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DEPRESSION AMONG COLLEGE STUDENTS: AN EMPIRICAL INVESTIGATION OF CAUSES, DETERMINANTS, AND PREVENTIVE MEASURES

DR. LAVAKUSH SINGH

HEAD OF DEPARTMENT-FACULTY OF BUSINESS ANALYTICS & IN-CHARGE DIRECTOR INTERNATIONAL INSTITUTE OF MANAGEMENT & HUMAN RESOURCE DEVELOPMENT FOR WOMEN,PUNE,MAH INDIA, ORCID: 0000-0002-5506-8227

ABSTRACT

Depression has emerged as one of the most significant mental health concerns among college students, affecting their emotional well-being, academic performance, and overall quality of life. The present study investigates the prevalence, causes, determinants, and preventive measures associated with depression among undergraduate and postgraduate students pursuing Commerce, Management, Science, and Engineering programmes. The study is based on a cross-sectional survey of 400 students comprising 250 males and 150 females aged between 18 and 25 years. Data were collected using a structured questionnaire and standardized psychological assessment instruments, namely the Beck Depression Inventory-21 (BDI-21), Student Health Questionnaire-9 (SHQ-9),and Depression Screening Scale-14 (DSS-14). Descriptive statistics and one-way Analysis of Variance (ANOVA) were employed to analyse the data and test the proposed hypotheses. The findings indicate that female students experience significantly higher levels of depression than male students, while no statistically significant differences were observed with respect to age, educational qualification, family income, or peer pressure. The study identifies inadequate sleep, financial stress, fear of unemployment, poor dietary habits, insufficient physical activity, stressful life events, and academic expectations as the primary contributors to depression among college students. Although a majority of respondents reported normal or mild depressive symptoms, a considerable proportion exhibited moderate to severe depression requiring timely intervention. The study recommends promoting healthy sleep patterns, regular physical exercise, balanced nutrition, meditation,yoga, counselling services, and peer support mechanisms within higher educational institutions to improve students' mental well-being. The findings provide useful implications for educational administrators, counsellors, policymakers, and healthcare professionals in designing effective mental health interventions and preventive strategies for college students.

KEYWORDS: Depression; College Students; Mental Health; Academic Performance; Beck Depression Inventory (BDI-21); Student Health Questionnaire (SHQ-9); Depression Screening Scale (DSS-14); Gender Differences; Higher Education; Counselling; Psychological Well-being; ANOVA.

1. INTRODUCTION

Mental health has become an increasingly important public health concern worldwide, particularly among adolescents and young adults enrolled in higher educational institutions. College life represents a critical transition period during which students encounter academic responsibilities, career uncertainty, financial challenges, changing social relationships, and increasing independence. While this transition offers opportunities for personal and professional growth, it also exposes students to numerous psychological stressors that may adversely affect their mental well-being. Among various mental health disorders, depression has emerged as one of the most prevalent conditions affecting college students across the globe (World Health Organization [WHO], 2023).

Depression is a common mental disorder characterized by persistent sadness, loss of interest in daily activities, feelings of hopelessness, reduced concentration, disturbed sleep, fatigue, changes in appetite, and, in severe cases, suicidal thoughts and behaviours (American Psychiatric Association, 2022). The World Health Organization identifies depression as one of the leading causes of disability worldwide, affecting more than 280 million people across different age groups (WHO, 2023). Young adults pursuing higher education are particularly vulnerable because of academic competition, financial burden, peer expectations, family pressure, social isolation, and uncertainties regarding future employment (Ibrahim et al., 2013).

In recent years, the prevalence of depression among university and college students has increased substantially. Numerous international studies have reported that between 20% and 40% of college students experience depressive symptoms of varying severity during their academic life (Auerbach et al., 2018; Eisenberg et al., 2007). Depression not only affects students' emotional health but also negatively influences academic achievement,

cognitive functioning, classroom participation, interpersonal relationships, and overall quality of life (Hysenbegasi et al., 2005). If left untreated, depression may result in substance abuse, poor academic performance, dropout from educational programmes, and increased risk of self-harm or suicide (WHO, 2023).

Several demographic, psychological, behavioural, and socio-economic factors contribute to depression among college students. Previous research has identified inadequate sleep, unhealthy dietary habits, lack of physical activity, financial constraints, relationship conflicts, peer pressure, academic workload, social comparison, parental expectations, and uncertainty regarding future career opportunities as major predictors of depressive symptoms (Bayram & Bilgel, 2008; Chen et al., 2013). In addition, gender differences have consistently been observed, with female students generally reporting higher levels of depression than their male counterparts due to biological, psychological, and socio-cultural factors (Khawaja & Duncanson, 2008).

Academic discipline also appears to influence students' psychological well-being. Students enrolled in professional programmes such as Engineering, Medicine, Management, and Business Administration often experience greater academic pressure, competitive environments, and demanding workloads, making them more susceptible to stress and depression than students pursuing conventional academic programmes (Arslan et al., 2009; Haldorsen et al., 2014). Understanding these variations is essential for designing targeted mental health interventions within higher educational institutions.

Despite increasing awareness regarding mental health issues, many students hesitate to seek professional psychological support because of stigma, fear of discrimination, lack of awareness, or limited access to counselling services (Eisenberg et al., 2007). Consequently, depressive symptoms frequently remain undiagnosed until they significantly impair academic performance and personal functioning. Higher education institutions therefore have an important responsibility to establish comprehensive mental health support systems that encourage early identification, counselling, and preventive interventions.

The present study seeks to examine depression among college students by identifying its major causes, assessing the prevalence and severity of depressive symptoms, analysing demographic differences based on gender, age, educational qualification, family income, and peer pressure, and recommending appropriate preventive measures. The study employs standardized psychological assessment instruments, namely the Beck Depression Inventory-21 (BDI-21), Student Health Questionnaire-9 (SHQ-9), and Depression Screening Scale-14 (DSS-14), to evaluate the mental health status of students. Statistical analysis using descriptive statistics and one-way Analysis of Variance (ANOVA) is applied to test the proposed hypotheses and determine whether significant differences exist among different student groups.

The findings of this study are expected to contribute to the growing literature on student mental health by providing empirical evidence regarding the determinants of depression among college students. Furthermore, the results may assist educational institutions, policymakers, mental health professionals, counsellors, and parents in developing evidence-based strategies for promoting psychological well-being and creating supportive academic environments that enhance students' academic success and overall quality of life.

2. LITERATURE REVIEW

2.1 Depression Among College Students: A Growing Global Concern

Mental health among university students has received increasing attention worldwide due to the growing prevalence of psychological distress, anxiety, and depressive symptoms during higher education. The transition from school to university life introduces several challenges, including academic pressure, social adjustment, financial concerns, career uncertainty, and increased personal responsibilities. These factors collectively influence students' emotional well-being and may increase vulnerability to depression.

Earlier studies have established that university students represent a psychologically sensitive population. Research conducted across different countries has reported considerable levels of depressive symptoms among students, indicating that depression is not restricted to any specific geographical region or educational system. Ibrahim Ahmed K. et al. (2013) through a systematic review observed that depression among university students is a widespread concern and highlighted the need for preventive mental health strategies within educational institutions.

