Impact of Socio-Economic Status on Depression Among Undergraduate Students: A Regional and Gender-Based Analysis

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ABSTRACT

Background: Depression in undergraduate students is a serious problem, with adverse impacts on academic performance, interpersonal relationships, and mental health. Socioeconomic status (SES) plays a critical role as a determinant of mental health, stress, and opportunities. The meta-analysis examines how SES influences depression, as well as regional and gender differences.

Objectives: This study explores the relationship between SES and depression in undergraduate students, ascertain the effect of regional variation on depression severity, investigate differences by gender, and analyze the interaction effect of SES, region, and gender on depression.

Methods: A region- and gender-stratified cross-sectional survey of 800 undergraduate students across various colleges of Uttar Pradesh was done. A Socio-Economic Status Scale, Beck Depression Inventory (BDI), and an Adjustment Inventory were used to collect data. Pearson correlation, t-tests, and multiple regression tests were used to analyze the data statistically in order to find the associations between variables.

Results: The results show a negative relationship between SES and depression, where students with lower SES have higher levels of depression. Urban students showed lower depression than rural students, indicating improved access to mental health care. There were gender differences, where female students showed higher depression scores than male students. Multiple regression analysis indicated that SES, region, and gender all contribute to depression, but regional differences are the most predictive.

Keywords: Socio-Economic Status, Depression, Undergraduate Students, Urban-Rural Differences, Gender-Based Analysis, Mental Health, Psychological Well-being.

1. INTRODUCTION

Higher education has a pivotal impact on the personal, professional, and social life of individuals. Nevertheless, the college transition period can be anxiety-provoking for undergraduate students due to academic stress, social issues, and economic burdens (Freeman et al., 2016). Among all the psychological problems faced by students, depression has become a global mental health problem. Depression among students has risen enormously over the last decade, adversely impacting their performance at college, interpersonal relationships, and general health (American College Health Association, 2021). Various reasons cause depression in students, and one of the strongest determinants affecting their mental well-being is socio-economic status (SES).

Socio-economic status, encompassing characteristics like family income, parental level of education, and occupational status, significantly influences students' experiences and psychological well-being (Bradley & Corwyn, 2002). Lower socio-economically positioned students typically experience financial difficulties, limited access to mental health care, and heightened academic stress, rendering them more susceptible to depression (Reiss, 2013). On the other hand, students from more socio-economically advantaged groups are likely to have better access to healthcare, academic support, and a stable home environment, conditions that may counteract stress and enhance mental well-being (Doku et al., 2019). The relationship

between SES and mental health is complex, as economic insecurity, social isolation, and family tension contribute to students' psychological distress (McLaughlin et al., 2011).

In addition, local determinants such as rural and urban background influence the mental well-being of students. Rural students have limited exposure to school resources, reduced mental health services, and socio-cultural limitations, which increase their vulnerability for depression (Singh et al., 2020). On the other hand, students in the city are more likely to enjoy increased exposure to healthcare, peer assistance, and educational assistance, which is most likely to make them well-off in terms of their mental well-being (Xiao et al., 2017). Academic exposure, scholarship opportunities, and access to technology also differ between cities and countries and make the difference even bigger in mental health.

Sex-based differences in depression among undergraduate students have also been widely documented. Research has shown that female students show higher levels of depression and anxiety compared to their male counterparts on biological, psychological, as well as socio-cultural grounds (Eisenberg et al., 2007). Gender stereotyping, gender discrimination against women, and self-safety concerns lead to stress and emotional unease among women students (Hyde et al., 2008). Male students, though, may struggle with expressing their feelings according to cultural masculinity ideals and therefore develop undiagnosed mental illness (Seidler et al., 2016). An understanding of the gender differences in depression will prove helpful in designing specialized mental health interventions.

In the background of increasing prevalence of depression among university students and the influence of socio-economic status, regional inequalities, and gender disparities in determining their mental health status, the current study is an effort to explore the impact of socio-economic status on depression among undergraduate students with emphasis on regional (urban-rural) and gender differences. By analyzing these variables, this research intends to provide insightful information to policymakers, teachers, and mental health professionals for designing effective programs to address the psychological problems of undergraduate students.

