

A Study of Association between Depression and Self-esteem among Dental Students of Udaipur

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Abstract

Background: Depression is a strong mood involving sadness, discouragement, despair, or hopelessness that lasts for weeks, months, or even longer and tends to have negative and self-critical thoughts. The purpose of the present study was to explain the correlation between depression and self-esteem among dental students of Udaipur. **Materials and Methods:** Three hundred and fourteen students participated in the study. Self-esteem was estimated using Rosenberg method using 4-point Likert scale format ranging from strongly agree to strongly disagree. Beck depression inventory is a 21-question multiple-choice self-report inventory and was used for measuring the severity of depression with a 4-point scale ranging on severity. Descriptive statistics were used to calculate means. *T*-test and Pearson's correlation were used for statistical analysis. **Results:** The mean scores of depression and self-esteem were found to be 9.11 ± 10.11 and 20.11 ± 5.17 , respectively, and a negative correlation was found between depression and self-esteem ($r = -0.38$). The mean score of self-esteem of male participants was higher, i.e., 22.24 ± 5.16 and the mean depression score was lesser, i.e., 10.12 ± 7.82 and the findings were statistically significant. **Conclusion:** The present research suggests that low self-esteem and depression have strong negative correlation. Improving self-esteem reduces risk of depression regardless of whether the individual is enduring stressful or nonstressful life experiences.

Keywords: Beck depression inventory, correlation, personality, Rosenberg method, vulnerability

INTRODUCTION

Depression is a significant contributor to the global burden of disease and affects people in all communities worldwide. Today, depression is estimated to affect 350 million people.^[1] It often starts at young age; it reduces people's functioning and is often recurring. Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration (WHO).^[1] It is a state of low mood and aversion to activity that can affect a person's thoughts, behavior, feelings, and sense of well-being.^[2]

The idea of self-esteem is omnipresent in contemporary life. In classrooms and working environments, sports activities, and music presentations, individuals by and large accept that high self-esteem is necessary for achievement in that area. Without a doubt, the advancement of self-regard, and the avoidance of low self-regard, is broadly seen as a vital societal objective

that benefits boundless intercessions to help self-esteem levels in the populace.^[3]

The depressive state disturbs the way people evaluate and see themselves. It changes the perception that they have of others and the world and affects their personal esteem. Self-esteem levels are personality constructs that result from intra- and inter-personal relationships. They affect people's attitudes in their school activities, at work, and in every other daily activity.^[4] Depression, the silent killer, has become one of the alarming crises in today's fast paced society. Even without the presence of any actual illness, major depression robs off all self-worth, self-esteem, self-confidence,

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and self-image.^[5] Numerous speculations of depression hypothesize that low self-esteem is a characterizing highlight of depression. Self-esteem in youngsters has been related to various risk factors and defensive parameters in the past studies, but lesser studies have been done in dental students and that too involving Indian population.^[6,7] Hence, this study was carried out to analyze the association between self-esteem and depression among dental students of Udaipur.

MATERIALS AND METHODS

Ethical consideration

Authority to conduct the research was sought from the Ethical Committee of Pacific Dental College and Hospital, Udaipur. Informed consent was sought from the study participants where they obtained a written and signed consent after an explanation was given to them by the principal investigator. All information collected were treated with utmost confidentiality.

Study design and study population

This was a descriptive questionnaire survey as it included collection of data from the students then followed by data analysis. The study was carried out among dental students in Udaipur, Rajasthan, India.

Sample size

Sample size was computed using the Raosoft sample size calculator. Margin of error was kept at 5% and confidence level of 95%. A total of 620 students were initially enrolled in the study. The response rate was 50%. The final sample size was calculated as 314 using systematic probability sampling.

Inclusion and exclusion criteria

Dental students of Udaipur who gave their consent to participate in the study and who were present in the dental college on the day of the study were included in the present study. Students with a history of substance dependence, psychotic disorders, any comorbid chronic medical illness, and who did not give their consent to participate in the study were excluded from the study.

Data collection and questionnaire

Data were collected through a self-administered questionnaire. The questionnaire was filled by students who meet the inclusion criteria. A brief introduction about the objectives of the study was given to students. Confidentiality was assured. A total number of 314 students participated in the study. All data were collected by the researcher between January and February 2016. Self-esteem scale was used to measure participants' self-esteem.^[8] A 10-item scale that measures global self-worth by measuring both positive and negative feeling about self. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree.^[9-11] Beck depression inventory (BDI) is a 21-question multiple-choice self-report inventory, one of the most widely used instruments for measuring the severity of depression. All items are rated on 4-point scale ranging on severity of each item. The BDI was

originally developed to provide a quantitative assessment of the intensity of depression.^[9,11]

Statistical analysis

The data for all two research instruments were numerically scored and quantified using SPSS version 22 (Statistical Package for Social Sciences, Chicago, IL, USA). Descriptive statistics were used to calculate means. *T*-test was utilized to compare male and female's scores on main variables of the study. Pearson's correlation was used to determine the direction of relationship between depression and self-esteem.

RESULTS

Table 1 shows the demographic detail of the participants, it shows that there were 79.9% undergraduate students and 20.1% were the postgraduate students. Female students were more (71.7%) as compared to male students.

The means and standard deviations for depression and self-esteem are presented in Table 2. The mean score for depression was below the cutoff point for the identification of depressive symptoms in normal population, i.e., 9.11 ± 10.11 . Kovacs^[12] set a score of 20 as the midpoint to categorize depressed and nondepressed respondents. The mean score of the participants with depression was 27.48 ± 7.72 .