The increasing complexity of student life has further intensified mental health concerns. Students are required to balance academic responsibilities, career expectations, interpersonal relationships, and personal development simultaneously. These multiple demands may create psychological pressure, especially among students who lack adequate coping mechanisms or institutional support.

Recent studies conducted after the COVID-19 pandemic have further highlighted the vulnerability of college students. The pandemic disrupted traditional learning systems, reduced social interaction, and increased uncertainty regarding academic progression and future employment. A study examining college students after the emergence of COVID-19 reported that academic stress and emotional difficulties increased significantly due to changes in learning patterns and uncertainty about future outcomes (Clabaugh et al., 2021).

Similarly, research among higher education students in India found significant levels of depression, anxiety, and stress during the pandemic period, emphasizing the influence of academic disruption, social isolation, and uncertainty on student mental health (Verma et al., 2021).

The present study extends this existing understanding by examining depression among students belonging to different academic streams, including Commerce, Management, Science, and Engineering, while also analysing demographic and lifestyle-related factors.

2.2 Academic Stress and Depression Among Students

Academic pressure is considered one of the major contributors to depression among college students. Students frequently experience stress due to examinations, workload, competition, expectations from parents, and concerns regarding academic achievement. Continuous academic pressure may affect psychological health and reduce students' ability to manage emotional challenges.

Previous research has demonstrated that academic stress is strongly associated with emotional distress among university students. Students often perceive academic success as directly linked with future career opportunities, creating additional pressure to achieve better outcomes.

Clabaugh et al. (2021) examined academic stress and emotional well-being among college students and found that academic disruption and uncertainty during the COVID-19 period were associated with increased emotional difficulties. The findings suggest that academic environments significantly influence students' psychological experiences.

The present study identified fear of not obtaining a suitable job after completing education as one of the major causes of depression among respondents. This finding indicates that students' psychological concerns are not limited to current academic challenges but are also associated with future employment expectations.

2.3 Gender Differences in Depression Among College Students

Gender differences in depression have been widely examined in student mental health research. Several studies have reported that female students demonstrate higher levels of depressive symptoms compared with male students. Possible explanations include differences in emotional responses, social expectations, coping mechanisms, and exposure to specific stressors.

Earlier studies have reported gender variations in depression, anxiety, and stress among university students (Bayram & Bilgel, 2008). Similar patterns have continued to appear in recent research. A longitudinal examination of college student mental health during the COVID-19 period found that female students experienced higher psychological distress compared with some other demographic groups (Copeland et al., 2021).

The present study also identified a significant relationship between gender and depression. Female students recorded higher depression scores compared with male students, supporting observations reported in previous research.

This finding suggests that higher education institutions should consider gender-sensitive approaches while designing mental health interventions.

2.4 Lifestyle Factors and Depression Among Students

Lifestyle-related behaviours such as sleep patterns, physical activity, diet, and recreational activities have an important relationship with student mental health. Poor sleep quality, irregular eating habits, and lack of exercise may negatively influence emotional regulation and increase psychological distress.

University students frequently experience disturbed sleep patterns due to academic workload, excessive screen usage, irregular schedules, and stress. Poor sleep can affect concentration, mood regulation, and overall psychological functioning.

Recent research has continued to highlight the relationship between lifestyle disruption and student mental health. Johansson et al. (2021) reported that sleep problems and psychological vulnerability were associated with increased depression, anxiety, and stress symptoms among university students during the pandemic period.

The present study supports these observations, as lack of sleep emerged as the most frequently reported cause of depression among respondents. This indicates that lifestyle improvement strategies may play an important role in reducing depressive symptoms among students.

2.5 Career Uncertainty and Psychological Distress

Career-related uncertainty has become an important psychological challenge among higher education students. Increasing competition in employment markets, changing skill requirements, and uncertainty regarding future opportunities create significant stress among students.

Students often associate educational success with employment security. When students perceive uncertainty regarding career outcomes, they may experience anxiety, reduced confidence, and depressive symptoms.

The present research identified fear of not obtaining a good job after completing education as one of the major contributors to depression. This finding highlights the importance of career counselling, skill development programmes, and placement support within educational institutions.

2.6. Role of Institutional Support in Reducing Student Depression

Educational institutions play an important role in promoting student mental health. Universities and colleges can reduce psychological distress by providing counselling services, awareness programmes, mentoring systems, and wellness activities.

Research indicates that students often hesitate to seek professional psychological support due to stigma, lack of awareness, or concerns regarding confidentiality. Therefore, institutions need to create supportive environments where mental health assistance is easily accessible.

Recent evidence suggests that student mental health interventions should combine professional counselling with preventive approaches such as peer support, mindfulness practices, and wellness programmes. Studies conducted

during and after COVID-19 have highlighted the importance of institutional responsibility in protecting student psychological well-being.

The present study similarly recommends counselling support, meditation, relaxation techniques, yoga, and peer interaction as important measures for reducing depression among students.

2.7 Research Gap

Although previous studies have extensively examined depression among university students, several gaps remain. First, many existing studies focus on general prevalence of depression without comparing students from different academic disciplines. The present study addresses this gap by examining students from Commerce, Management, Science, and Engineering backgrounds.

Second, earlier research has mainly examined psychological symptoms, whereas the present study integrates lifestyle factors, academic concerns, demographic characteristics, and coping measures.

Third, limited studies have analysed depression among Indian college students using multiple screening instruments such as BDI-21, SHQ-9, and DSS-14 together.

Therefore, the present study attempts to provide a comprehensive understanding of depression among college students by analysing causes, levels, influencing factors, and preventive measures.

3. THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

3.1 Theoretical Foundation

The present study adopts a multidimensional theoretical perspective to explain depression among college students. Drawing upon the Stress and Coping Theory (Lazarus & Folkman, 1984), the Biopsychosocial Model (Engel, 1977), and Social Support Theory, the study proposes that depressive symptoms emerge through the interaction of individual vulnerabilities, environmental stressors, lifestyle behaviours, and available coping resources.

The Stress and Coping Theory suggests that psychological distress is influenced not only by exposure to stressful events but also by individuals' appraisal of stress and their ability to cope with challenges. In the context of higher education, academic pressure, career uncertainty, financial concerns, and social expectations may act as significant stressors that increase students' vulnerability to depression when coping resources are insufficient.

The Biopsychosocial Model provides a broader explanation by emphasizing that mental health outcomes result from interactions among biological, psychological, and social factors. Accordingly, depression among students may be influenced by lifestyle-related factors such as sleep disturbances and unhealthy routines, psychological factors including academic stress and fear of failure, and social conditions such as family expectations and financial pressure.

Social Support Theory further explains the protective role of interpersonal resources. Support from family, peers, faculty members, and institutional counselling services may reduce the negative psychological effects of stress by strengthening coping capacity and emotional adjustment.

Together, these theoretical perspectives suggest that depression among college students is a complex outcome shaped by multiple interacting determinants rather than a single isolated factor.

3.2 Conceptual Framework: Based on the theoretical foundation, the study proposes that demographic characteristics, academic and career-related stressors, lifestyle behaviours, and social factors influence students' psychological processes, including stress perception and coping ability, which subsequently affect depression levels.

