

A COMMUNITY BASED SURVEY ON THE DEPRESSION CAUSED BY THE ACADEMIC AND WORK STRESS

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Abstract

Purpose: Explore the potential mediating effects of anxiety symptoms and hopelessness on the relationship between academic stress and depressive symptoms among Chinese college students.

Aim: The aim of this community-based survey is to investigate the prevalence and impact of depression resulting from academic and work-related stress within diverse community populations. By examining the relationship between stressors and depressive symptoms, this study aims to identify key factors contributing to mental health challenges and inform the development of targeted interventions and support systems. Additionally, the study seeks to explore demographic variations in the experience of depression to tailor interventions effectively to specific population groups. Through this research, we aim to contribute to the promotion of mental well-being and the mitigation of adverse effects of stress on individuals within educational and professional settings.

Objective: This study aimed to explore the associations between academic stress and depression, and the mediating roles of negative affect and sleep quality, as well as the moderating role of social support in the relationship between negative affect and sleep quality.

Method: This cross-sectional study was conducted from 10 January 2024 to 30 April 2024, it was carried out by a household survey. For this cross-sectional study, we performed in-person interviews in both urban

and rural locations both urban and rural regions of Karnataka, Andhra Pradesh, Uttarakhand, Maharashtra, Tamil Nadu, Delhi, Kerala, Mumbai, Assam & Meghalaya were used for the study. A convenience sample of 365 college students aged between 18 and 45 completed questionnaires on academic stress, depression, negative affect, sleep quality and social support. This study investigates the prevalence and correlates of depression stemming from academic and work-related stress within a community setting. Through a survey-based approach, data was collected from diverse individuals to assess the extent of depression experienced due to the pressures of academia and professional life. Findings indicate a significant association between stressors and depressive symptoms, highlighting the need for targeted interventions and support systems to mitigate the adverse effects of stress on mental health.

Results: The majority of subjects (76.9%) are between the ages of 18 to 25, followed by the age groups of 36 to 35 (8.4%), 36 to 45(7.2%), and those over 45 (4.1%). Out of all the volunteers, 50.0% were females and rest were 49.7 % males. 84.0% of people stay at home while the rest 16.0% in hostel.

31.8% of the subjects had difficulty in concentrating on work and 48.4% are not having any difficulty & 72.8 % (214members) are facing stress because of work pressure, 26.5% (78 members) are facing stress because of relationship, 7.8 % (23 members) of Genetic, 11.9% (35 members) are from drugs and 23.5% (69 members) are from Poor nutrition. 39.1 % (124 members) are feeling that rate of depression is going higher, 37.5 % (119 members) does not feel rate of depression is higher & 23.3% (74 members) are feeling may be

Conclusion: The study detailed the specific process of depressive symptoms caused by academic stress in college students and in different age groups. Anxiety symptoms and hopelessness could mediate the relationship between academic stress and depressive symptoms. Paying attention to the anxiety levels and hopelessness levels of college students with high academic pressure is suggested as a means of preventing depression and promoting mental health.

Keywords: Depression, academic stress, work stress, community-based survey & mental health,

Introduction:

In accordance with the World Health Organization, depression is one of the leading causes of disability worldwide and is projected to significantly contribute to the overall global burden of disease by 2030.^{1,2} Research on depression among college students has gained increasing attention in recent years.^{3,4} College years are a critical transition period for students as they become adults, which is often accompanied by a variety of challenges.⁵ Students at this stage are susceptible to a variety of mental disorders. According to an estimate by Eisenberg, approximately 15.6% of undergraduate students in the United States showed signs of depression or anxiety disorder.⁶ Based on a meta-analysis which included 21 studies, the prevalence of depression symptoms among Chinese college students stands at 24.71% and is increasing.⁷ The presence of

severe depressive symptoms will not only hinder college students from participating in academic activities, but may also lead to a number of negative consequences, some of which may even be fatal.⁸

In college students, academic stress may play a crucial role in the development of depression.⁹ Academic stress is a term used to describe the stress that individuals can experience in regards to exams or assignments, educational environments, being evaluated, and a variety of academic-related issues.^{10,11} According to the traditional Confucian philosophy, education in China tends to focus mainly on various examinations or tests, resulting in a high level of pressure environment for Chinese students.¹² Research has demonstrated that academic stress is associated with a variety of mental health problems in adolescents, especially depression, indicating that further research is warranted on this topic.¹³

