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Research Article

Post COVID-19: Mental Health and Academic Performance in 1st year College Students

Shaini Suraj[1*], Amita Kamdi[2], Mangesh Kohale[3], Nandkishor Bankar[4]

[1*]Adjuvant Faculty, Department of Clinical Psychology, School of Allied Health Sciences,Wanadongri, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Nagpur, India.
[2]Psychological Counsellor, Department of Clinical Psychology, School of Allied Health Sciences,Wanadongri, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Nagpur, India.
[3]Associate Professor, Department of Pathology, Datta Meghe Medical College, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Nagpur, India.
[4]Associate Professor, Department of Microbiology, Jawaharlal Nehru Medical College, Wardha, Datta Meghe Institute of Higher Education and Research (Deemed to be University), Wardha, India.

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ABSTRACT

Background: Good mental health helps students to realize their full potential in academics, handle stress and pressures related to studies and help them to work productively towards their goals. But COVID-19 had an immense effect on the students world-wide. Students were isolated from their peers causing a steep decline in their social skills and increased alienation. This study was done on the first-year college students who faced home isolation for nearly 2 and half years.

Purpose: This study was done on the first-year college students who faced home isolation for nearly 2 and half years. The overall aim of this study was to assess negative emotionality among these students as they come out of new normal and face college life. It also aimed to find out its effect on academic scores.

Methods: Sample consists of 200 students, age group 19 to 23 years, both male and female of different streams coming from urban and rural areas. Data was collected through Kundu's Neurotic Personality Inventory. The academic scores were obtained from their respective colleges.

Results: Results evaluated using Pearson correlation, and descriptive analysis. Findings show that 27% of the students have no neurotic tendencies, 42% are slightly neurotic, 26% are moderately neurotic, 6% are highly neurotic. A significant negative correlation was seen between the scores of KNPI and academic performance indicating that increase in neurotic scores results in decrease in academic performance.

Conclusion: Post Covid mental health problems are seen to increase among college students which lead to lower academic functioning. These results from the present study provide insight for development of timely mental health interventions in colleges for the students to come out of the new normal created by COVID-19.

Keywords: COVID-19, academic performance, neurotic tendency, increased alienation, mental health interventions.

INTRODUCTION

College students often encounter a diverse range of unique experiences that can be accompanied by significant stressors. These challenges may include managing a higher workload, striving for academic excellence, navigating a competitive environment, grappling with financial concerns, dealing with parental expectations, and contemplating uncertainties about the future (Hurst et al.,2012b). In addition to the customary pressures, COVID-19 pandemic introduced a new phase of anxiety and stress for college students

with the shift to online classes. Numerous obstacles arose from this abrupt change, such as adjusting to distance learning settings, resolving technical issues, missing out on in-person interactions and campus events, and juggling the increasingly hazy boundaries between personal and academic life. (Bhattacharjee & Ghosh, 2021). Research from a number of locations, including the United States, Asia, and Europe, has illuminated the preliminary findings regarding the deleterious effects of COVID-19 on undergraduate students' mental health.

These studies have revealed concerning findings about the negative effects experienced by students during the pandemic (Cao et al.,2020; Huckins et al., 2020; Marelli et al.,2021; Odriozola-González et al., 2020). According to a study by Tang et al. (2020), being a graduating student, feeling intense fear about the pandemic, living in an area heavily affected by the virus, and getting less sleep were all associated with higher levels of depression. A comprehensive study conducted in China, encompassing a large sample of both undergraduate and graduate students, revealed significant findings regarding the mental health impact of the pandemic. The study demonstrated that the prevalence of anxiety and depression symptoms among students increased progressively over the course of the pandemic. This indicated a growing burden of psychological distress experienced by students during this period (Li et al., 2020).