Independent Variables

- Demographic factors: Gender, age, educational background, family income
- Academic and career factors: Academic pressure, employment concerns, career uncertainty
- Lifestyle factors: Sleep patterns, exercise behaviour, dietary practices, relaxation activities
- Social factors: Peer relationships, family expectations, institutional support

↓

Psychological Mechanisms

- Stress perception
- Coping ability
- Emotional adjustment

↓

Dependent Variable

Depression level among college students

↓

Outcomes

- Psychological well-being
- Academic functioning
- Quality of student life

3.3 Hypothesis Development

Based on the theoretical framework, the following hypotheses were developed:

H1: Gender is significantly associated with depression levels among college students.

H2: Age is significantly associated with depression levels among college students.
H3: Educational background significantly influences depression levels among college students.
H4: Family income is significantly associated with depression levels among college students.
H5: Peer-related factors significantly influence depression levels among college students.
The proposed framework integrates demographic, academic, lifestyle, and social determinants to provide a comprehensive explanation of depression among students from diverse educational backgrounds.

4. RESEARCH METHODOLOGY

4.1. Research Design: The study employed a quantitative, descriptive, and cross-sectional research design to examine the prevalence of depression and its associated demographic, academic, social, and lifestyle-related factors among college students. The analytical component investigated differences in depression levels across selected demographic variables and identified key contributors to depressive symptoms.

4.2 .Research Objectives

The study was designed to:

1. Assess the prevalence and severity of depression among college students.
2. Identify major factors associated with depressive symptoms.
3. Examine the relationship between demographic variables and depression.
4. Compare depression levels across different academic disciplines.
5. Identify potential strategies for promoting students' psychological well-being.

4.3 Participants and Sampling

The study included **400 undergraduate and postgraduate students** from Commerce, Management, Science, and Engineering programmes. The sample comprised **250 male and 150 female students** aged **18–25 years**. Participants were selected using a **non-probability convenience sampling** technique. Eligible respondents were currently enrolled in higher education programmes, aged between 18 and 25 years, and provided informed consent to participate.

4.4 Data Collection and Research Instrument

Primary data were collected using a structured questionnaire, while secondary information was obtained from peer-reviewed journals, academic books, and other scholarly sources.
The questionnaire consisted of three sections:

- **Section A:** Demographic characteristics (gender, age, educational qualification, and family income).
- **Section B:** Factors associated with depression, including academic pressure, career uncertainty, financial concerns, family expectations, peer influence, sleep patterns, dietary habits, physical activity, and relationship-related issues.
- **Section C:** Assessment of depression using standardized psychological measurement instruments.

4.5 Measurement of Depression

Depressive symptoms were assessed using validated psychological instruments, including the **Beck Depression Inventory (BDI-21)**, the **Student Health Questionnaire-9 (SHQ-9)**, and the **Depression Screening Scale-14 (DSS-14)**. These instruments evaluate cognitive, emotional, behavioural, and somatic symptoms of depression, including low mood, loss of interest, fatigue, sleep disturbances, and concentration difficulties. The combined use of these standardized measures enabled a comprehensive assessment of depression severity among respondents.

4.6 Reliability and Validity

The study employed standardized depression assessment instruments with established psychometric properties reported in previous research. Reliability was assessed through internal consistency measures, while content validity was ensured through the use of validated scales and alignment with existing literature on depression among college students.

4.7 Study Variables

The **dependent variable** was the level of depression among college students.
The **independent variables** included demographic characteristics (gender, age, educational qualification, and family income), social factors (peer pressure, family expectations, and social relationships), academic and career factors (academic pressure, career uncertainty, and employment concerns), and lifestyle factors (sleep patterns, physical activity, dietary habits, and relaxation practices).

4.8 Statistical Analysis

Data were analysed using descriptive and inferential statistical techniques. Frequencies, percentages, means, and standard deviations were used to summarise respondent characteristics and depression levels.
One-way Analysis of Variance (ANOVA) was employed to examine differences in depression across demographic groups, including gender, age, educational qualification, family income, and peer pressure. Statistical significance was determined at $\mathbf{p < 0.05}$.

4.9 Ethical Considerations

The study adhered to established ethical standards for research involving human participants. Participation was voluntary, informed consent was obtained prior to data collection, and confidentiality and anonymity of participants were maintained. The collected data were used solely for academic research purposes.

5. RESULTS AND FINDINGS

5.1 Profile of the Respondents

The study examined depression levels among college students from different academic backgrounds. A total of **400 respondents** participated in the study, consisting of **250 male students (62.5%) and 150 female students (37.5%)**. The respondents belonged to various educational streams, including Commerce, Management, Science, and Engineering. The age group of participants ranged from **18 to 25 years**, representing the typical undergraduate and postgraduate student population.

The demographic distribution of respondents is presented in Table 1.

Table 1:Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	250	62.50
Age	Female	150	37.50
	18–20 Years	204	51.00
	21–23 Years	138	34.50
	24–25 Years	58	14.50
Educational Background	B.Com	235	58.75
	BBA	31	7.75
	B.Sc	20	5.00
	MBA	94	23.50
	Engineering	20	5.00
Total Respondents		400	100.00

Interpretation: The sample consisted predominantly of male respondents (62.50%), while female students represented 37.50% of the participants. The majority of respondents were between 18 and 23 years of age, indicating that the study mainly captured the experiences of students undergoing graduation and early postgraduate education.

Among different academic streams, students pursuing B.Com constituted the largest group (58.75%), followed by MBA students (23.50%). Although students from Engineering and Science streams represented comparatively smaller proportions, their inclusion enabled comparison of depression levels across different educational disciplines.

The diversity of the sample provides a broader understanding of psychological challenges experienced by students belonging to different academic environments.

5.2 Causes of Depression Among College Students

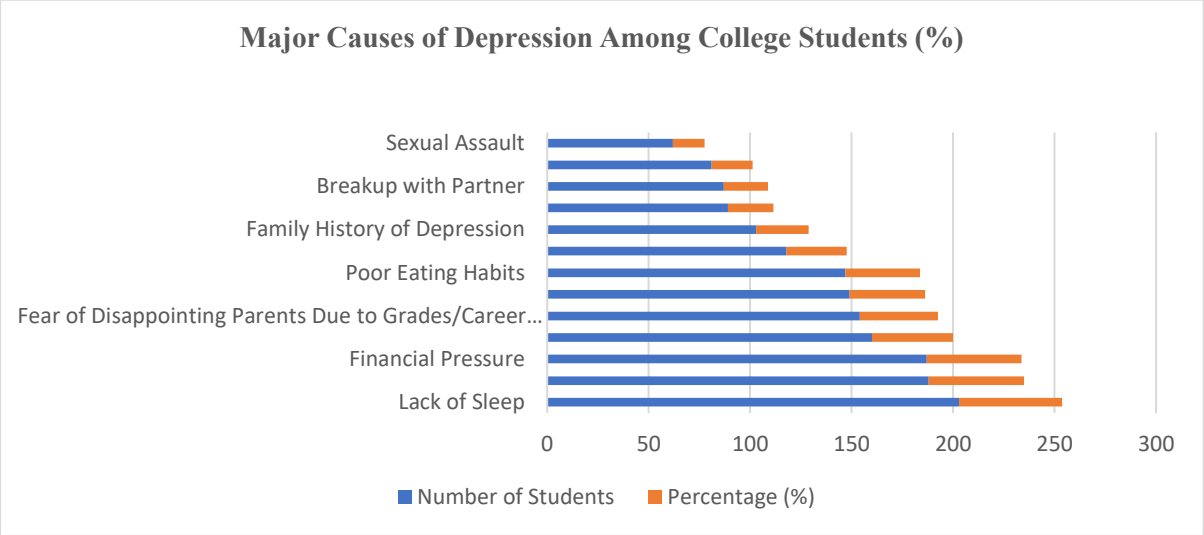
The first objective of the study was to identify the major factors contributing to depression among college students. Respondents were asked to indicate the factors that affected their psychological well-being.