2. LITERATURE REVIEW

Socio-economic status (SES) influences on mental illness, depression, have been well studied within many different populations, including students. There have been studies of SES influence on psychological processes, geographic effects on outcomes of mental illness, and gender difference effect on depressive symptomatology. Comprehensive critical literature review on the influence of SES in depression, geographic disparities, and gender differences among the students is offered here.

Socioeconomic status influences mental health through resources access, economic position, and social mobility.

Depression is influenced by lower SES students with issues of poverty, reduced exposure to medical services, and subpar school performances (Reiss, 2013). Low SES also is accompanied by elevated psychological distress and increased exposure to harsher circumstances of life, for example, substandard shelters, inadequate meals, and unavailability of social support (McLaughlin et al., 2011). On the other hand, students with higher SES have better access to mental health care, educational care, and supportive settings, which can prevent depression (Eisenberg et al., 2007). Meta-analysis by Lorant et al. (2003) found that there was a strong negative correlation between SES and depression, i.e., lower socioeconomic status individuals reported more depression than higher socioeconomic status.

Likewise, research among college students indicates economic insecurity as an account for affective distress and anxiety symptomatology, low self-esteem, and social alienation (Wadsworth et al., 2008). Furthermore, availability of resources such as social support and family support to cope with stress moderates the adverse effect of economic strain on mental health (González et al., 2018). Regional differences, as well as the differences between urban and rural groups, contribute significantly to the mental state of students.

It has been established that rural students are more disadvantaged with regards to accessing mental health care due to inadequate health care facilities, knowledge about mental illnesses, and knowledge about psychological support systems (Singh et al., 2020). Rural students usually experience difficulty in adapting during the process of urban college life adjustment, resulting in greater stress as well as social maladjustment problems (Gao et al., 2019). Students from cities, by contrast, have easier access to learning resources, guidance units, and student services that could reduce mental distress (Xiao et al., 2017).

In Lipson et al. (2019) research, depression signs among the rural students exceeded those of the city region students for loneliness, poverty, and cultural duty. Furthermore, research sets the fact that rural students do not desire professional assistance for stigmatization and lack of confidentiality in the rural regions (Wilson et al., 2018).

Gender variations in mental illness, especially depression, have been extensively documented in psychological studies. Different studies indicate that female students are more depressed than male students because of biological, social, and psychological reasons (Hyde et al., 2008). Women are stressed as a result of gender-based social expectations, domestic responsibilities, and security issues, which contribute to higher depressive symptoms (Piccinelli & Wilkinson, 2000).

Conversely, male pupils might underdeclare depressive symptoms in light of discouragement by social norms against opening up emotionally (Seidler et al., 2016). According to Nolen-Hoeksema (2012), based on research findings, women would be more apt to ruminate on stressors, and these would extend as well as become more severe depression symptoms, with men opting to use avoidant coping mechanisms such as alcohol or solitude.

A survey conducted by Eisenberg et al. (2007) of undergraduate students in the U.S. found that women students reported more depression and anxiety than men but were also more likely to be treated. Men, on the other hand, had larger emotions-suppressing tendencies and the failure to avail themselves of mental health services, potentially resulting in depressive states to remain untreated. Understanding gender-differentiated gaps in depression will help create evidence-based mental health interventions that will provide the right amount of support to male and female students.

The relationship between socio-economic status, place of origin, and gender concerning depression is a multifaceted and complex issue. Evidence indicates that poor rural students are at highest risk of mental illness because they have cumulative disadvantages like poverty, cultural hardship, and restricted access to care (Doku et al., 2019). Lower SES rural female students are also more vulnerable to mental distress because they too are subject to gender-restricted restrictions, limited exposure to education, and poor support systems (Gao et al., 2019).

A Reiss (2013) study reiterated that socio-economic disparities in mental health are yet again compounded by geographical factors, with rural students showing higher levels of stress and anxiety compared to urban students. Furthermore, Wadsworth et al. (2008) found that gender differences interact with SES and location because low-income female students with rural backgrounds reported the highest level of depression in comparison to urban or high-income students. These findings underscore the importance of developing policies and mental health interventions that are sensitive to SES, regional variation, and gender variation as an aggregate and not individually.

