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## Impact of Covid-19 on the Mental Health Status of Dentists in North Kerala – A Cross Sectional Study



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### ABSTRACT

**Introduction:** The outbreak and spread of Corona Virus Disease 19 (COVID-19) has produced an emergency status in the health system, including in the dental community which has posed an unparalleled danger to the physical and mental health of doctors. **Methods:** A cross-sectional observational study was conducted among various practising dentists across North Kerala. An online structured questionnaire was developed which recorded the sociodemographic details, attitude and knowledge regarding COVID-19, Depression, Anxiety Stress Scale (DASS 21) and Insomnia. **Results:** A total of 211 complete responses have been received. Out of this 30.33% dentists were depressed, 27.4% were anxious and 15.6% were stressed which is surely alarming. 'Insomnia' had shown statistically significant association ( $p$  value $<0.05$ ) with depression, anxiety and stress symptoms. On bivariate analysis between non anxious and anxious statistically significant difference was observed for 'age' ( $p$  value $<0.05$ ). **Conclusion:** Psychiatric morbidities are very prevalent among doctors, very little has been done by the health care system to provide adequate support for them. It should also be an important part of public health policies to ensure the safety and welfare of dental practitioners, and we need specialised programmes to support their mental well-being as well.

## INTRODUCTION

The new coronavirus disease 2019 (COVID-19) is currently a threat to global health in an unprecedented manner. <sup>[1]</sup> Starting as a mere local transmission from the Wuhan city of China, Covid-19 has become the major catastrophes of the world. There are reports of escalating new cases and death rate, globally, and the Government of India imposed Complete Safety Restrictions. <sup>[2]</sup> In India, the first positive case of the novel coronavirus was reported from Kerala. In May, this state had brought down the number of new cases to zero on many days with the implementation of proper precautions for containment from both government and non-governmental sectors. Now, Kerala has galloped into the list of top ten states with maximum caseloads, with highest number of active cases accumulated in the northern districts of Kerala and generating extreme concern among the state's health officials. <sup>[3]</sup>

Whenever situations like this arise, health care workers come in to play a major role and Doctors and other health care workers do not have the luxury of holding themselves up in their homes to protect themselves from the outbreak. <sup>[2]</sup> The mental health impact of a disease outbreak is usually neglected during pandemic management although the consequences are costly. Early evidence has shown that health workers directly involved in the diagnosis, treatment, and care of patients with COVID-19 are at risk of developing mental health symptoms. <sup>[1]</sup> The increasing number of confirmed cases and deaths, work burden, inadequate personal protective equipment (PPE), media coverage, lack of specific treatment, vulnerability to infection and having to stay in quarantine, as well as feelings of being inadequately supported in the workplace, can contribute to the mental burden of health workers. <sup>[4]</sup>

Psychological wellbeing has an important impact on individuals' performance. The impact of COVID-19 on mental health is well documented in various countries among different populations including health professionals. <sup>[1]</sup> However, little attention has been paid to psychological well-being and burnout among dental practitioners. Face-to-face communication and consistent exposure to body fluids such as blood and saliva predispose dental care workers at serious risk for coronavirus infection. <sup>[5]</sup> Dentists also play a critical role in the public health emergency management system and to fight against emerging life-threatening diseases. <sup>[6]</sup>

A timely assessment of mental health status and mental health needs of health workers during emergencies will help the management to respond and reduce psychological distress, and also align health workers to the patient needs.<sup>[1]</sup> In this context, this study has been undertaken to evaluate mental health impact due to COVID 19 among dentists in North Kerala by quantifying the magnitude of symptoms of depression, anxiety, stress and insomnia and by analysing potential risk factors associated with these symptoms.

## MATERIALS AND METHODS

A cross-sectional observational study was conducted among various dentists working in Government and private sectors of North Kerala. Ethical clearance was obtained from the Institutional Ethics Committee bearing a registration number 183/2020/DCC. Sample size was calculated according to the given formula:

$$\text{Sample Size (n)} = \frac{Z_{(1-\alpha/2)}^2 \times p \times (1-p)}{d^2}$$

Where,

$Z_{(1-\alpha/2)} = 1.96$  for 95% confidence interval

p- Prevalence from the previous study (35%)<sup>[2]</sup>

$$q = 1-p$$

d - Precision of the study

With a precision of 8 %, the samples size required for the present study was calculated as 142.