The findings indicate that academic uncertainty, financial concerns, lifestyle patterns, and personal relationships are important contributors to depression among students.

Table 2:Major Causes of Depression Among College Students

Causes of Depression	Number of Students	Percentage (%)
Lack of Sleep	203	50.75
Risk of Not Getting a Good Job After Study	188	47.00
Financial Pressure	187	46.75
Insufficient Exercise	160	40.00
Fear of Disappointing Parents Due to Grades/Career Choice	154	38.50
Stressful Life Events	149	37.25
Poor Eating Habits	147	36.75
Faulty Comparison with Peers	118	29.50
Family History of Depression	103	25.75
Drug or Alcohol Use	89	22.50
Breakup with Partner	87	21.75
Peer Relationship Difficulties	81	20.25
Sexual Assault	62	15.50

Fig 1:Major Causes of Depression Among College Students (%)



Interpretation: The findings reveal that **lack of sleep emerged as the most frequently reported factor associated with depression**, affecting 50.75% of respondents. This indicates that irregular sleeping patterns and academic workload may negatively influence students' emotional health.

Career uncertainty was another significant concern, with 47% of students expressing anxiety regarding future employment opportunities after completion of their education. Similarly, financial pressure was reported by 46.75% of respondents, highlighting the influence of economic concerns on students' mental well-being.

Lifestyle-related factors such as insufficient physical exercise (40%) and poor eating habits (36.75%) were also identified as important contributors. These findings suggest that unhealthy daily routines may increase vulnerability to psychological distress.

Personal and social factors, including relationship difficulties, peer comparison, and fear of disappointing parents, also contributed to depressive symptoms among students. Although comparatively fewer students reported experiences such as sexual assault or substance use, these factors remain important because of their potential psychological impact.

Overall, the results indicate that depression among college students is not caused by a single factor but develops through the interaction of academic, social, economic, lifestyle, and personal challenges.

5.3 Assessment of Depression Level Among College Students

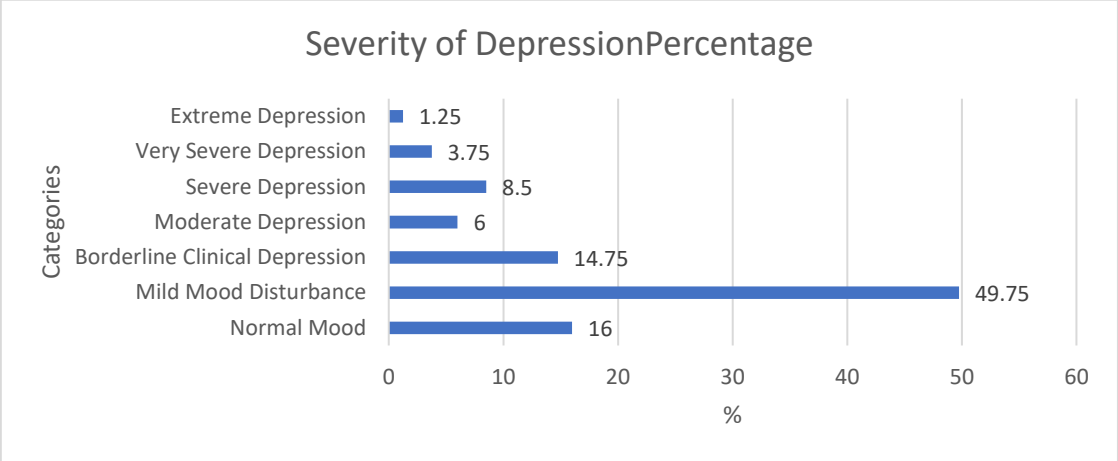
The second objective of the study was to assess the severity of depression among college students. The level of depression was measured using the **Beck Depression Inventory (BDI-21)**, which is one of the widely used self-report instruments for assessing depressive symptoms.

The BDI-21 scale categorizes respondents into different levels of depression based on their obtained scores. A higher score indicates a greater severity of depressive symptoms. The distribution of respondents according to their depression level is presented in Table 3.

Table 3:Distribution of Students According to Beck Depression Inventory (BDI-21) Scores

BDI-21 Score Range	Interpretation	Number of Students	Percentage (%)
0	Normal Mood	64	16.00
1–10	Mild Mood Disturbance	199	49.75
11–16	Borderline Clinical Depression	59	14.75
17–20	Moderate Depression	24	6.00
21–30	Severe Depression	34	8.50
31–40	Very Severe Depression	15	3.75
Above 40	Extreme Depression	5	1.25
Total		400	100.00

Figure 2: Severity Levels of Depression Among College Students Based on BDI-21 Scores



Interpretation: The findings presented in Table 3 indicate that depression symptoms were experienced by a considerable proportion of college students, although the intensity varied across different levels.

Among the 400 respondents, **49.75% of students reported mild mood disturbances**, representing the largest category in the sample. A further **14.75% of students showed borderline clinical depression**, suggesting that approximately one-sixth of the respondents experienced symptoms requiring attention.

Around **18% of students demonstrated moderate to extreme levels of depression**, including moderate depression (6%), severe depression (8.50%), very severe depression (3.75%), and extreme depression (1.25%). Although the percentage of students with extreme depressive symptoms was comparatively low, the presence of such cases highlights the importance of early identification and institutional support mechanisms.

Only **16% of respondents reported a completely normal mood condition**, indicating that emotional challenges are relatively common among college students.

The results suggest that while most students may not experience severe depression, a substantial number exhibit varying degrees of depressive symptoms. This finding emphasizes the need for preventive mental health initiatives, including counselling services, awareness programmes, stress management activities, and supportive academic environments.

5.4 Academic Performance and Depression

The study further examined whether depression had an observable impact on students' academic performance. Academic achievement was assessed through the percentage category obtained by students in their previous semester examinations.

The distribution of students according to their academic performance is presented in Table 4.

Table 4:Academic Performance Profile of Respondents

Academic Performance Category	Percentage Range	Number of Students	Percentage (%)
Pass Class	Up to 33%	4	1.00
Second Class	34–45%	16	4.00
Higher Second Class	46–59%	50	12.50
First Class	60–69%	300	75.00
First Class with Distinction	70% and Above	30	7.50
Total		400	100.00

Interpretation: The academic performance analysis indicates that the majority of respondents demonstrated satisfactory academic achievement. Nearly **75% of students secured first-class grades**, while an additional **7.50% achieved distinction-level performance**.

Only a small proportion of students obtained lower academic grades, with 1% falling under the pass-class category and 4% under the second-class category.