While students initially faced challenges in adjusting to the new normal brought about by COVID-19, an equally significant set of difficulties arose as they transitioned back to offline college life. The shift from remote learning and limited social interactions to in-person classes and campus activities do present a unique set of obstacles. Students experienced difficulties readjusting to the pace and demands of offline academic work, re-establishing social connections, and reintegrating into the college community. Finding their foots were the recent first year college going students who were at home for a period of 2-1/2 to 3 years. Studies on medical students showed that they suffer from stress during their training period and negative emotionality gets exaggerated, which have a negative influence on their coping ability (Stults-Kolehmainen & Sinha, 2014; Kendall et al., 2001). Among many factors affecting college students is neuroticism. Neuroticism is characterized by a heightened tendency to experience negative emotions. Individuals who score high in neuroticism often experience more frequent and intense negative emotions such as anxiety, fear, anger, and sadness, compared to those who score lower on this trait. Neuroticism can be a risk factor for various mental health conditions, including depression (Liu & Lin, 2019). Neuroticism is considered as one of the universal personality dimensions in the Five-Factor Model of personality. It represents a continuum ranging from emotional instability (high neuroticism) to emotional stability (low neuroticism). These individuals often exhibit traits such as being easily agitated, anxious, and prone to worry (Filippello, 2017). They also exhibit sadness or anxiety, and mood swings (Costa & McCrae, 1985) and also show more negative reactions to extreme stressors and hassles of daily life (Suls & Martin, 2005). Individuals high in neuroticism tend to have a particular cognitive style when it comes to stressors. They often appraise objectively identical stressors as more threatening and less controllable compared to individuals low in neuroticism (Bibbey, 2013) and emotionally react more when psychological stress is encountered (Mroczek & Almeida, 2004).

METHODS

Objectives

The overall aim of this study was to assess negative emotionality among first year college students as they come out of new normal and face college life. Also, it aimed to find out its effect on academic scores.

Research Methodology

This is a co-relational study. Students of 1st year from various colleges in Nagpur were recruited for this study. These students were doing B.Sc. Nursing (Bachelor of Science), GNM (General Nursing and midwifery), BAMS (Bachelor of Ayurveda, Medicine and Surgery), BPharm (Bachelor of pharmacy), BPth (Bachelor of physiotherapy), and BE (Bachelor of Engineering). The questionnaire consisted of two sections: a demographic information sheet and Kundu's Neurotic Inventory. The participants were selected as clusters from various colleges using a random sampling method. The choice of colleges was based on their geographic location, ensuring convenient accessibility for the researchers during the data collection process. The selected participants were students aged between 19 and 23 years including both males and females. The sample size was 200. Students with any major mental

health issues or any severe health problems or those whose family members were suffering from chronic health conditions were excluded from this study. This was verified during the interview with participants after which informed consent was obtained. We adhered to all relevant guidelines and regulations while conducting the data collection process. Prior to participating, the participants received a detailed explanation of the study, and any questions or concerns they had were addressed. Once they had a clear understanding of the study, they were provided with the questionnaire to complete. Then their scores in the midterm exam was collected from the respective teachers after taking informed consent from college principals. In all 246 students were given the data collection tool. The forms received back were 218. Out of the total participants, 28 students did not provide responses, resulting in a response rate of 87%. However, some of the received

responses were incomplete and thus were excluded from the analysis. As a result, the research included the responses of 200 participants who provided complete and usable data for the study.

Tools for Data Collection

Section A: Demographic data sheet included basic information such as age, gender, educational stream, and area of stay.
Section B: Kundu's Neurotic Personality Inventory. This was developed by Dr. Ramanath Kundu, Department of Psychology, University of Calcutta (1965). It has 66 statements describing behavior which may be identified as neurotic. Each of the statements has to be responded to on a 5 numerical response category. The reported reliability coefficient of the test ranges from 0.72 to 0.89 determined by different methods on large samples. The validity coefficient against external criteria ranges between 0.66 and 0.86.
Section C: Academic Scores. Taken from College Authorities after taking consent from the respective college principals. These were the Terminal 1 average scores (1st year batch, 2022)

RESULTS AND DISCUSSION

Data Analysis: Data from this study was analyzed using IBM SPSS Statistics for Windows, Version 22.0. Descriptive statistics were calculated for all variables

Table 1. Demographic Information of the Participants

S.No	Demographic Characters	Category	Frequency	Percentage
1.	Age	19 years	116	58%
		20 years	56	28%
		21 years	21	11%
		22 years	6	3%
		23 years	1	1%
2.	Course	GNM	30	15%
		B.BSc	40	20%
		B.Pharm	30	15%
		Engg	40	20%
		BAMS	30	15%
		B.Pth	30	15%
3.	Gender	Male	100	50%
		Female	100	50%
		Urban	111	55%
		Rural	89	45%

Table 1. shows the distribution of students according to their demographic characteristics. The mean age of the students is 19.6 and SD 0.83**.** The students of age group 19 are 58%, students of age 20 are 28%, 21-year students are 11%, 22-year-old students are 3%, and 23-year-old students are 1%. In this study the GNM students are 15%, BSc Nursing are 20%, B.Pharmacy are 15%, Engineering students are 20 %, BAMS students are 15%, Physiotherapy students are 15 %. In this study 50% are males and 50% are females. Students belonging to rural areas are 45% and urban areas are 55%.