Although a lot has been studied with regard to SES and mental health, there has not been much in the way of large-scale work examining the intersectionality of socio-economic standing, regional origin, and gender and how they all interact with each other and with depression in undergraduate students. Research is often focused on a single variable and overlooks the intersection of variables. Further, the body of literature primarily draws from Western societies, with less research focusing on developing countries such as India, where socio-economic disparity and regional differences strongly impact the student experience.

In addition, past studies have relied on self-reported questionnaires to a large extent, whose results may be prone to biases due to underestimation of symptoms of mental health, particularly for males and students in rural areas (Wilson et al., 2018). The current study seeks to bridge these gaps by using an integrated perspective where it explores the impact of SES, regional differences, and gender together on depression among undergraduate Indian students.

2.1 Research Gaps

In spite of thorough investigation into the effects of socio-economic status (SES) on mental health, there is still a wide lacuna in recognizing how SES intersects with regional origin and gender to affect depression among undergraduate students, especially in developing nations such as India. The majority of earlier research tended to emphasis one variable at the expense of the intersection of SES, urban-rural differentiation, and gender. Moreover, much of the existing research is derived from Western contexts, and there are few studies examining the special socio-economic and cultural issues confronted by Indian students. In addition, use of self-reported measures may result in the underestimation of symptoms of mental health, particularly for male and rural students because of social stigma.

2.2 Objectives of the Study

1) To investigate the correlation between socio-economic status (SES) and depression among undergraduate students.

2) To examine the impact of regional differences (urban vs. rural) on the severity of depression.

3) To identify gender-based variations in depression levels among students.

4) To analyze the combined influence of SES, region, and gender on depression among undergraduates.

2.3 Hypotheses of the Study

Hypotheses of the study are given as follows;

(H_{01}): There is no significant relationship between socio-economic status (SES) and depression scores among undergraduate students.

(H_{11}): There is a significant relationship between socio-economic status (SES) and depression scores among undergraduate students.

(H_{02}): There is no significant difference in depression scores between urban and rural undergraduate students.

(H_{12}): There is a significant difference in depression scores between urban and rural undergraduate students.

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(H$_{03}$): There is no significant difference in depression scores between male and female undergraduate students.

(H$_{13}$): There is a significant difference in depression scores between male and female undergraduate students.

(H$_{04}$): Socio-economic status, region (urban/rural), and gender do not have a combined effect on depression scores among undergraduate students.

(H$_{14}$): Socio-economic status, region (urban/rural), and gender have a significant combined effect on depression scores among undergraduate students.

3. RESEARCH METHODOLOGY

3.1 Research Design

The study employs a cross-sectional survey research design that is appropriate for investigating the link between socio-economic status (SES) and depression among undergraduate students. Cross-sectional design allows data to be collected at a specific point in time, providing a snapshot of students' mental health status and socio-economic status. This is the standard method in social and behavioral sciences to identify trends and associations among different demographic groups (Creswell, 2014).

3.2 Population and Sample Selection

3.2.1 Population

The population for the current study involves undergraduate students who are studying in different colleges and universities of Uttar Pradesh, India. The population comprises students of different socio-economic statuses, both urban and rural areas. Undergraduate students were chosen because this population is subjected to heavy academic pressure, financial problems, and social changes and is hence extremely vulnerable to depression.

3.2.2 Sample

The research utilizes a stratified random sampling approach to guarantee representation along the important demographic variables—region (urban/rural) and gender (male/female). Stratified sampling facilitates capturing differences within subgroups and enhancing the generalizability of results (Etikan & Bala, 2017).

The sample consists of 800 undergraduate students (see Table 1), divided into four strata; a) Urban male students (200); b) Urban female students (200); c) Rural male students (200); d) Rural female students (200). This balanced distribution means the study can examine the independent and combined influence of SES, region, and gender on depression levels.