### Inclusion criteria

- Dentists who are currently practising in different parts of North Kerala.

### Exclusion criteria

- Dentists already under consultation for psychiatric disorders
- Dentists already under medication for stress, anxiety, depression or insomnia

### **Data collection instrument**

The questionnaire was formed on three sections: the first section was for background data which included age, gender, place of practice, qualification, working in Government or private and comorbidities associated with the investigator, the second section comprised of a set of questions targeting attitude and knowledge regarding COVID-19. In the third section consisted of a pre-validated Depression, Anxiety, and Stress Scale (DASS) -21<sup>[7]</sup> and one single question to assess the presence of insomnia due to COVID 19. DASS -21 has three subscales of depression, stress, and anxiety, and each subscale consists of seven questions each. The rating of DASS-21 sub items such as depression, anxiety, and stress can be rated as normal, mild, moderate, and extremely severe. Each item was scored on a self- rated Likert scale from 0 (didn't apply to me all) to 3 (much or mostly applied to me) in the past 1 week.

### **Validation of the tool**

A set of 20 questions in English pertaining to various domains were prepared based on literature review. These questions were emailed to five experts in the field to perform content validation on a five point likert scale. Each question was assessed for its relevance by calculating its Aiken's index. Questions which obtained a score  $\geq 0.6$  were included in the proforma. Reliability of the questionnaire was assessed by Cronbach's alpha value which ranged between 0.76 and 0.891 with a median of 0.81 showing good reliability.

### **Study procedure**

An online structured questionnaire with a consent form attached to it was developed. Study started from August 2020 to October 2020. The link of the questionnaire was sent through the E-mails and WhatsApp to the contacts of the investigators and the link was also posted in social media comprised of only dentists. Participants were automatically directed to the study details and informed consent after obtaining and clicking the link. When they decided to take the survey, the demographic details were filled in. Then, sequentially, a sequence of several questions emerged, which the participants were to answer. In the midst of this survey, participants were able to opt out of the study if they did not want to submit the results. Completeness and consistency were checked for the collected information.

## Statistical analysis

Data analysis was carried out using IBM SPSS (Statistical Package for Social Sciences) Version 21.0, Chicago, IL Descriptive measures and chi-square test was conducted separately for each variable. Statistical significance was determined at  $P < 0.05$ .

## RESULTS

Out of 260 responses obtained, a total of 211 completely filled survey forms were amenable for statistical analysis. Analysis of sociodemographic characteristics revealed that most of the dentists were females ( $n = 108, 51.2\%$ ) belonging to the age group of 30-40 years ( $n=98, 46.2\%$ ) practicing in urban background ( $n = 115, 55.8\%$ ), working in the private sector ( $n = 145, 69.4\%$ ), and having BDS qualification ( $n = 132, 62.3\%$ ) and minority were associated with comorbidities ( $n=22, 11.3\%$ ) [Table 1].

Majority of the dentists were working for 6-10 hours ( $n=111, 53.9\%$ ) and were using N-95 mask ( $n=138, 65.7\%$ ) and some of them were using 3-ply surgical mask (30.5%) and only few of them were using 2-ply surgical masks (3.8%). The majority of the dentists were using PPE kits for aerosol generating procedures only ( $n=108, 52.2\%$ ) and some of them were using PPE kits for every procedures (36.2%) and only few were not at all using PPE kits (11.6%). Majority of dentists perceived Covid-19 as moderately dangerous ( $n=126, 59.7\%$ ) and 38.4% perceived it as very dangerous and only few perceived it as not at all dangerous ( $n=4, 1.9\%$ ) [Table 1].