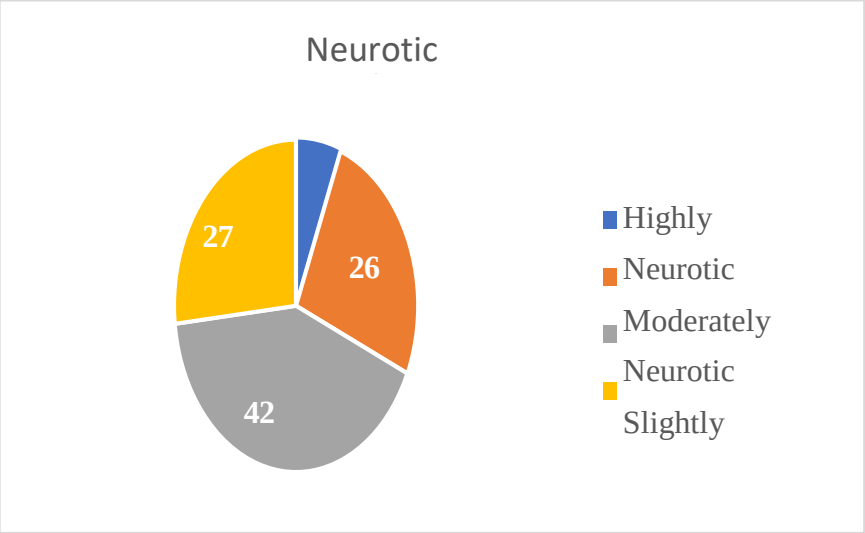

Fig 1. Percentage wise distribution of students according to Neurotic Tendency.

Figure 1 shows the neurotic tendency among students. Students with no neurotic tendency is 27%, slightly neurotic are 42%, moderately neurotic are 26% and highly neurotic are 6%.

Fig.2: Relationship between Academic Scores and KNPI score

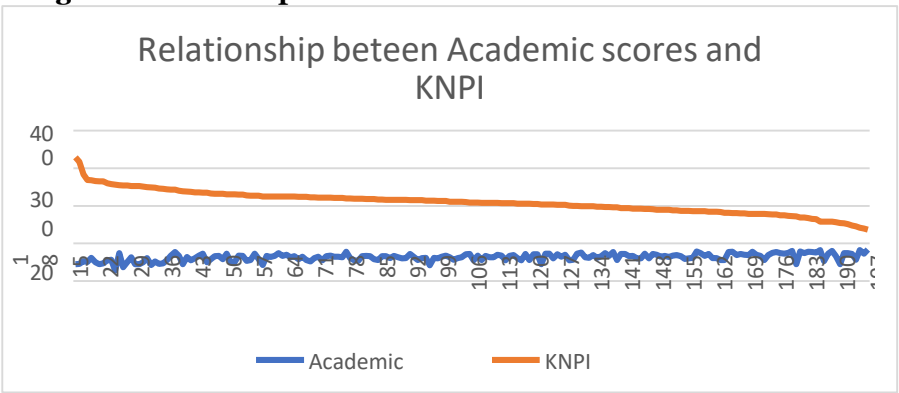

Table 2. Corelation between academic scores and KNPI scores Correlations

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	-.552**
	Sig. (2-tailed)		.000
	N	200	200
VAR00002	Pearson Correlation	-.552**	1
	Sig. (2-tailed)	.000	
	N	200	200

**. Correlation is significant at the 0.01 level (2-tailed).

The value of r is -0.552. This is statistically significant strong negative corelation which shows that there is a tendency for high neurotic scores to go with low academic achievement.