Multiple factors may be involved in the effect of academic stress on depressive symptoms. Researchers have demonstrated that anxiety symptoms are positively correlated with academic stress, and that academic stress is a risk factor for anxiety symptoms among students.¹⁴ Anxiety symptoms are closely related to school performance, exams, assignments, ranking, test scores, teacher-student relationships, and other related topics.^{15,16} Moreover, a large body of research has demonstrated that anxiety symptoms and depressive symptoms are closely related among college students.¹⁷⁻¹⁹ Based on the stress response theory, students exposed to a high academic stress environment may experience anxiety, and this anxiety may further contribute to the occurrence of depression.¹⁸

In recent years, the rising incidence of depression has become a concerning issue, particularly among individuals facing high levels of academic and work-related stress. The demands of academia and professional life often entail rigorous schedules, competitive environments, and heavy workloads, which can exacerbate mental health challenges. Understanding the prevalence and impact of depression in these contexts is crucial for developing effective interventions and support mechanisms. This study aims to elucidate the relationship between academic/work stress and depression through a community-based survey.

Method:

Study Design

For this study, we performed online in different locations. Frequency and its contributing elements from 24 December 2022 to 18 April 2023, it was carried out by an online survey.

Study setting:

Both urban and rural regions of Karnataka, Andhra Pradesh, Jammu & Kashmir & Tamil Nadu, were used for the study. The investigation was conducted using the provided questionnaire online. More than 365 participants took part in the study.

Study questionnaire:

An English-language structured research questionnaire was created a copy is available upon request from the relevant author. A skilled and certified translator translated it into the native languages of Marathi and Hindi. To guarantee consistency in the text, another translator performed back translations from Marathi and Hindi into English.

The questionnaire will be designed to gather comprehensive data on the experiences, perceptions, and needs of individuals regarding academic and work-related stress and its impact on depression within the community. It will ensure anonymity and confidentiality to encourage honest responses from participants.

Methodology:

A community-based survey was conducted to collect data on the experiences of individuals regarding academic and work-related stress and its association with depressive symptoms. The survey questionnaire included standardized measures to assess stress levels, depressive symptoms, coping mechanisms, and demographic information. Participants were recruited through community organizations, educational institutions, and online platforms to ensure diverse representation.

Participants:**Inclusion standards:**

The research was open to participants who could understand English and could provide address for verification.

Exclusion standards:

The study excluded participants with communication issues or mental disabilities.

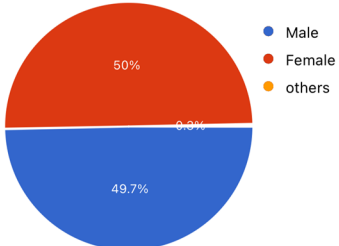
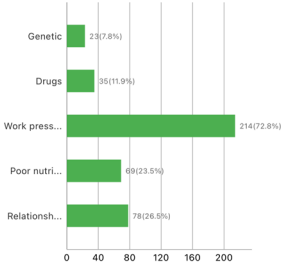
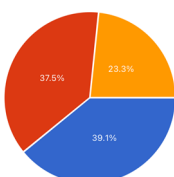
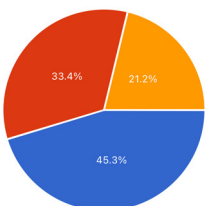
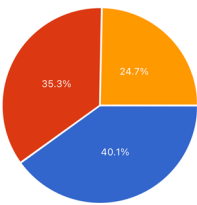
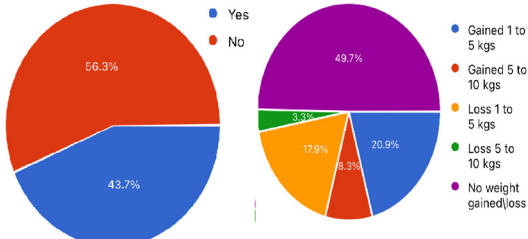
Data collection:

A link to a Google Forms survey with a questionnaire was created online survey were conducted using this questionnaire.