## Depression

Among the 211 total samples, 64 (30.33%) dentists were depressed, among which 30(14.2) were mild and 22(10.4%), 4(1.9%) and 8(3.8%) dentists were having moderate, severe, and very severe depression scores, respectively [Table 5 and Figure 1] Mean depression subscale score were found to be  $8.04 \pm 2.69$ . [Table 4]. On bivariate analysis between non depressed and depressed groups, statistically significant difference was observed for the outcome variable insomnia ( $p=0.000$ ) and statistically, significant difference was not observed for the associated factors such as age, gender, place of practice, qualification, working sector and comorbidities of the study participants [Table 1].

## Anxiety

Out of 211 total samples, 58 (27.4%) dentists were anxious, among which 23(10.8%) were mild and 13(6.2%), 12(5.6%) and 10(4.8%) dentists were having moderate, severe, and very severe anxiety scores, respectively [Table 5 and Figure 2] Mean anxiety subscale score were found to be  $7.02 \pm 2.37$ . [Table 4]. On bivariate analysis between non anxious and anxious groups, statistically significant difference was observed for the outcome variable insomnia( $p=0.01$ ) and associated factor age( $p=0.02$ ), and statistical significant difference was not observed for the associated factors such as gender, place of practice, qualification, working sector and comorbidities of the study participants[Table 2].

## Stress

Among the 211 total samples, 33 (15.6 %) dentists were stressed, among which 9(4.3%) were mild and 13(6.2%), 9(4.3%) and 2 (0.9%)dentists were having moderate, severe, and very severe stress scores, respectively [Table 5 and Figure 3] Mean stress subscale score were found to be  $11.52 \pm 2.32$ . [Table 4]. On bivariate analysis between non stressed and stressed groups, statistically significant difference was observed for the outcome variable insomnia( $p=0.000$ ) and statistically significant difference was not observed for the associated factors such as age, gender, place of practice, qualification, working sector and comorbidities of the study participants[Table 3].

## DISCUSSION

Since the World Health Organization (WHO) declared COVID-19 a pandemic, it became a major challenging public health problem worldwide. Many governments have declared quarantine and focused on reducing transmission by limiting activities to save lives but, at the same time, impacting the economy of people. This context has generated anxiety, uncertainty, and fear in people and among health care workers (HCW).<sup>[6]</sup> The mental impact of the COVID-19 pandemic on patients, children,<sup>[8]</sup> older adults,<sup>[9]</sup> and students<sup>[10]</sup> has been reported. To the best of our knowledge, there is no such published Indian study assessing the mental health of dentists till date. To explore this gap, the plan for this study was made to assess the depression, anxiety, and stress among dentists during the corona outbreak and evaluate their attitude toward this major disaster.

The COVID-19 outbreak has negatively impacted the activity of dentists. Routine dental procedures have been suspended because of the risk of cross-infection during dental care. Moreover, oral mucosa has been recognized as an entry route of infection, limiting dental activities to treat urgent and emergency procedures to minimize the production of drops or sprays. Additionally, dental companies and industries have decided to suspend part of their staff. Dentists feel a moral duty to reduce regular work to avoid spreading the infection among their relatives and patients. However, they also have a great concern about the financial consequences of a lockdown. <sup>[6]</sup>

In our study, we have observed that 30.3% prevalence of depressive symptoms among dentists during the COVID-19 outbreak. The stress and anxiety symptoms were found to be present in 27.4% and 15.6% of dentists respectively. Consolo et al. <sup>[11]</sup> reported a similar finding that almost 85% of dentists in a province of Italy reported being worried about contracting the infection during dental procedures. Shacham et al. <sup>[12]</sup> identified psychological distress among dentists and found that the fear of getting infected with COVID-19 from a patient provides high psychological tension which was in accordance with the study we conducted. According to González et al <sup>[13]</sup> high number of patients have been cancelling their previous appointments, and others have perceived vulnerability to infection during dental practice increased the chance of exacerbating the stress symptoms among dentists.

Our study also revealed that insomnia due to COVID 19 was a significant finding among the dentists who had suffered from depression, anxiety and stress which was in accordance with study conducted by Lai et al. <sup>[14]</sup> reported a prevalence of insomnia among 39.2% of health care workers along with depression, stress and anxiety. Dentist's age was found to have statistically significant association with anxiety symptoms. Dentists belonging to the age group of 30 -40 years were found to be more anxious than their respective counter parts.