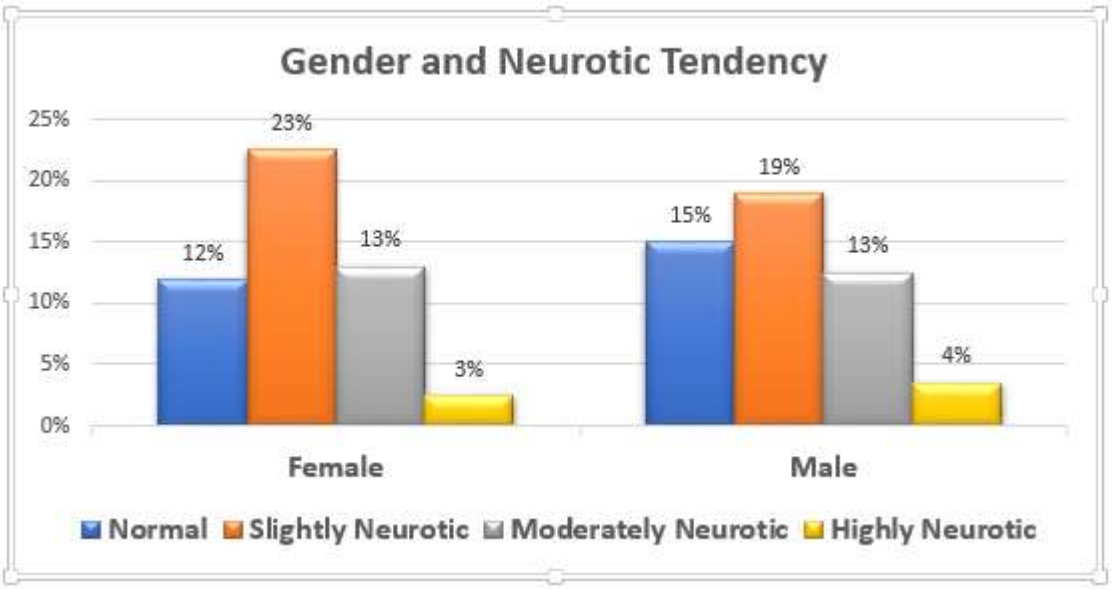

Fig. 3: Gender and Neurotic tendency

Correlations

Table 3. Corelation between academic scores of males and KNPI scores

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	-.582**
	Sig. (2-tailed)		.000
	N	100	100
VAR00002	Pearson Correlation	-.582**	1
	Sig. (2-tailed)	.000	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

Table 4. Corelation between academic scores of females and KNPI scores

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	-.519**
	Sig. (2-tailed)		.000
	N	100	100
VAR00002	Pearson Correlation	-.519**	1
	Sig. (2-tailed)	.000	
	N	100	100

**. Correlation is significant at the 0.01 level (2-tailed).

From Table 3 and 4, we see that **rm > rf , -.**582 > -.519. It can be said that females have better academic scores despite neurotic tendencies.