These findings indicate that the presence of depressive symptoms does not necessarily result in poor academic performance for all students. Many students may continue to maintain academic achievement despite experiencing psychological difficulties. However, prolonged or severe depression may affect concentration, motivation, attendance, and learning ability.

Therefore, academic performance alone may not be sufficient to identify students experiencing depression. Universities should consider psychological assessment tools and counselling interventions along with academic monitoring systems.

5.5 Relationship Between Gender and Depression Among College Students

The study examined whether depression levels differed significantly between male and female students. Gender differences in psychological well-being have been widely discussed in mental health research, as social expectations, emotional responses, coping mechanisms, and environmental factors may influence depressive symptoms differently among males and females.

To determine whether a significant difference existed between male and female students, a **one-way Analysis of Variance (ANOVA)** was conducted.

The descriptive statistics of depression scores according to gender are presented in Table 5.

Table 5:Descriptive Statistics of Depression Scores Based on Gender

Gender	Number of Respondents (N)	Mean Depression Score	Standard Deviation
Male	250	0.53	0.75
Female	150	0.73	0.87
Total	400	0.61	0.80

Table 6:ANOVA Results for Difference in Depression Levels Based on Gender

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	3.80	1	3.80	5.96	0.015
Within Groups	253.58	398	0.64		
Total	257.38	399			

Hypothesis Testing:

Null Hypothesis (H_0): There is no significant difference between depression levels of male and female college students.

Alternative Hypothesis (H_1): There is a significant difference between depression levels of male and female college students.

Interpretation: The results indicate that female students reported a higher mean depression score (**Mean = 0.73, SD = 0.87**) compared with male students (**Mean = 0.53, SD = 0.75**).

The ANOVA results reveal that the difference between male and female students was statistically significant (**$F(1,398) = 5.96$, $p = 0.015$**). Since the p-value is below the significance level of 0.05, the null hypothesis is rejected.

Therefore, the study confirms that **gender has a significant association with depression levels among college students**.

The higher depression scores observed among female students may be related to multiple social, psychological, and environmental factors. Female students may experience additional pressures associated with academic expectations, family responsibilities, interpersonal concerns, and emotional stress. However, these findings should be interpreted within the specific social and institutional context of the study population.

5.6 Relationship Between Age and Depression Among College Students

The study also investigated whether depression levels varied significantly across different age groups. Age was considered an important demographic factor because students at different educational stages may experience different academic pressures, career concerns, and personal challenges.

A one-way ANOVA was conducted to examine differences in depression scores among students aged between 18 and 25 years.

Table 7:Depression Scores Across Different Age Groups

Age Group (Years)	Respondents (N)	Mean Depression Score	Standard Deviation
18	46	0.57	0.78
19	78	0.59	0.87
20	80	0.67	0.87
21	57	0.74	0.84
22	44	0.59	0.82
23	37	0.46	0.65
24	32	0.41	0.56
25	26	0.73	0.78
Total	400	0.61	0.80

Table 8: ANOVA Results for Difference in Depression Levels Across Age Groups

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	3.94	7	0.56	0.87	0.530
Within Groups	253.44	392	0.65		
Total	257.38	399			

Hypothesis Testing

Null Hypothesis (H_0): There is no significant difference in depression levels among different age groups of college students.

Alternative Hypothesis (H_1): There is a significant difference in depression levels among different age groups of college students.

Interpretation

The results indicate minor variations in depression scores among different age categories. Students aged 21 years reported the highest mean depression score (**Mean = 0.74, SD = 0.84**), followed by students aged 25 years (**Mean = 0.73, SD = 0.78**). However, students aged 24 years reported the lowest mean depression score (**Mean = 0.41, SD = 0.56**).

The ANOVA results show that the differences among age groups were not statistically significant (**F(7,392) = 0.87, p = 0.530**). Since the p-value is greater than 0.05, the null hypothesis is accepted.

Hence, the study concludes that **age does not have a statistically significant impact on depression levels among college students**.

Although older students may experience additional concerns related to career decisions, employment uncertainty, and future planning, these factors did not produce statistically significant differences within the present sample.

5.7. Relationship Between Educational Qualification and Depression Levels Among College Students

The study further examined whether students belonging to different educational streams experienced different levels of depression. Academic discipline may influence students' psychological experiences because each course involves different academic requirements, workload patterns, competitive pressures, and career expectations.

The respondents were categorized into five educational groups: **B.Com, BBA, B.Sc., MBA, and Engineering**. A one-way ANOVA was conducted to identify whether significant differences existed among these groups.

Table 9: Depression Scores According to Educational Qualification

Educational Qualification	Number of Respondents (N)	Mean Depression Score	Standard Deviation
B.Com	235	0.69	0.87
BBA	31	0.42	0.56
B.Sc.	20	0.30	0.73
MBA	94	0.54	0.67
Engineering	20	0.55	0.83
Total	**400**	**0.61**	**0.80**

Table 10: ANOVA Results for Difference in Depression Levels Across Educational Groups

Source of Variation	Sum of Squares	df	Mean Square	F-value	p-value
Between Groups	5.03	4	1.26	1.97	0.099
Within Groups	252.35	395	0.64		
Total	257.38	399			

Hypothesis Testing

Null Hypothesis (H_0): There is no significant difference in depression levels among students belonging to different educational qualifications.

Alternative Hypothesis (H_1): There is a significant difference in depression levels among students belonging to different educational qualifications.

Interpretation: The findings indicate variations in depression scores across different academic streams. Students pursuing **B.Com reported the highest mean depression score (Mean = 0.69, SD = 0.87)**, followed by Engineering students (**Mean = 0.55, SD = 0.83**) and MBA students (**Mean = 0.54, SD = 0.67**).

Students from B.Sc. reported the lowest mean depression score (**Mean = 0.30, SD = 0.73**), while BBA students also showed comparatively lower depression levels (**Mean = 0.42, SD = 0.56**).

However, the ANOVA results indicate that the observed differences among educational groups were **not statistically significant** (**F(4,395) = 1.97, p = 0.099**). Since the p-value is greater than 0.05, the null hypothesis is accepted.

Therefore, the study concludes that **educational qualification does not significantly influence depression levels among college students**.

Although students from professional courses such as Engineering and MBA may experience greater academic competition, workload, and career-related stress, these differences were not statistically significant in the present study.

5.8 Relationship Between Family Income and Depression Levels: Socio-economic background is considered an important factor influencing students' psychological well-being. Financial uncertainty, educational expenses, lifestyle differences, and perceived economic limitations may affect students' stress levels.The study examined whether students belonging to different family income categories differed significantly in terms of depression levels.

Table 11: Depression Scores According to Family Income Groups

Family Income Category	Number of Respondents (N)	Mean Depression Score	Standard Deviation
Up to ₹2 Lakhs	194	0.70	0.85
₹2,00,001 – ₹4 Lakhs	103	0.49	0.73
₹4,00,001 – ₹6 Lakhs	42	0.52	0.86
₹6,00,001 – ₹8 Lakhs	16	0.87	0.96
₹8,00,001 – ₹10 Lakhs	23	0.52	0.51
₹10,00,001 – ₹12 Lakhs	10	0.70	0.67
₹12 Lakhs and Above	12	0.17	0.39
Total	400	0.61	0.80

Table 12: ANOVA Results for Difference in Depression Levels Across Family Income Groups

Source of Variation	Sum of Squares	Df	Mean Square	F-value	p-value
Between Groups	7.26	6	1.21	1.9	0.08
Within Groups	250.12	393	0.64		
Total	257.38	399			

Hypothesis Testing

Null Hypothesis (H_0): There is no significant relationship between family income and depression levels among college students.