Statistical Analysis:

The questionnaire included the following details, which brings into the conclusion. The Statistical information is as follows:-

Table -1 :

<p>Gender</p>	 <p>Legend: Male (Blue), Female (Red), others (Yellow)</p>
<p>Cause of the Depression</p>	 <p>Legend: Genetic, Drugs, Work press..., Poor nutri..., Relationsh...</p>
<p>Do you feel that rate of depression is going higher</p>	 <p>Legend: Yes (Blue), No (Red), Maybe (Yellow)</p>
<p>Are you comfortable in discussing your health openly with others including Health care Professional.</p>	 <p>Legend: Yes (Blue), No (Red), Maybe (Yellow)</p>
<p>Does present education brings you lots of pressure.</p>	 <p>Legend: Yes (Blue), No (Red), Maybe (Yellow)</p>
<p>Do you experienced weight loss or any weight gain without any diet & if yes how many</p>	 <p>Legend: Yes (Blue), No (Red), Gained 1 to 5 kgs (Blue), Gained 5 to 10 kgs (Red), Loss 1 to 5 kgs (Yellow), Loss 5 to 10 kgs (Green), No weight gained/loss (Purple)</p>

RESULT:

A total of 356 people consented to take place as volunteers in the research. Age, marital status, employment, level of education, and other demographic factors levels, a job, health condition, etc were collected.

The majority of subjects (76.9%) are between the ages of 18 to 25, followed by the age groups of 36 to 35 (8.4%), 36 to 45(7.2%), and those over 45 (4.1%). Out of all the volunteers, 50.0% were females and rest were 49.7 % males. 84.0% of people stay at home while the rest 16.0% in hostel.

31.8% of the subjects had difficulty in concentrating on work and 48.4% are not having any difficulty & 72.8 % (214members) are facing stress because of work pressure, 26.5% (78 members) are facing stress because of relationship, 7.8 % (23 members) of Genetic, 11.9% (35 members) are from drugs & 23.5% (69 members) are from Poor nutrition. 39.1 % (124 members) are feeling that rate of depression is going higher, 37.5 % (119 members) does not feel rate of depression is higher & 23.3% (74 members) are feeling may be.

Discussion:

The present study examined the potential mediating role of anxiety symptoms and hopelessness in the relationship between academic stress and depressive symptoms among college students. It is consistent with our hypothesis that academic stress may contribute to depressive symptoms directly or indirectly through three different indirect pathways: through the mediating role of anxiety symptoms, through the mediating role of hopelessness, and through the chain mediating role of both anxiety symptoms and hopelessness.

In this study, the overall difficulty in concentrating in work is 31.8% (101 members) and neutral was 48.4% (164 members) & 50 members i.e. 15.7% having self-harming behaviors

Our study confirms what prior research has indicated: academic stress such as poor academic performance, a desire to succeed, and post-graduation plans can lead to anxiety. Moreover, academic stress was positively and significantly associated with hopelessness among college students in this study, which is consistent with previous research. It is known that anxiety is a normal physical response to stress.²⁵ Undergraduate students who have been subjected to high levels of academic pressure for a long period of time and adopt ineffective coping methods may experience frustration, despair, and even develop more serious mental disorders, such as depression. Due to both hopelessness and depression being significant risk factors for suicidal behavior, attentions must be paid to the issue of high academic stress affecting college students.

The results of the mediation analysis indicated that academic stress is significantly associated with depression symptoms among college students. This means that the greater the academic stress, the higher the risk of developing depression symptoms. This is consistent with the results of previous studies, verifying the relationship between academic stress and depressive symptoms, indicating that academic stress is an

influential factor causing depressive symptoms in college students. In addition to that, anxiety symptoms could also positively and significantly predict depressive symptoms in the current study.

In line with our expectations, academic stress could affect depressive symptoms via one direct effect pathway and three indirect effect pathways. First, academic stress could directly affect depressive symptoms, the higher academic stress may cause severe depressive symptoms. Second, academic stress could affect depressive symptoms through the partially mediating effect of anxiety. Third, academic stress affects depressive symptoms through the partially mediating effect of hopelessness. Finally, a significant pathway of academic stress-anxiety symptoms-hopelessness-depressive symptoms was found. The total effect of three indirect pathways accounts for 62% of the total effect which academic stress affects depressive symptoms.

Conclusion:

The study detailed the specific process of depressive symptoms caused by academic stress in college students and in different age groups. Anxiety symptoms and hopelessness could mediate the relationship between academic stress and depressive symptoms. Paying attention to the anxiety levels and hopelessness levels of college students with high academic pressure is suggested as a means of preventing depression and promoting mental health.