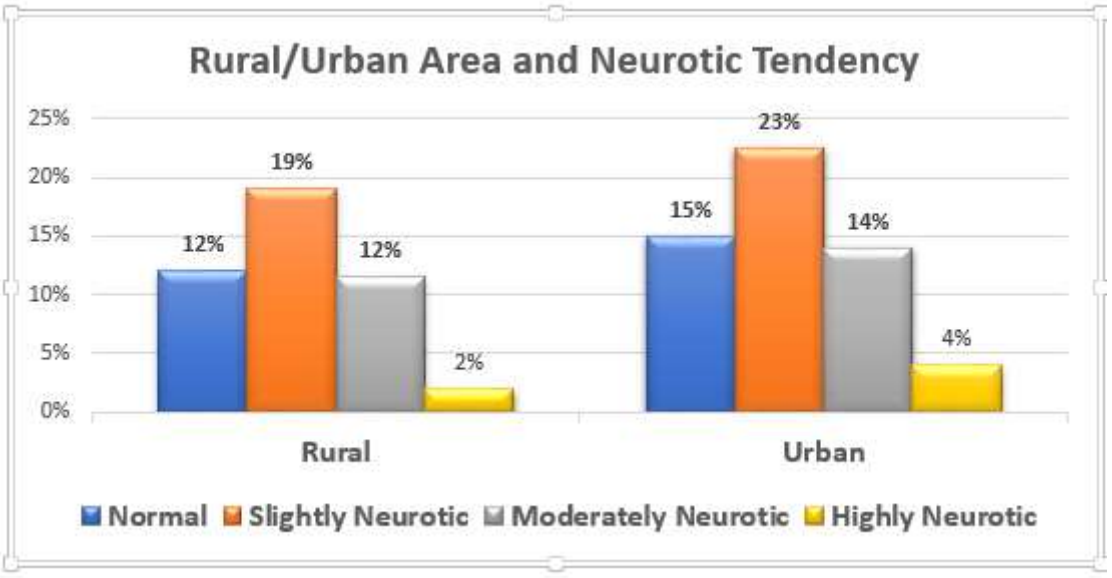

Fig 4: Area of stay and neurotic tendency

Correlations

Table 5. Corelation between academic scores of urban students and KNPI scores

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	-.674**
	Sig. (2-tailed)		.000
	N	111	111
VAR00002	Pearson Correlation	-.674**	1
	Sig. (2-tailed)	.000	
	N	111	111

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

Table 6. Corelation between academic scores of rural students and KNPI scores

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	-.355**
	Sig. (2-tailed)		.001
	N	89	89
VAR00002	Pearson Correlation	-.355**	1
	Sig. (2-tailed)	.001	
	N	89	89

**. Correlation is significant at the 0.01 level (2-tailed).

From Table 5 and 6, we see that $r_{rural} <$ **rurban,** -.355 < -.674. It can be said that students in rural areas have better academic scores despite neurotic tendencies

DISCUSSION

The current study aims to assess the extent of neuroticism (negative emotionality) in college students and understand its relationship with academic performance. Based on the study by Bhagat and Nayak (2014), we hypothesised that there would be a negative correlation between neuroticism and academic performance. Using scores from Kundu's Neurotic Personality Inventory and academic scores of 200 university students, a correlational analysis was conducted. The results revealed a significant moderate negative correlation with $r = -0.552^{**}$, retaining the hypothesis. The results are in line with previous findings in the field. A study conducted by Bhagat and Nayak (2014) on 70 medical students using the Eysanck Personality Inventory aimed to understand the effect of the level of neuroticism on academic performance and found a significant negative correlation (Bhagat and Nayak, 2014). The current study has replicated the same results on a larger sample with diverse educational backgrounds. Similar results were seen in studies in different population groups across the globe. A study by Poropat (2011) correlated personality traits with academic performance

and also found a negative correlation. Similarly, Kline (1966) conducted a study on Ghanaian university students to study the same relation and found similar results. Other studies have also found similar relationship (Bauer & Liang, 2003; Wagerman & Funder, 2007; Biderman & Reddock, 2012).

According to studies of university students, increased neuroticism lowers academic performance (Chamorro-Premuzic & Furnham, 2003). Neurotic medical students may be more nervous, as well as more prone to melancholy and insecurity (Tyssen et al., 2007). They may also be more susceptible to stress due to inadequate coping abilities (Tyssen et al., 2007). In a study by Diseth (2013), students who scored high on neuroticism seemed to have a more unfavourable assessment of teaching quality than other students and perceived the burden as unsuitable since it was too heavy.

Researchers have quoted various reasons for such a negative correlation. Primarily, neuroticism is believed to impair educational achievement by redirecting their concentration away from learning and towards nervous feelings and internal dialogue (De Raad & Schouwenburg, 1996) which might be connected to the finding that more susceptible children perform poorly in school (Hojat et al., 2003). Another reason often quoted for this relationship is procrastination in neurotic individuals. Kertechian (2018) discovered that neuroticism was negatively connected with motivation and favourably correlated with a procrastinating attitude. As a result, the students who were the most anxious, frightened, or upset were among the worst procrastinators.

In addition to this, neurotic people are more likely to be depressed, anxious, angry, and vulnerable. Students scoring high on this feature are likely to have more significant worry and stress, which can lead to poor academic performance on tests or other assessments (Bauer & Liang, 2003; Ackerman et al., 2011; O'Connor & Paunonen, 2007). Since students with higher NEO-Neuroticism scores may devote more psychological attention to difficulties of emotional stability and interpersonal connections, learners with greater neuroticism levels may not value focusing attention on educational and intellectual pursuits as much as children with lower neuroticism levels do. Lectures or courses on studying techniques, managing time, and integrating academic and recreational pursuits may be beneficial to students.