The study is first of its kind which attempts to find out the impact of COVID 19 on mental health status of dentists in India. Findings of this study should be interpreted with caution as published literature to compare our findings is very scarce. In this study, we have not made an attempt to assess the severity of insomnia which can be considered as one of the limitations of the study. However, we have made an attempt to evaluate the mental health impact of COVID 19 among

dentists in North Kerala by analysing symptoms of depression, anxiety, stress and insomnia and potential risk factors associated with these symptoms.

## CONCLUSION AND RECOMMENDATIONS

During pandemics, many health workers employed in health institutions are not trained to provide mental health assistance. Surveys should be used in hospitals and dental clinics to assess staff's physical, emotional, and mental fatigue, and counselling services should be developed using digital technology. While burnout and depression are very prevalent among doctors, very little has been done by the health care system to provide adequate support for them. It should also be an important part of public health policies to ensure the safety and welfare of dental practitioners, and we need specialised programmes to support their mental well-being as well. Since the COVID-19 pandemic continues to sweep, our results will be important in planning an inclusive psychological support strategy in a country like India where psychiatric morbidity is expected.

## REFERENCES:

1. Khanal P, Devkota N, Dahal M, Paudel K, Joshi D. Mental health impacts among health workers during COVID-19 in a low resource setting: a cross-sectional survey from Nepal. *Globalization and health*. 2020 Dec; 16(1):1-2.
2. Chatterjee SS, Bhattacharyya R, Bhattacharyya S, Gupta S, Das S, Banerjee BB. Attitude, practice, behavior, and mental health impact of COVID-19 on doctors. *Indian Journal of Psychiatry*. 2020 May 1; 62(3):257.
3. Chathukulam J, Tharamangalam J. The Kerala model in the time of COVID19: Rethinking state, society and democracy. *World Development*. 137:105207.
4. Neto ML, de Oliveira Araújo FJ, de Souza RI, Lima NN, da Silva CG. When Health Professionals Look Death in The Eye: The Mental Health of Professionals who Deal Daily with the New Coronavirus Outbreak of 2019. *Frontiers in Medical Case Reports*. 2020 Mar;1:1-3.
5. Fallahi HR, Keyhan SO, Zandian D, Kim SG, Cheshmi B. Being a front-line dentist during the Covid-19 pandemic: A literature review. *Maxillofacial Plastic and Reconstructive Surgery*. 2020 Dec; 42:1-9.
6. Vergara-Buenaventura A, Chavez-Tuñon M, Castro-Ruiz C. The Mental Health Consequences of COVID-19 pandemic in Dentistry. *Disaster Medicine and Public Health Preparedness*. 2020 Jun 5:1-3.
7. Antony MM, Bieling PJ, Cox BJ, Enns MW, Swinson RP. Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological assessment*. 1998 Jun;10(2):176.
8. Fegert JM, Schulze UM. COVID-19 and its impact on child and adolescent psychiatry—a German and personal perspective. *Irish Journal of psychological medicine*. 2020 May 14:1-3.
9. Yang Y, Li W, Zhang Q, Zhang L, Cheung T, Xiang YT. Mental health services for older adults in China during the COVID-19 outbreak. *The Lancet Psychiatry*. 2020 Apr 1;7(4):e19.
10. Cao W, Fang Z, Hou G, Han M, Xu X, Dong J, Zheng J. The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry research*. 2020 Mar 20:112934.