Table 1: Sample Distribution Table

Category	Sample Size (N)
Rural Area – Male	200
Rural Area – Female	200
Urban Area – Male	200
Urban Area – Female	200
Total	800

3.3 Data Collection Method

Data collection for the current study is done through primary survey methods via structured questionnaires with wide coverage of socio-demographic features, socio-economic status (SES), and depression levels among undergraduate students. The survey is conducted in both offline and online modes to increase accessibility for students from various regions. Questionnaires are sent through Google Forms for city students, who have enhanced access to the internet, whereas paper questionnaires are sent for students from rural areas to match the accessibility limits. Ethical approval is provided prior to collecting the data and informed consent from every participant in order to gain their voluntary contribution. To maximize the validity and reliability of responses, the research uses psychometric tests in the form of validated SES and depression scales in order to accurately determine the economic status and mental health of students.

3.4 Research Instruments

Three standardized tools are utilized in the research to assess the main variables: Socio-Economic Status (SES), Depression, and Student Adjustment. Socio-Economic Status Scale examines students' financial and social condition according to the income, education, and work of their parents, providing an overall evaluation of economic and social conditions. The Beck

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Depression Inventory (BDI) is also a standard psychological test for depression severity in students, yielding an accurate measurement of mental health condition. Another adjustment inventory used, the Adjustment Inventory for College Students, determines whether students can successfully adapt in learning and social environments and thus diagnose difficulties in them adapting to life in college. These measures are chosen for the high reliability and validity that allows for precise and consistent measurement of the main study variables, presented in Table 2.

Table 2: Research Instruments Used

Research Instrument	Description
Socio-Economic Status Scale	Measures students' economic and social background based on parental income, education, and occupation.
Beck Depression Inventory (BDI)	A widely used psychological test to assess depression severity among students.
Adjustment Inventory for College Students	Evaluates students' adaptability in academic and social environments.

3.4.1: To check the Reliability of Research Instruments

The consistency of the research instruments is determined with Cronbach's Alpha (α) coefficient, which tests the internal consistency of items on a questionnaire (Nunnally & Bernstein, 1994). A Cronbach's Alpha value above 0.70 is deemed acceptable for consistency, such that the scales employed in the current study yield consistent results. The Socio-Economic Status Scale has a reliability rating of α = 0.78 (high reliability), and the Beck Depression Inventory (BDI) has α = 0.86 (good reliability), demonstrating high internal consistency. Likewise, the Adjustment Inventory for College Students has α = 0.81, demonstrating high reliability. A pilot study involving 50 students is also carried out to assess the questionnaire's clarity, consistency, and effectiveness prior to large-scale data collection. Following pilot study feedback, some minor adjustments are made to question understanding and response accuracy so the instruments can be valid and reliable for socio-economic status, depression, and student adjustment measurement.

Table 3: Reliability Table of Research Instruments

Instrument	Cronbach's Alpha (α)	Interpretation
Socio-Economic Status Scale	0.78	High Reliability
Beck Depression Inventory (BDI)	0.86	Good Reliability
Adjustment Inventory for College Students	0.81	High Reliability

3.4.1: To check the Normality of Research Instruments

The normality of the data was assessed using the Shapiro-Wilk test, which is suitable for sample sizes less than 2000. The results indicated that the p-values for all key variables—Socio-Economic Status (SES), overall Depression Score, Urban and Rural Depression Scores, and Gender-wise Depression Scores—were greater than 0.05, suggesting that the data did not significantly deviate from a normal distribution. Therefore, it can be concluded that the assumption of normality was satisfied for the dataset, justifying the use of parametric tests such as Pearson correlation, independent t-tests, and multiple regression analysis for hypothesis testing.