This contributes to a better understanding of the link between academic stress and depression. It found that problems of anxiety, hopelessness, and depression caused by academic stress are common in college students. In order to promote the mental health of college students, academic stress must be addressed. However, several limitations in the current study must be mentioned. The data from college students with severe mental health problems did not exclude from the final analysis, which may potentially enhance the relationship between the main variables. Future research on college students should be cautious with the same problem.

AUTHORS CONTRIBUTIONS

All the authors contributed equally in design of the work, acquisition and interpretation of data, and manuscript preparation, all authors have read and approved the manuscript.

CONFLICT OF INTEREST

There is no conflict of interest from all the authors.

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References:

1. James SL, Abate D, Abate KH, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the global burden of disease study 2017. *Lancet*. 2018;**392**(10159):1789–1858.
2. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med*. 2006;**3**(11):e442.
3. Lattie EG, Adkins EC, Winquist N, Stiles-Shields C, Wafford QE, Graham AK. Digital mental health interventions for depression, anxiety, and enhancement of psychological well-being among college students: systematic review. *J Med Internet Res*. 2019;**21**(7):e12869.
4. Mendelson T, Tandon SD. Prevention of depression in childhood and adolescence. *Child Adolesc Psychiatr Clin N Am*. 2016;**25**(2):201–218.
5. Feng Q, Zhang QL, Du Y, Ye YL, He QQ. Associations of physical activity, screen time with depression, anxiety and sleep quality among Chinese college freshmen. *PLoS One*. 2014;**9**(6):e100914.
6. Eisenberg D, Gollust SE, Golberstein E, Hefner JL. Prevalence and correlates of depression, anxiety, and suicidality among university students. *Am J OrthoPsychiatry*. 2007;**77**(4):534–542.
7. Wang M, Liu J, Wu X, et al. The prevalence of depression among students in Chinese universities over the past decade: a meta-analysis. *J Hainan Med Univ*. 2020;**9**:44–50.
8. Ibrahim AK, Kelly SJ, Adams CE, Glazebrook C. A systematic review of studies of depression prevalence in university students. *J Psychiatr Res*. 2013;**47**(3):391–400.
9. Jayanthi P, Thirunavukarasu M, Rajkumar R. Academic stress and depression among adolescents: a cross-sectional study. *Indian Pediatr*. 2015;**52**(3):217–219.
10. Emond M, ten Eycke K, Kosmerly S, Robinson AL, Stillar A, van Blyderveen S. The effect of academic stress and attachment stress on stress-eaters and stress-undereaters. *Appetite*. 2016;**100**:210–215.
11. Verma S, Gupta J. Some aspects of high academic stress and symptoms. *J Pers Clin Stud*. 1990;**6**(1):7–12
12. Jinghua L, Xiaoli F, Songli M, Dongliang Y. Investigation of study pressure effects on mental health of junior school students in Changchun. *Med Soc*. 2007;**20**(2):56–57.
13. Beiter R, Nash R, McCrady M, et al. The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *J Affect Disord*. 2015;**173**:90–96.

14. Leung GSM, Yeung KC, Wong DFK. Academic stressors and anxiety in children: the role of paternal support. *J Child Fam Stud*. 2010;**19**(1):90–100.
15. Fawzy M, Hamed SA. Prevalence of psychological stress, depression and anxiety among medical students in Egypt. *Psychiatry Res*. 2017;**255**:186–194.
16. Kouzma NM, Kennedy GA. Self-reported sources of stress in senior high school students. *Psychol Rep*. 2004;**94**(1):314–316.
17. Azad N, Shahid A, Abbas N, Shaheen A, Munir N. Anxiety and depression in medical students of a private medical college. *J Ayub Med Coll Abbottabad*. 2017;**29**(1):123–127.
18. Dyson R, Renk K. Freshmen adaptation to university life: depressive symptoms, stress, and coping. *J Clin Psychol*. 2006;**62**(10):1231–1244.
19. Shao R, He P, Ling B, et al. Prevalence of depression and anxiety and correlations between depression, anxiety, family functioning, social support and coping styles among Chinese medical students. *BMC Psychol*. 2020;**8**(1):38.
20. Beck AT, Weissman A, Lester D, Trexler L. The measurement of pessimism: the hopelessness scale. *J Consult Clin Psychol*. 1974;**42**(6):861–865.