11. Consolo U, Bellini P, Bencivenni D, Iani C, Checchi V. Epidemiological Aspects and Psychological Reactions to COVID-19 of Dental Practitioners in the Northern Italy Districts of Modena and Reggio Emilia. International Journal of Environmental Research and Public Health. 2020 Jan;17(10):3459.
12. Shacham M, Hamama-Raz Y, Kolerman R, Mijiritsky O, Ben-Ezra M, Mijiritsky E. COVID-19 factors and psychological factors associated with elevated psychological distress among dentists and dental hygienists in Israel. International Journal of Environmental Research and Public Health. 2020 Jan;17(8):2900.
13. González-Olmo MJ, Ortega-Martínez AR, Delgado-Ramos B, Romero-Maroto M, Carrillo-Díaz M. Perceived vulnerability to Coronavirus infection: impact on dental practice. Brazilian Oral Research. 2020;34.
14. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, Wu J, Du H, Chen T, Li R, Tan H. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. JAMA network open. 2020 Mar 2;3(3):e203976-.

**Table No. 1: Sociodemographic and Clinical Characteristics of the Sample Depression**

Variables		Total sample (n=211), n (%)	No depression (n=147), n (%)	Depression present (n=64), n (%)	$\chi^2$	P
<b>Background data</b>						
Age	<30 years	75(35.4)	49(33.1)	26(40.6)	3.644	0.303
	30-40 years	98(46.2)	67(45.3)	31(48.4)		
	40-50 years	26(12.3)	21(14.2)	5(7.8)		
	>50 years	13(6.1)	11(7.4)	2(3.1)		
Gender	Male	103(48.8)	77(52.4)	26(40.6)	2.466	0.116
	Female	108(51.2)	70(47.6)	38(59.4)		
Place of practice	Urban	115(55.8)	80(55.9)	35(55.6)	0.003	0.959
	Rural	91(44.2)	83(44.1)	28(44.4)		
Qualification	BDS	132(62.3)	88(59.5)	44(68.8)	1.641	0.200
	MDS	80(37.7)	60(40.5)	20(31.2)		
Working sector	Government	64(30.6)	47(32.4)	17(26.6)	0.716	0.398
	Private	145(69.4)	98(67.6)	47(73.4)		
Comorbidities	Yes	22(11.3)	14(10.2)	8(13.8)	0.520	0.471
	No	173(88.7)	123(89.8)	50(86.2)		
<b>Attitude and knowledge regarding COVID-19</b>						

Average working hours during COVID-19 outbreak	<6 hours	91(44.2)	61(43.0)	30(46.9)	0.315	0.854
	6-10 hours	111(53.9)	78(54.9)	33(51.6)		
	>10 hours	4(1.9)	3(2.1)	1(1.6)		
Perception of seriousness of COVID-19	Very dangerous	81(38.4)	58(39.5)	23(35.9)	2.176	0.337
	Moderately dangerous	126(59.7)	85(57.8)	41(64.1)		
	Not at all dangerous	4(1.9)	4(2.7)	0(0)		
Respirator used during COVID-19	2-ply surgical mask	8(3.8)	6(4.1)	2(3.1)	0.131	0.936
	3-ply surgical mask	64(30.5)	44(30.1)	20(31.2)		
	N-95 Mask	138(65.7)	96(65.8)	42(65.6)		
Do you use PPE kits	For every procedures	75(36.2)	50(35.0)	25(39.1)	0.605	0.739
	For aerosol generating procedures only	108(52.2)	75(52.4)	33(51.6)		
	Not at all using	24(11.6)	18(12.6)	6(9.4)		
<b>Outcome parameter (Insomnia)</b>						
Do you have any sleepless night due to stress of COVID-19	Yes	44(20.9)	17(11.6)	27(42.2)	25.334	0.000*
	No	167(79.1)	130(88.4)	37(57.8)		