Alternative Hypothesis (H_1): There is a significant relationship between family income and depression levels among college students.

Interpretation: The results indicate that students belonging to different income groups displayed variations in depression scores. Students from the **₹6–8 lakh income category reported the highest mean depression score (Mean = 0.87, SD = 0.96)**, while students from the **₹12 lakh and above category reported the lowest mean depression score (Mean = 0.17, SD = 0.39)**.

Students belonging to lower income groups also demonstrated comparatively higher depression scores. This may be associated with financial concerns, educational expenses, and uncertainty regarding future opportunities.

However, the ANOVA results indicate that differences among income groups were **not statistically significant** (**F(6,393) = 1.90, p = 0.080**). Since the p-value exceeds the 0.05 significance level, the null hypothesis is accepted.

Therefore, the study concludes that **family income does not have a statistically significant relationship with depression levels among college students**.

The findings suggest that depression among students is influenced by multiple interacting factors rather than economic background alone. Academic pressure, lifestyle patterns, personal relationships, and future career concerns may collectively contribute to psychological distress.

5.9 Relationship Between Peer Pressure and Depression Among College Students

Peer pressure is considered an important psychological factor that may influence students' emotional health. During college life, students often experience pressure related to academic achievement, social acceptance, comparison with peers, and expectations regarding career success. The present study examined whether peer pressure significantly influenced depression levels among college students.

A one-way ANOVA was conducted to determine whether students experiencing different levels of peer pressure showed significant differences in depression scores

Table 13: Depression Scores According to Peer Pressure

Peer Pressure Group	Number of Respondents (N)	Mean Depression Score	Standard Deviation
Group 1	157	0.59	0.82
Group 2	243	0.62	0.79
Total	400	0.61	0.8

Table 14: ANOVA Results for Relationship Between Peer Pressure and Depression

Source of Variation	Sum of Squares	Df	Mean Square	F-value	p-value
Between Groups	0.12	1	0.12	0.19	0.667
Within Groups	257.26	398	0.65		
Total	257.38	399			

Hypothesis Testing

Null Hypothesis (H_0): There is no significant relationship between peer pressure and depression among college students.

Alternative Hypothesis (H_1): There is a significant relationship between peer pressure and depression among college students.

Interpretation: The results show that students exposed to different levels of peer pressure reported almost similar depression scores. Students in Group 1 recorded a mean depression score of **0.59 (SD = 0.82)**, whereas students in Group 2 recorded a mean score of **0.62 (SD = 0.79)**.

The ANOVA findings indicate that the difference between the groups was not statistically significant (**$F(1,398) = 0.19$, $p = 0.667$**). Since the p-value is greater than 0.05, the null hypothesis is accepted.

Therefore, the study concludes that **peer pressure does not have a statistically significant relationship with depression levels among college students in the present sample**.

Although peer pressure is frequently considered a possible contributor to psychological stress among students, the findings indicate that its influence may depend on other factors such as individual coping ability, social support systems, academic environment, and personal resilience.

5.10 Overall Summary of Hypothesis Testing: To provide a consolidated understanding of the statistical findings, all hypotheses tested in the study are summarized in Table 15.

Table 15: Summary of Hypothesis Testing Results

Hypothesis	Relationship Examined	Statistical Test	Result	Decision
H1	Peer Pressure and Depression	One-way ANOVA	p = 0.667	H_0 Accepted
H2	Gender and Depression	One-way ANOVA	p = 0.015	H_0 Rejected
H3	Age and Depression	One-way ANOVA	p = 0.530	H_0 Accepted
H4	Educational Qualification and Depression	One-way ANOVA	p = 0.099	H_0 Accepted
H5	Family Income and Depression	One-way ANOVA	p = 0.080	H_0 Accepted

Interpretation: The hypothesis testing results reveal that among all demographic variables examined, **gender was the only factor showing a statistically significant association with depression levels**.

Female students demonstrated significantly higher depression scores compared with male students. However, factors such as age, educational qualification, family income, and peer pressure did not show statistically significant relationships with depression levels.

These findings suggest that depression among college students is a complex phenomenon influenced by multiple psychological and social factors. While demographic characteristics may create different experiences, individual emotional responses, coping strategies, and environmental conditions may play a more prominent role in determining students' mental well-being.

5.11 Key Findings of the Study: Based on the statistical analysis, the major findings of the study are summarized below:

1. **Depression symptoms were present among a considerable proportion of college students**, with varying levels of severity ranging from mild mood disturbances to extreme depression.
2. **Lack of sleep emerged as the most commonly reported cause of depression**, followed by career uncertainty and financial pressure.
3. **Female students showed significantly higher depression levels than male students**, indicating a significant gender-based difference.

4. **Age was not found to have a significant relationship with depression**, although minor variations were observed among different age groups.
5. **Students from different academic streams showed variations in depression scores**, but these differences were not statistically significant.
6. **Family income did not significantly influence depression levels**, suggesting that psychological stress among students cannot be explained by economic factors alone.
7. **Peer pressure did not show a significant statistical relationship with depression**, although it remains an important contextual factor affecting student experiences.
8. Lifestyle-related interventions such as proper sleep, exercise, meditation, yoga, relaxation practices, and counselling support were identified as useful measures for reducing depressive symptoms**.**

Figure 3: Conceptual Summary of Factors Influencing Depression Among College Students

Framework:

Academic Pressure

↓

Career Uncertainty

↓

Lifestyle Factors

↓

Social and Personal Factors

↓

Depression Level Among Students

6. DISCUSSION OF FINDINGS

The present study investigated the prevalence of depressive symptoms and their association with selected demographic, academic, and lifestyle-related factors among college students. The findings demonstrate that depression is a significant mental health concern within the higher education context and is influenced by a complex interaction of individual, social, and environmental determinants. Rather than being attributable to a single factor, depressive symptoms appear to emerge through the cumulative influence of academic demands, lifestyle behaviours, career uncertainty, and psychosocial stressors. These findings are consistent with contemporary ecological and biopsychosocial models of mental health, which emphasize that psychological well-being is shaped by multiple interacting influences rather than isolated individual characteristics.

A substantial proportion of students reported symptoms ranging from mild mood disturbances to moderate and severe depression, suggesting that psychological distress is relatively common among university students. Although mild depressive symptoms may not always meet the threshold for clinical diagnosis, they can adversely affect concentration, academic engagement, interpersonal relationships, and overall quality of life if left unaddressed. Consequently, the findings reinforce the importance of preventive mental health strategies and early intervention programmes within higher education institutions.

6.1 Prevalence of Depression among College Students: The study revealed that while most students experienced mild depressive symptoms, a considerable proportion reported moderate to severe levels of depression. This pattern indicates that mental health challenges extend beyond a small vulnerable subgroup and affect students across the broader university population. The transition to higher education is frequently accompanied by academic adjustment, increased independence, financial responsibilities, and uncertainty regarding future careers, all of which may contribute to elevated psychological distress.