However, some research reveals a more complex relationship between academic performance and neuroticism as they were unable to find a negative relationship (Komarraju et al., 2009; Nguyen et al., 2005; Rosander et al., 2011). Neuroticism may have an immediate detrimental impact on academic performance, especially in difficult circumstances like examinations. However, a beneficial indirect impact through incentives may compensate for or reverse this unfavourable effect. For this favourable indirect effect to occur, neuroticism must be beneficial to academic motivation. However, there is evidence of an advantageous and detrimental link between neuroticism and scholastic desire. While experts agree that the dread of failing is characteristic of neuroticism, they vary regarding the way neurotic students deal with it. By deciding whether neuroticism influences intrinsic motivation or extrinsic motivation, this method of coping improves the effect of neuroticism on educational achievement through incentives. The research on cognitive instructional approaches helps comprehend how students cope with the fear of failure (De Feyter et al., 2012).

Additional analysis also reveals that females have better academic scores despite neurotic tendencies. These results are in conjecture with previous literature as well. According to Dunsmore (2005), gender is a characteristic that mitigates differences in learning results across individual characteristics across various educational environments. While the five-factor theory regarding personality has been seen in men and women, a combination of these five characteristics, sex, and educational achievement will probably create different outcomes. Nguyen et al. (2005) have previously reported that openness and emotional stability (the polar opposite of neuroticism) substantially and positively predicted performance in male students but not in female students. Similarly, De Fruyt and Mervielde (1996) discovered that openness was a more reliable indicator of scores for girls than boys in the initial examination session. Furthermore, they discovered that neuroticism indicated performance during the initial examination session, with boys showing a higher correlation than girls.

This study also brings forth that students coming from rural areas have better academic scores despite neurotic tendencies. One possible explanation is the influence of rural environments on student outcomes. Factors such as stronger community support, lower stress levels, and close- knit social networks in rural areas may contribute to better academic performance, even in individuals with neurotic tendencies. Many research studies indicate that social support and resilience are the protective factors on mental health (Ai & Hu., 2016; Davydov et al., 2010).

Emotional support and encouragement play crucial roles in shaping the educational pathways of rural students in postsecondary education (Flowers, 2021; Slocum et al., 2019). These factors are significant in fostering the academic success and overall well-being of students coming from rural area.

Limitations and Implication

The study is not without its limitations. The primary limitation was that the study was conducted in comparatively smaller sample in a single geographical region. Future research can be conducted on a larger sample in a diverse geographical extent. Also, the current study points to a relationship between the two, but future research can be conducted to build regressive models and identify the specific aspects of neuroticism which affect academic success, which will lead to a deeper understanding in this regard.

These results pose many practical implications as well. Since there is an effect of neuroticism on academic performance, students should become more conscious of their emotions and learn to self-regulate their emotional stability in order to improve their academic performance. In addition to this, institutions of health sciences utilise this outcome to assist students in developing skills and talents for improved academic achievement. Faculties must also closely monitor students and report any difficulties to a mental health practitioner and establish personality development sessions, to improve emotional quotient.

Conclusion

The current study aimed to understand the relationship of neuroticism with academic performance. The study reports findings that neuroticism is negatively correlated with academic success. These effects differ between gender and region of residence (urban-rural). Neuroticism in males predicts poorer academic performance more than it does in females.
Similarly, neurotic tendencies are better predictor of academic scores in urban areas than in rural areas. The current study highlights the importance of understanding the positive and negative effects of the emotional dimension and trait personality toward academic achievement.

Declaration of Conflicting Interests
The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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ORCID iD: Dr Shaini Suraj, Orchid Id: 0000-0002-3837-912X

Author Contributions: Dr Shaini Suraj and Dr Amita Kamdi have conceptualized and designed the study, led data collection, and have analyzed the data. The original manuscript draft was prepared by Dr Shaini Suraj and Dr Mangesh Kohale. Dr Nandkishor Bankar provided guidance on study design and data analysis. All authors contributed to the revision of the final manuscript.

