leads to depression.
 - (b) Castillo-Navarrete et al.— cortisol is used to measure stress levels.
- B) Connection between stress and academic performance and students’ health
 - 1) mental and physical health significantly impacts academic performance
 - 2) Strong evidence from peer reviewed articles and use of valid sources
 - (a) Use of original survey for data collection
 - (b) Peer reviewed and backed my authentic data

II) PURPOSE

- A) To understand and examine how stress impacts the health and academic performance of college students.
 - (a) To examine biological and psychological connections and consequences between stress and academic performance.

- (b) To find the connection between overall health and academic performance

III) BACKGROUND

- A) Discussion of academic environments
- B) Dental program
- C) General University culture and student body; cultural and demographic insights
- D) International example- US vs. Pakistan
- E) Gender differences observed in stress levels

IV) DISCUSSION

- A) Impact on mental health
 - 1) relation between sleep patterns and stress (Huang et al.)
 - (a) Irregular sleep patterns influence concentration and academic performance
 - (b) Depression served as a mediating factor
 - 2) Biological connection related to stress(Castillo- Navarrete)
 - (a) Link between cortisol and academic performance
- B) Impact of environmental stress on academic performance
 - 1) High competitive nature in academic culture (Mirabelli et al.)
 - (a) Normalisation of stress in stimulated majors and fields.
 - (b) High levels of pressure amongst peers reduces the need for self-care
 - 2) Specific experiences related to certain fields (Atif et al.)
 - (a) Dental/health students vs. engineering students
 - (b) Students in the final year experience highest levels of stress
- C) Effective coping and stress managing strategies

- 1) Staying positive: finding true meaning in life, actively coping against negative thoughts and pressure.
- 2) Getting rid of negativity: refraining from engaging in self blame and discouragement

V) COMMUNITY HEALTH CONCERNS

A) Chronic stress levels result in lower academic performance and health concerns.

- 1) long-term effects on health
 - (a) Anxiety
 - (b) Depression
- 2) Academic culture results in ignorance of stress related issues and health concerns
 - (a) Lack of positivity and aim

B) Inequality is observed in stress levels

- 1) Gender differences
 - (a) Females reported higher stress levels (Atif et al.)
 - (b) Cultural stigma attached to seeking help

VI) EXTRAS (SOME PEOPLE MAY NEED A CASE STUDY OR FURTHER

DESCRIPTION_

A) Survey design

- 1) Google Forms survey (6 point likert questions)
 - (a) Focuses on stress and academic performance
 - (b) Easy to read and complete and will be completely anonymous
- 2) Sample group
 - (a) At least 30 undergraduate CCNY students
 - (b) Students will be from different majors and departments

B) The survey measures

- 1) Levels of stress and its impact on focus
- 2) Impact of stress on students performance in exams
 - (a) Questions will be about concentration, anxiety and focus
 - (b) Results will be organised according to trend and patterns

C) Analysis of Results

- 1) Use of Excel to create basic graphs and charts
 - (a) To show trends observed in stress levels and gpa
 - (b) Comparison between gender and major

VII) CONCLUSIONS

A) Analysis of findings based on research

- 1) Stress influencers, academic performance and students overall well-being and health
 - (a) Stress results in irregular sleeping patterns ,lack of focus and concentration
 - (b) The type of coping strategies utilised also influence academic performance related to stress levels
- 2) Student academic culture ignores health risks related to high stress levels
 - (a) Peer competition in STEM and Health related fields results in normality of high stress levels

B) Predicted results from my survey

- 1) Students related to STEM and Health majors will report higher levels of stress and lower academic performance
 - (a) Due to high competition
 - (b) Constant peer competition

- (c) Lack of focus and concentration
- 2) Results may support similar outcomes such as previous research

References

- Huang, Y., Yang, L., Liu, Y., & Zhang, S. (2024). Effects of perceived stress on college students' sleep quality: A moderated chain mediation model. *BMC Psychology*, 12(1).
<https://doi.org/10.1186/s40359-024-01976-3>
- Mirabelli, J. F., Johnson, E. M., Vohra, S. R., Sanders, J. L., & Jensen, K. J. (2025). Stressors and normalized stress in undergraduate engineering education culture: Development of the Engineering Stress Culture Scale and Undergraduate Engineering Stressors Questionnaire. *International Journal of STEM Education*, 12(1).
<https://doi.org/10.1186/s40594-025-00540-8>
- Atif, S., Mustafa, N., & Ghafoor, S. (2025). Perceived stress and coping strategies used by undergraduate dental students: An observational study. *PLOS ONE*, 20(1).
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0318152>
- Castillo-Navarrete, J. L., Guzmán-Castillo, A., & Bustos, C. (2024). Longitudinal analysis of academic stress and its effects on salivary cortisol, alpha-amylase, and academic outcomes: Study protocol. *PLOS ONE*, 19(12).
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0315650>