These findings are consistent with previous international research reporting a high prevalence of depression among university students. Ibrahim et al. (2013) identified depression as one of the most common psychological disorders affecting higher education students worldwide, while Eisenberg et al. (2007) demonstrated that depressive symptoms significantly impair academic performance, retention, and social functioning. The present findings therefore reinforce the growing consensus that mental health promotion should constitute an essential component of student support services rather than being viewed solely as a healthcare issue.

6.2 Gender Differences in Depression: Gender emerged as the only demographic variable significantly associated with depression, with female students reporting higher levels of depressive symptoms than their male counterparts. This finding aligns with extensive empirical evidence suggesting that women consistently report greater psychological distress during late adolescence and early adulthood.

The observed gender differences may be interpreted from multiple perspectives. Biological mechanisms, including hormonal fluctuations and genetic susceptibility, may contribute to increased vulnerability to depression among females. However, psychological and sociocultural factors are equally important. Female students often experience greater interpersonal stress, heightened emotional demands, concerns regarding personal safety, societal expectations, and role-related pressures, all of which may increase susceptibility to depressive symptoms. Differences in emotional expression and help-seeking behaviour may also contribute to the observed disparities.

The findings corroborate those reported by Bayram and Bilgel (2008) and Chen et al. (2013), who similarly identified gender as an important predictor of depression among university students. Nevertheless, the present

results suggest that gender should be understood within a broader social and cultural context rather than being interpreted solely through biological explanations.

6.3 Age and Depression: Although minor variations in depression scores were observed across different age groups, the relationship between age and depressive symptoms was not statistically significant. This finding suggests that psychological distress may affect students relatively uniformly throughout the college years, irrespective of chronological age.

One possible explanation is that students across different age groups encounter comparable academic expectations, examination stress, financial concerns, and career uncertainty. While younger students may experience adjustment-related challenges, older students may encounter increasing pressure associated with graduation and employment. These differing stressors may ultimately produce similar levels of psychological distress.

The absence of significant age-related differences contrasts with some previous studies that reported increasing depression among senior students due to heightened academic and career pressures. Such inconsistencies may reflect differences in institutional environments, cultural contexts, sampling strategies, or measurement instruments.

6.4 Educational Background and Depression: The comparison across Commerce, Management, Science, and Engineering programmes did not reveal statistically significant differences in depression levels. Although students enrolled in professional programmes frequently encounter demanding curricula and competitive learning environments, the findings indicate that academic discipline alone does not adequately explain variations in depressive symptoms.

This result suggests that individual coping capacity, social support, institutional climate, and personal resilience may exert greater influence on mental health than programme-specific academic demands. Consequently, mental health promotion initiatives should be implemented across all academic disciplines rather than being restricted to programmes traditionally perceived as academically stressful.

6.5 Family Income and Depression: The study found no statistically significant association between family income and depression, despite modest differences in mean depression scores across income categories. This finding indicates that economic status alone may not be sufficient to explain psychological well-being among college students.

Although financial constraints can increase stress by limiting educational opportunities and creating uncertainty regarding future prospects, students from higher-income families may also experience substantial psychological pressure arising from parental expectations, academic competition, and performance demands. These findings support the multidimensional nature of depression and suggest that socioeconomic factors interact with broader psychological and environmental influences rather than operating independently.

6.6 Peer Pressure and Depression: Contrary to expectations, peer pressure was not significantly associated with depression in the present study. While peer relationships remain an important component of student life, the findings suggest that students differ considerably in their responses to peer influence.

Individual differences in resilience, emotional regulation, self-esteem, and coping strategies may explain why similar peer experiences produce varying psychological outcomes. For some students, peer interactions provide motivation, emotional support, and social belonging, whereas for others they may generate comparison, competition, and stress. These findings indicate that the quality of peer relationships may be more important than peer influence itself and warrant further investigation in future research.

6.7 Major Determinants of Depression: The analysis identified inadequate sleep, fear of unemployment, financial pressure, unhealthy lifestyle behaviours, fear of disappointing parents, and stressful life events as the most frequently reported contributors to depressive symptoms. These findings illustrate that student depression is closely linked to modifiable behavioural and psychosocial factors.

Among these determinants, career uncertainty emerged as a particularly important source of distress, reflecting the increasingly competitive labour market and growing concerns regarding graduate employability. Similarly, inadequate sleep and unhealthy daily routines suggest that lifestyle factors represent an important yet potentially preventable pathway to psychological distress. Together, these findings support previous literature emphasizing that depression among university students arises through the interaction of behavioural, psychological, academic, and socioeconomic influences.

6.8 Preventive Strategies and Institutional Response: Students identified healthy sleep habits, regular physical activity, balanced nutrition, meditation, yoga, supportive interpersonal relationships, and professional counselling as important strategies for reducing depressive symptoms. These findings reinforce the importance of adopting a holistic approach to student mental health that integrates psychological, physical, and social dimensions of well-being.

Educational institutions should therefore move beyond traditional academic support by developing comprehensive wellness programmes that include mental health literacy, confidential counselling services, routine psychological screening, faculty awareness initiatives, peer-support systems, and career guidance. Such integrated interventions are likely to strengthen resilience, facilitate early identification of psychological distress, and improve both academic performance and overall student well-being.

6.9 Contribution of the Study: The present study contributes to the literature by providing empirical evidence regarding depression among students from diverse academic disciplines within the Indian higher education

context. Unlike many previous studies that have focused on single institutions or specific academic programmes, this research examined students from Commerce, Management, Science, and Engineering, thereby offering a broader understanding of depression across disciplines.

Furthermore, the integration of standardized psychological assessment with demographic and lifestyle variables provides a more comprehensive perspective on the determinants of student depression. The findings offer valuable evidence for researchers, educational administrators, counsellors, and policymakers seeking to develop evidence-based mental health interventions within higher education institutions.

7. CONCLUSION AND IMPLICATIONS OF THE STUDY

7.1 Conclusion: The findings demonstrate that depression represents a significant mental health challenge among college students and is influenced by the combined effects of demographic, lifestyle, academic, and psychosocial factors. Although most respondents experienced mild depressive symptoms, a substantial proportion reported moderate to severe depression, indicating the need for systematic mental health promotion and early intervention within higher education institutions.

Among the variables examined, gender emerged as the only significant demographic predictor, whereas age, educational background, family income, and peer pressure did not show statistically significant associations with depression. Nevertheless, behavioural and contextual factors—including inadequate sleep, career uncertainty, financial concerns, unhealthy lifestyles, and parental expectations—were identified as important contributors to students' psychological distress.

Overall, the findings support the view that depression among college students is a multidimensional phenomenon requiring coordinated efforts from educational institutions, families, healthcare professionals, and policymakers. Promoting psychological well-being should therefore be regarded as an integral component of educational quality and student success.

7.2 Theoretical Implications: The present study contributes to the growing body of literature on student mental health by providing empirical support for multidimensional models of depression that recognize the interaction between individual characteristics and environmental influences. The findings reinforce ecological and biopsychosocial perspectives by demonstrating that depressive symptoms are shaped by the combined effects of demographic characteristics, lifestyle behaviours, academic experiences, and future-oriented concerns rather than by any single determinant.