Ethical Aspects
Institutional Ethical Committee has confirmed that no ethical approval is required due to the nature of the study. Permission was taken from concerned authorities of the institutes where study was conducted. Full confidentiality was maintained by assigning a code to each participating student's document. Data was stored with security code.

References

1. Hurst CS, Baranik LE, Daniel F. College student stressors: a review of the qualitative research. Stress Health. 2013;29(4):275-285. doi:10.1002/smi.2465
2. Bhattacharjee A, Ghosh T. COVID-19 Pandemic and Stress: Coping with the New Normal. J Prev Health Promot. 2022;3(1):30-52. doi:10.1177/26320770211050058
3. Cao W, Fang Z, Hou G, et al. The psychological impact of the COVID-19 epidemic on college students in China. Psychiatry Res. 2020;287:112934. doi:10.1016/j.psychres.2020.112934
4. Huckins JF, daSilva AW, Wang W, Hedlund E, Rogers C, Nepal SK et al. Mental Health and Behavior of College Students During the Early Phases of the COVID-19 Pandemic: Longitudinal Smartphone and Ecological Momentary Assessment Study. J Med Internet Res. 2020;22(6):e20185. Published 2020 Jun 17. doi:10.2196/20185
5. Marelli S, Castelnuovo A, Somma A, et al. Impact of COVID-19 lockdown on sleep quality in university students and administration staff. J Neurol. 2021;268(1):8-15. doi:10.1007/s00415-020-10056-6
6. Odriozola-González P, Planchuelo-Gómez Á, Irurtia MJ, de Luis-García R. Psychological effects of the COVID-19 outbreak and lockdown among students and workers of a Spanish university. Psychiatry Res. 2020;290:113108. doi:10.1016/j.psychres.2020.113108
7. Tang B, Wang X, Li Q, et al. Estimation of the Transmission Risk of the 2019-nCoV and Its Implication for Public Health Interventions. J Clin Med. 2020;9(2):462. Published 2020 Feb 7. doi:10.3390/jcm9020462
8. Li M, Zhang Z, Cao W, et al. Identifying novel factors associated with COVID-19 transmission and fatality using the machine learning approach. Sci Total Environ. 2021;764:142810. doi:10.1016/j.scitotenv.2020.142810
9. Stults-Kolehmainen MA, Sinha R. The effects of stress on physical activity and exercise. Sports Med. 2014;44(1):81-121. doi:10.1007/s40279-013-0090-5
10. Kendall E, Murphy PL, O'neill V, Bursnall, S. Occupational Stress: Factors that Contribute to its