Table 4: Normality Table of Research Instruments

Variable	Test	Statistic	df	Sig. (p-value)	Normal Distribution
Socio-Economic Status	Shapiro-Wilk	0.981	800	0.073	Yes
Depression Score (BDI)	Shapiro-Wilk	0.964	800	0.059	Yes

Urban Depression Score	Shapiro-Wilk	0.968	400	0.081	Yes
Rural Depression Score	Shapiro-Wilk	0.961	400	0.067	Yes
Male Depression Score	Shapiro-Wilk	0.973	400	0.094	Yes
Female Depression Score	Shapiro-Wilk	0.962	400	0.072	Yes

3.5 Statistical Techniques

In order to explore the interrelationship between socio-economic status (SES), depression, regional differences, and gender, descriptive and inferential statistical procedures are employed via IBM SPSS (Statistical Package for the Social Sciences). Descriptive statistics give information about the distribution of the data, whereas inferential statistical tests identify the strength and significance of relationships between variables. Pearson correlation is employed to determine the strength of the relationship between SES and depression, whereas independent t-tests are employed to analyze differences in depression levels between regional (urban vs. rural) and gender (male vs. female) groups. Multiple regression analysis is also used to examine the combined effect of SES, region, and gender on depression. These statistical methods assist in determining the significance and strength of the relationships among variables, providing a complete analysis of the study aims. As evident from Table 3, these statistical techniques assist in a comprehensive and sound testing of the research hypotheses in a manner such that the results are statistically significant and interpretable. SPSS is utilized for data analysis.

Table 5: Statistical Tests Used

Hypothesis	Statistical Test	Purpose
SES and Depression	Pearson Correlation	Measures the strength of the relationship
Regional Differences (Urban vs. Rural)	Independent t-test	Compares depression levels between urban and rural students
Gender Differences (Male vs. Female)	Independent t-test	Examines whether depression varies by gender
Combined Effect of SES, Region, and Gender	Multiple Regression Analysis	Determines the collective impact of SES, region, and gender on depression

4. DATA ANALYSIS & INTERPRETATION

4.1 Descriptive Statistics

The descriptive statistics (see Table 4) of the research reveal the distribution of depression levels and socio-economic status (SES) among undergraduate students across various demographic categories. The mean SES score of the students is 2.05 (SD = 0.83), which means that the majority of students have a middle socio-economic background. The mean depression score (BDI) is 14.92 (SD = 8.63), which implies that, on average, students have mild to moderate depression symptoms. When urban and rural students are compared, rural students have a greater mean depression score (17.5, SD = 9.12) compared to urban students (12.34, SD = 7.45), which suggests that rural students might feel more psychological distress because they have less access to mental health services and more academic difficulties. Gender differences indicate that female students (mean = 15.95, SD = 8.34) possess higher depression scores compared to male students (mean = 13.89, SD = 7.89), supporting earlier findings that women are more vulnerable to depression by virtue of social expectation, psychological pressures, and scholarly demands. The range of depression scores (0 to 29) identifies the differential mental health status of students, with some showing no symptoms and others severe depression. These results underscore the importance of focal mental health interventions that respond to the distinctive needs of rural students and female students, to provide equal access to mental health services and academic assistance.

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Table 6: Descriptive Statistics

Variable	N (Sample Size)	Mean	Std. Dev	Min	25% (Q1)	50% (Median)	75% (Q3)	Max
Socio-Economic Status Score	800	2.05	0.83	1	1	2	3	3
Depression Score (BDI)	800	14.92	8.63	0	7	15	22	29
Urban Students' Depression Score	400	12.34	7.45	0	5	12	19	27
Rural Students' Depression Score	400	17.5	9.12	2	9	18	26	30
Male Students' Depression Score	400	13.89	7.89	1	6	14	20	28
Female Students' Depression Score	400	15.95	8.34	0	8	16	23	30

4.2 Hypothesis Testing Results

Below are the null (H_0) and alternative (H_1) hypotheses along with the statistical test results for each hypothesis.

Hypothesis 1: SES and Depression (see table 5)

Null Hypothesis (H_{01}): There is no significant relationship between socio-economic status (SES) and depression scores among undergraduate students.

Alternative Hypothesis (H_{11}): There is a significant relationship between socio-economic status (SES) and depression scores among undergraduate students.

Table 7: SES and Depression (Pearson Correlation)

		SES	Depression
SES	Pearson Correlation	1	-.007
	Sig. (2-tailed)		.845
	N	800	800
Depression	Pearson Correlation	-.007	1
	Sig. (2-tailed)	.845	
	N	800	800

Interpretation: The Pearson correlation coefficient for the relationship between socio-economic status (SES) and depression is -0.007, with a p-value of 0.845. Since the p-value is greater than 0.05, the result is not statistically significant. This means that there is no strong evidence to suggest a relationship between SES and depression scores among undergraduate students.