The study also extends existing knowledge by examining depression across multiple academic disciplines within the Indian higher education context, thereby broadening the evidence base beyond institution-specific investigations. Furthermore, the significant association between gender and depression highlights the importance of incorporating gender-sensitive perspectives into theoretical frameworks explaining psychological well-being among university students. These findings provide a foundation for future research aimed at developing integrated conceptual models of student mental health and evaluating interventions that address multiple determinants simultaneously.

7.3 Practical Implications for Educational Institutions: The findings of this study have important practical implications for higher education institutions, highlighting the need for a comprehensive and proactive approach to promoting student mental health. The significant prevalence of depressive symptoms among college students indicates that psychological well-being should be regarded as an integral component of student development rather than a peripheral health concern. Institutions should therefore adopt evidence-based strategies that combine prevention, early identification, intervention, and continuous support.

One of the primary implications is the strengthening of institutional mental health services. Universities and colleges should establish accessible, confidential, and professionally managed counselling centres that provide psychological assessment, counselling, crisis intervention, and referral services. Encouraging students to seek professional help at an early stage may prevent the progression of psychological distress and reduce its adverse effects on academic performance, interpersonal relationships, and overall quality of life. Institutional efforts should also focus on reducing the stigma associated with mental health by fostering an inclusive campus environment where help-seeking behaviour is viewed positively.

The study further suggests that mental health promotion should be integrated into routine student development activities. Structured programmes focusing on stress management, emotional regulation, resilience, coping skills, and mental health literacy can enhance students' ability to manage academic and personal challenges effectively. Embedding these initiatives within orientation programmes and extracurricular activities may facilitate the development of adaptive coping mechanisms throughout students' academic journey.

Lifestyle-related factors identified in the present study also warrant institutional attention. Educational institutions should promote healthy behavioural practices by encouraging regular physical activity, adequate sleep, balanced nutrition, mindfulness practices, yoga, and recreational sports. Developing a campus culture that supports healthy living may contribute not only to reducing depressive symptoms but also to improving students' cognitive functioning, academic engagement, and overall well-being.

Career-related uncertainty emerged as an important contributor to psychological distress among students. Consequently, institutions should strengthen career guidance and employability support through career counselling, industry interaction, internship opportunities, skill development programmes, and placement

preparation initiatives. Providing students with greater clarity regarding career pathways and employment opportunities may alleviate anxiety associated with future uncertainty and enhance their confidence and motivation.

Faculty members also play a critical role in supporting student mental health. As they maintain regular contact with students, they are well positioned to recognize early signs of emotional distress, including declining academic performance, absenteeism, behavioural changes, and social withdrawal. Training faculty members to identify these indicators and refer students to appropriate support services can facilitate early intervention while fostering a more supportive learning environment.

Collectively, these findings emphasize that promoting student mental health requires a collaborative institutional approach involving administrators, faculty, counsellors, healthcare professionals, and students themselves.

7.4 Policy Implications: The findings of this study have significant implications for higher education policy and institutional governance. Student mental health should be recognized as a strategic priority within higher education systems because psychological well-being directly influences learning outcomes, academic persistence, employability, and overall student success.

Educational policymakers should encourage institutions to incorporate comprehensive mental health frameworks into their governance and quality assurance mechanisms. Such frameworks should include mandatory counselling services, periodic mental health screening, student wellness centres, and institution-wide mental health promotion programmes. Policies should also support faculty and staff training to improve awareness of common psychological disorders and strengthen referral pathways for students requiring professional care.

Furthermore, integrating life skills education, resilience training, stress management, and psychological well-being into student development programmes can strengthen preventive mental health initiatives. Collaboration between educational institutions, healthcare providers, and government agencies may further improve the accessibility and effectiveness of mental health services for young adults.

By adopting preventive and multidisciplinary mental health policies, higher education institutions can create healthier learning environments that support students' academic achievement, psychological resilience, and long-term personal development.

7.5 Limitations of the Study: Despite its contributions to understanding depression among college students, this study has several limitations that should be considered when interpreting the findings.

First, the study employed a cross-sectional research design, which limits the ability to establish causal relationships between the identified factors and depressive symptoms. The observed associations represent relationships measured at a single point in time and therefore cannot capture changes in students' psychological well-being across different stages of their academic life.

Second, the study was conducted among 400 college students from selected institutions. Although the sample size was statistically adequate, the findings may not be fully generalizable to students from other geographical regions, institutional settings, or cultural contexts.

Third, data were collected using self-reported questionnaires, which may be affected by recall bias, response bias, or social desirability bias. Participants may have underreported or overreported their psychological experiences due to personal perceptions or concerns regarding disclosure.

Fourth, the study focused on selected demographic, academic, and lifestyle variables. Other important determinants of depression, including personality characteristics, family functioning, financial stress, academic workload, social support, and digital media use, were not examined and may have influenced the observed outcomes.

Finally, institutional characteristics and cultural differences may influence students' mental health experiences. Consequently, caution should be exercised when generalizing the findings beyond the specific study context.

7.6 Future Research Directions: The present study provides several directions for future research. Longitudinal studies are needed to examine changes in depressive symptoms over time and to establish causal relationships between demographic, academic, behavioural, and psychological factors. Such designs would provide a more comprehensive understanding of the developmental patterns of student mental health.

Future research should also include larger and more diverse samples representing different geographical regions, institutional types, academic disciplines, and cultural settings to enhance the external validity of the findings. Comparative studies involving public and private institutions or urban and rural populations may further improve understanding of contextual influences on student mental health.

In addition, future investigations should examine emerging determinants of depression, including social media use, digital addiction, academic burnout, financial insecurity, family relationships, and perceived social support. Employing advanced statistical approaches such as Structural Equation Modelling (SEM), mediation analysis, and moderation analysis would facilitate a deeper understanding of the complex relationships among these variables.

Intervention-based research is also recommended to evaluate the effectiveness of counselling programmes, resilience training, mindfulness-based interventions, and institutional wellness initiatives in improving students' psychological well-being and academic outcomes. Such evidence would provide stronger empirical support for developing effective mental health policies within higher education institutions.

7.7 Conclusion: This study demonstrates that depression constitutes a significant mental health concern among college students and is influenced by a combination of demographic, academic, lifestyle, and career-related

factors. The findings reinforce the growing recognition that psychological well-being is closely linked to students' academic performance, personal development, and future employability.

Addressing depression among college students requires a comprehensive institutional approach that extends beyond conventional academic support. Strengthening counselling services, promoting healthy lifestyle behaviours, enhancing mental health literacy, improving faculty awareness, and providing effective career guidance are essential strategies for creating supportive learning environments that foster both academic success and psychological resilience.

From a broader perspective, higher education institutions should regard student mental health as a fundamental dimension of educational quality and sustainable development. By integrating evidence-based mental health promotion into institutional policies and practices, universities can contribute to the development of healthier, more resilient, and socially responsible graduates who are better prepared to meet the challenges of both professional and personal life. Continued research employing longitudinal and multidisciplinary approaches will further strengthen the evidence base needed to design effective interventions and inform future educational policies.

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