Occurrance and Effective Management. (2001).
11. Liu W, Lin J. The Role of Meditation in College Students' Neuroticism and Mental Health. Transl Neurosci. 2019;10:112-117. Published 2019 Apr 23. doi:10.1515/tnsci-2019-0019
12. Filippello P. The mediating role of maladaptive perfectionism in the association between psychological control and learned helplessness. Improving Schools. 2017; 20.2: 113-126.10.1177/1365480216688554
13. Costa P X, McCrae RR. NEO Personality Inventory (NEO-PI) [Database record]. (1985). APA PsycTests. https://doi.org/10.1037/t07564-000Suls J, Martin R. The daily life of the garden-variety neurotic: Reactivity, stressor exposure, mood spillover, and maladaptive coping. Journal of Personality. 2005; 73(6), 1485–1509. https://doi.org/10.1111/j. 1467-6494.2005.00356.x
14. Bibbey A, Carroll D, Roseboom TJ, Phillips A C, De Rooij SR. Personality and physiological reactions to acute psychological stress. International journal of psychophysiology: Official journal of the International Organization of Psychophysiology. 2013; 90(1), 28–36. https://doi.org/10.1016/j.ijpsycho.2012.10.018
15. Mroczek DK, Almeida DM. The effect of daily stress, personality, and age on daily negative affect. Journal of personality. 2004; 72(2), 355–378. https://doi.org/10.1111/j.0022-3506.2004.00265.x
16. Bhagat V, Nayak RD. Neuroticism and academic performance of medical students. Int J Humanit Soc Sci Invent. 2014;3(1), 51-55.
17. Poropat AE. The Eysenckian personality factors and their correlations with academic performance. British Journal of Educational Psychology. 2011;81(1), 41-58.
18. Kline P. Extraversion, neuroticism and performance among Ghanaian university students, British Journal of Educational Psychology. 1966;36: 93–94. [Google Scholar]
19. Biderman MD, Reddock CM. The relationship of scale reliability and validity to respondent inconsistency. Personality and Individual Differences. 2012;52(5), 647- 651.
20. Wagerman SA, Funder DC. Acquaintance reports of personality and academic achievement: A case for conscientiousness. Journal of Research in Personality. 2007;41(1), 221-229.
21. Bauer KW, Liang Q. The effect of personality and precollege characteristics on first- year activities and academic performance. Journal of college student development. 2003; 44(3), 277-290.
22. Chamorro-Premuzic T, Furnham A. Personality predicts academic performance: Evidence from two longitudinal university samples. Journal of research in personality. 2003; 37(4), 319-338.
23. Tyssen R, Dolatowski FC, Røvik JO, Thorkildsen RF, Ekeberg O, Hem, E.et al. Personality traits and types predict medical school stress: a six-year longitudinal and nationwide study. Medical education. 2007; 41(8), 781-787.
24. Diseth Å. Personality as an indirect predictor of academic achievement via student course experience and approach to learning. Social Behavior and Personality: An international journal. 2013; 41(8), 1297-1308.
25. De Raad B, Schouwenburg HC. Personality in learning and education: A review. European Journal of personality. 1996;10(5), 303-336.
26. Hojat M, Gonnella JS, Erdmann JB, Vogel WH. Medical students' cognitive appraisal of stressful life events as related to personality, physical well-being, and academic performance: A longitudinal study. Personality and Individual Differences. 2003; 35(1), 219-235.
27. Kertechian SK. Conscientiousness as a key to success for academic achievement among French university students enrolled in management studies. The International Journal of Management Education. 2018; 16(2), 154-165.
28. Ackerman PL, Chamorro-Premuzic T, Furnham A. Trait complexes and academic achievement: Old and new ways of examining personality in educational contexts. British Journal of Educational Psychology. 2011;81(1), 27-40.
29. O'Connor C, Paunonen SV. Big Five personality predictors of post-secondary academic performance. Personality and Individual differences. 2007; 43(5), 971-990
30. Komarraju M, Karau SJ, Schmeck RR. Role of the Big Five personality traits in predicting college students' academic motivation and achievement. Learning and individual differences. 2009; 19(1), 47-52.
31. Nguyen NT, Allen LC, Fraccastoro K. Personality predicts academic performance: Exploring the moderating role of gender. Journal of Higher Education Policy and Management. 2005;27(1), 105-117.
32. Rosander P, Bäckström M, Stenberg G. Personality traits and general intelligence as predictors of academic performance: A structural equation modelling approach. Learning and individual differences. 2011; 21(5), 590-596.
33. De Feyter T, Caers R, Vigna C, Berings D. Unraveling the impact of the Big Five personality traits on academic performance: The moderating and mediating effects of self-efficacy and academic motivation. Learning and individual Differences. 2012; 22(4), 439-448.
34. Dunsmore JA. An investigation of the predictive validity of broad and narrow personality traits in relation to academic achievement. A dissertation ph D. University of Tennessee, Knoxville. 2005.
35. De Fruyt F, Mervielde I. Personality and interests as predictors of educational streaming and

achievement. European journal of personality. 1996; 10(5), 405-425.
36. Ai H, Hu J. Psychological resilience moderates the impact of social support on loneliness of "left-behind" children. Journal of health psychology. 2016;21(6), 1066– 1073. https://doi.org/10.1177/1359105314544992
37. Davydov DM, Stewart R, Ritchie K, Chaudieu I. Resilience and mental health. Clinical psychology review. 2010; 30(5), 479–495. https://doi.org/10.1016/j.cpr.2010.03.003
38. Flowers JH. The privileged rural: The college experiences of rural African Americans. In C. R. Chambers & L. Crumb (Eds.), African American rural education: College transi-tions and postsecondary experiences. 2021;(pp. 87–102). Emerald Group Publishing.
39. Slocum A, Weekley BS, Sherfinski M. Mind the gap: Parents' efforts to support college- bound students in Appalachia. The High School Journal. 2019;103(1), 18-37. https://www.jstor.org/stable/26986608