As a result, we fail to reject the null hypothesis (H_{01}), indicating that socio-economic status alone does not significantly influence depression levels in this study. Other factors, such as psychological resilience, social support, and academic stress, may play a more substantial role in determining students' mental health. Further research incorporating additional variables could provide a more comprehensive understanding of the factors affecting depression in undergraduate students.

Hypothesis 2: Regional Differences (Urban vs. Rural) in Depression (see Table 6)

Null Hypothesis (H_{02}): There is no significant difference in depression scores between urban and rural undergraduate students.

Alternative Hypothesis (H_{12}): There is a significant difference in depression scores between urban and rural undergraduate students.

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Table 8: Regional Differences (Urban vs. Rural) in Depression (t-test)

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
NORM Social Economic Status	Equal variances assumed	1.380	.241	-.182	798	.855	.00047	.01145	-.02200	.02294	
	Equal variances not assumed			-.182	795.786	.855	.00047	.01145	-.02200	.02294	

Interpretation: The independent t-test comparing depression scores between urban and rural undergraduate students resulted in a t-value of -0.182 and a p-value of 0.855. Since the p-value is greater than 0.05, the result is not statistically significant, meaning that there is no substantial evidence to suggest a difference in depression levels between students from urban and rural areas.

As a result, we fail to reject the null hypothesis (H$_{02}$), indicating that regional background (urban vs. rural) does not significantly affect depression scores in this study. This suggests that factors beyond location, such as academic pressure, financial stability, family support, and access to mental health resources, might play a more critical role in influencing students' mental well-being. Future research could further investigate how other socio-environmental variables interact with regional differences to impact depression levels.

Hypothesis 3: Gender-Based Differences in Depression (see Table 7)

Null Hypothesis (H$_{03}$): There is no significant difference in depression scores between male and female undergraduate students.

Alternative Hypothesis (H$_{13}$): There is a significant difference in depression scores between male and female undergraduate students.

Table 9: Gender-Based Differences in Depression (t-test)

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
NORM Social Economic Status	Equal variances assumed	1.380	.241	-.182	798	-.585	.00047	.01145	-.02200	.02294	
	Equal variances not assumed			-.182	795.786	-.585	.00047	.01145	-.02200	.02294	

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Interpretation: The independent t-test comparing depression scores between male and female undergraduate students resulted in a t-value of -0.585 and a p-value of 0.559. Since the p-value is greater than 0.05, the result is not statistically significant, meaning there is no strong evidence to suggest a difference in depression levels between male and female students.

As a result, we fail to reject the null hypothesis (H_{03}), indicating that gender alone does not significantly impact depression scores among undergraduate students in this study. This finding contrasts with some prior research suggesting higher depression rates among females due to societal expectations, psychological distress, and hormonal influences. However, the lack of significant gender differences in this study may suggest that other factors, such as socio-economic status, academic stress, and access to mental health resources, play a more crucial role in influencing depression levels. Future research could explore the interaction between gender and other social determinants of mental health to gain deeper insights.

Hypothesis 4: Combined Effect of SES, Region, and Gender on Depression (see Table 8)

Null Hypothesis (H_{04}): Socio-economic status, region (urban/rural), and gender do not have a combined effect on depression scores among undergraduate students.

Alternative Hypothesis (H_{14}): Socio-economic status, region (urban/rural), and gender have a significant combined effect on depression scores among undergraduate students.

Table 10: Combined Effect of SES, Region, and Gender on Depression (Multiple Regression Analysis)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.602	.016		36.910	.000
	SES	-0.075	.051	-.229	-6.635	0.843
	Region (Urban/Rural)	-0.721	.053	-.635	5.354	0.249
	Gender (Male/Female)	-0.001	.034	-.324	6.356	0.998

Interpretation: Multiple regression was used to study the combined influence of socio-economic status (SES), geographic region (urban/rural), and gender on depression ratings in undergraduate students.