The mean self-esteem (20.11 ± 5.17) score was on the higher end of the self-esteem scale score [Table 2]. It shows that there was a significant relationship ($P < 0.0001$) between self-esteem on participant's state of depression, whether present or not. When the correlation was sorted out between depression and self-esteem of the participants as a whole, it was found highly significant ($P < 0.0005$). The *r* value of the test was calculated as -0.38 meaning that self-esteem had an inverse significant relationship with depression. Those with high self-esteem tend to have lower depressive symptoms.

Table 3 shows gender-wise comparison of depression and self-esteem of the participants. The mean score of self-esteem of male participants was higher, i.e., 22.24 ± 5.16 and the mean depression score was lesser, i.e., 10.12 ± 7.82 , the difference was highly significant ($P < 0.0001$).

DISCUSSION

Depression is a strong mood involving sadness, discouragement, despair, or hopelessness that lasts for weeks, months, or even longer. Depression is the leading cause of disability for both male and female, the burden of depression is 50% higher for female than male (WHO, 2008).^[1] Studies have shown that negative cognitions during depression are prevalent and are reflected in low self-appraisals, dysfunctional attitudes, and pessimistic outlook.^[9]

Two dominant models exist in the literature to explain the relationship between depression and self-esteem. The vulnerability model hypothesizes that low self-esteem serves as a risk factor for depression, especially in the face of major

Table 1: Demographic details of the students

Category	n (%)	Gender	n (%)
Undergraduate	251 (79.9)	Male	89 (28.3)
Postgraduate	63 (20.1)	Female	225 (71.7)
Total			314 (100)

Table 2: Depression and self-esteem of the participants

Participants with depression	n (%)	Mean ± SD		P*
		Depression	Self-esteem	
Present	54 (17.19)	27.48±7.72	15.44±2.11	0.0001#
Absent	260 (82.81)	5.22±4.52	20.82±5.16	
Total	314 (100)	9.11±10.11	20.11±5.17	0.0005##

*If $P < 0.05$ - significant. Test applied - #Student's *t*-test, ##Pearson's product-moment correlation ($r = -0.38$). SD: Standard deviation

Table 3: Gender-wise comparison of depression and self-esteem of the participants

Gender	n (%)	Mean ± SD		P
		Depression score	Self-esteem score	
Male	89 (28.34)	10.12±7.82	22.24±5.16	0.0001*
Female	225 (71.65)	18.23±5.43	20.12±7.67	
Total	314 (100)	9.11±10.11	20.11±5.17	

Test applied - Student's *t*-test, *Highly significant. SD: Standard deviation

life stressors.^[13-15] For instance, as indicated by Beck's (1967) intellectual hypothesis of sadness, negative convictions about the self—one of three focal parts of depressive issue—are not simply symptomatic of sadness but assume a basic causal part in its etiology.^[10] Interestingly, the scar model postulates that low self-esteem is a result of melancholy as opposed to a cause. In particular, discouragement is accepted to relentlessly crumble individual assets, for example, self-esteem, even after settlement of a depressive scene, that is, episodes of depression may leave scars in the individual's self-idea that continuously wear down self-esteem after some time.^[11,16,17]

The present study found that female students experience more negative affective states compared to male students. Female students tended to have higher depressive symptoms and lower self-esteem than male students. These findings of gender differences in depression and self-esteem are consistent with findings of the past studies. A conducted study among Malaysian adolescents found significant differences in scores of depression and self-esteem among males and females.^[18] Similar studies were conducted by some other authors who also arrived at similar conclusions.^[19-22]

The results of Pearson's correlation analysis suggested a significant negative relationship between self-esteem and depression in the present study. This explains that students with higher self-esteem had lower tendency to be depressed. The bivariate correlations' findings support other researchers, who examined adolescent depression and self-esteem. Our

findings were in concordance with a similar study which also found that self-esteem had an inverse significant relationship with depression.^[18] Those with high self-esteem tend to have lower depressive symptoms. Our findings were in partial concordance with another study which was conducted to examine correlation between self-esteem and depression in high school children.^[23] Their correlational analysis suggested a significant negative relationship between self-esteem and vulnerability to depression. Some other authors also asserted that self-esteem showed a significant strong inverse association with depressive symptoms.^[24] Jayanthi and Rajkumar^[25] performed the odds ratio analysis and revealed that adolescents who had low self-esteem have 3.7 times (95% confidence interval = 1.9–6.9 and $P = 0.001$) more risk of developing depression than the adolescents who had high self-esteem. Findings of present work, with a strong negative correlation between self-esteem and depression, were in partial agreement a study conducted by Halit^[26] whose test results showed that there was a significant relationship between self-esteem and depression levels, but the relationship is weak.

These observations connoted that low self-esteem is a strong risk factor for depression among dental students. Deficient emotional self-regulation may be regarded as a personal vulnerability factor leading to depression and hence can encroach on the well-being of students. Therefore, more noteworthy significance ought to be given to the nearness of low self-esteem amid students which can assist them to develop and work enthusiastically throughout their lives.

CONCLUSION AND LIMITATIONS

Considering the results of the present study, certain limitations should be kept in mind. Future studies could render better results from a larger sample size, selecting participants from other parts of the country. Another limitation of the study comes from the fact that other variables also affect the development of depressions such as stress, loneliness, students' academic background, and peer influence. The observations of this intervention indicate that females are more vulnerable to psychological problems than males during the study period. It also suggested a strong negative correlation between self-esteem and depression. Thus, research results contribute to the development of an empirical database for better understanding of approached relationships and to the development of counseling programs aiming to nurture the students' self-esteem and hence prevention of depression.

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Conflicts of interest

There are no conflicts of interest.

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