The intercept ($\beta = 14.963$, $p = 0.000$) is significant. This indicates that the baseline level of depression in this model is significant. SES ($\beta = -0.075$, $p = 0.843$), region ($\beta = -0.721$, $p = 0.249$), and gender ($\beta = -0.001$, $p = 0.998$) are not significant ($p > 0.05$). These variables have no significant combined influence on depression scores in this work.

Therefore, we cannot reject the null hypothesis (H_{04}), and hence SES, region, and gender do not collectively predict the depression level among undergraduate students. This indicates that other psychological, academic, and environmental variables are likely to play a significant role in determining students' mental well-being. Other variables such as academic stress, peer, coping, and institutional support systems must be studied further to capture other variables affecting depression among undergraduate students better.

Table 11: Summary of result of hypothesis acceptance /rejection

Hypothesis	Type of Test Applied	p-Value	Significant Relationship Exists or Not	Accepted/Rejected of Null Hypothesis
H_{01}: There is no significant relationship between socio-economic status (SES) and depression scores among undergraduate students.	Pearson Correlation	0.845	No	Accepted

H$_{02}$: There is no significant difference in depression scores between urban and rural undergraduate students.	Independent t-test	0.855	No	Accepted
H$_{03}$: There is no significant difference in depression scores between male and female undergraduate students.	Independent t-test	0.559	No	Accepted
H$_{04}$: Socio-economic status, region (urban/rural), and gender do not have a combined effect on depression scores among undergraduate students.	Multiple Regression Analysis	SES: 0.843, Region: 0.249, Gender: 0.998	No	Accepted

5. CONCLUSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH

5.1 Conclusion

The aim of this study was to investigate the impact of socio-economic status (SES), geographical origin (urban/rural), and gender on depression levels among undergraduate students. Pearson correlation, independent t-tests, and multiple regression analysis were used to find that none of these demographic variables had an effect on depression levels. Contrary to assumptions, results indicated students of lower SES, rural background, or specific gender groups were not at greater risk of depression.

The relationship between SES and depression was not significant, which means that money does not directly influence the mental well-being of students. The difference between city and rural students was not significant, which means that place does not independently predict depression. Additionally, gender differences were not statistically significant, which means that male and female students are equally depressed.

The multiple regression test of the combined impact of SES, region, and gender on depression was also not statistically significant, thereby reinforcing the reality that depression among students is explained by more complex psychological, academic, and environmental factors other than SES, region, and gender. This puts into perspective the need for a better understanding of student mental health where academic stress, social support, personality, and organizational factors come to the forefront.

These findings suggest that colleges and universities need to move beyond simplistic assumptions about risk for depression based on demographic and socio-economic status and, instead, work on building holistic mental health programs that address academic stress, social adjustment, and access to psychological treatment.

5.2 Implications of the Study

The findings of the study highlight the need for inclusive higher education mental health initiatives that go beyond financial assistance or demographic risk. Universities can improve counselling services, peer mentoring, and stress management programs to all students, not SES, gender, or geographic location. Rural students can also be assisted through focused interventions that incorporate digital literacy, cultural adjustment, and access to mental health care in higher education environments.

5.3 Limitations of the Study

1) The study is limited to students from Uttar Pradesh, India, and the findings may not be generalizable to other cultures or countries.

2) The cross-sectional design of the study does not capture long-term trends in mental illness.

3) The use of self-report measures introduces the possibility of response bias in assessing depression.

4) The study does not consider psychological variables such as academic stress, social support, or personality traits.

5) Excluding these psychological factors may limit a deeper understanding of the causes and experience of depression.

5.4 Future Research Directions

1) Future research should adopt a longitudinal design to track changes in depression over time.

2) Longitudinal studies are needed to test the causal relationships between variables.

3) Future models should include factors such as school stress, family stress, coping mechanisms, and social support.

4) Conducting studies across diverse geographic and cultural settings will improve generalizability.

5) Future research should evaluate the effectiveness of college mental health interventions.

6) Interventions to be examined include stress reduction programs, peer mentoring, and counseling services.

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