\* $P < .05$  was considered statistically significant

**Table No. 2: Sociodemographic and Clinical Characteristics of the Sample Anxiety**

Variables		Total sample (n=211), n (%)	No anxiety (n=153), n (%)	Anxiety present (n=58), n (%)	$\chi^2$	P
<b>Background data</b>						
Age	<30 years	75(35.4)	53(34.4)	22(37.9)	9.703	0.021*
	30-40 years	98(46.2)	65(42.2)	33(56.9)		
	40-50 years	26(12.3)	24(15.6)	2(3.4)		
	>50 years	13(6.1)	12(7.8)	1(1.7)		
Gender	Male	103(48.8)	76(49.7)	27(46.6)	0.164	0.685
	Female	108(51.2)	77(50.3)	31(53.4)		
Place of practice	Urban	115(55.8)	82(55.4)	33(56.9)	0.038	0.846
	Rural	91(44.2)	66(44.6)	25(43.1)		
Qualification	BDS	132(62.3)	91(59.1)	41(70.7)	2.412	0.120
	MDS	80(37.7)	63(40.9)	17(29.3)		
Working sector	Government	64(30.6)	51(33.8)	13(22.4)	2.546	0.111
	Private	145(69.4)	100(66.2)	45(77.6)		
Comorbidities	Yes	22(11.3)	13(9.2)	9(16.7)	2.163	0.141
	No	173(88.7)	128(90.8)	45(83.3)		
<b>Attitude and knowledge regarding COVID-19</b>						
Average working hours during COVID-19 outbreak	<6 hours	91(44.2)	66(44.6)	25(43.1)	0.066	0.968
	6-10 hours	111(53.9)	79(53.4)	32(55.2)		
	>10 hours	4(1.9)	3(2.0)	1(1.7)		
Perception of seriousness of COVID-19	Very dangerous	81(38.4)	57(37.3)	24(41.4)	0.305	0.858
	Moderately dangerous	126(59.7)	93(60.8)	33(56.9)		
	Not at all dangerous	4(1.9)	3(2.0)	1(1.7)		

Respirator used during COVID-19	2-ply surgical mask	8(3.8)	6(3.9)	2(3.4)	1.243	0.537
	3-ply surgical mask	64(30.5)	43(28.3)	21(36.2)		
	N-95 Mask	138(65.7)	103(67.8)	35(60.3)		
Do you use PPE kits	For every procedures	75(36.2)	57(38.3)	18(31.0)	3.647	0.161
	For aerosol generating procedures only	108(52.2)	52(48.3)	36(62.1)		
	Not at all using	24(11.6)	20(13.4)	4(6.9)		
<b>Outcome parameter (Insomnia)</b>						
Do you have any sleepless night due to stress of COVID-19	Yes	44(20.9)	25(16.3)	19(32.8)	6.869	0.013*
	No	167(79.1)	128(83.7)	39(67.2)		

\* $P < .05$  was considered statistically significant

**Table No. 3: Sociodemographic and Clinical Characteristics of the Sample Stress**

Variables		Total sample (n=211), n (%)	No stress (n=178), n (%)	Stress present (n=33), n (%)	$\chi^2$	P
<b>Background data</b>						
Age	<30 years	75(35.4)	65(36.3)	10(30.3)	6.470	0.091
	30-40 years	98(46.2)	77(43.0)	21(63.6)		
	40-50 years	26(12.3)	24(13.4)	2(6.1)		
	>50 years	13(6.1)	13(7.3)	0(0)		
Gender	Male	103(48.8)	91(51.1)	12(36.4)	2.427	0.119
	Female	108(51.2)	87(48.9)	21(63.6)		
Place of practice	Urban	115(55.8)	97(56.1)	18(54.5)	0.026	0.872
	Rural	91(44.2)	76(43.9)	15(45.5)		
Qualification	BDS	132(62.3)	109(60.9)	23(69.7)	0.919	0.338
	MDS	80(37.7)	70(39.1)	10(30.3)		
Working sector	Government	64(30.6)	58(33.0)	6(18.2)	2.855	0.091
	Private	145(69.4)	118(67.0)	27(81.8)		
Comorbidities	Yes	22(11.3)	16(9.8)	6(19.4)	2.400	0.121
	No	173(88.7)	148(90.2)	25(80.6)		
<b>Attitude and knowledge regarding COVID-19</b>						
Average working hours during COVID-19 outbreak	<6 hours	91(44.2)	78(45.1)	13(39.4)	0.543	0.762
	6-10 hours	111(53.9)	92(53.2)	19(57.6)		
	>10 hours	4(1.9)	3(1.7)	1(3.0)		
Perception of seriousness of COVID-19	Very dangerous	81(38.4)	69(38.8)	12(36.4)	0.884	0.643
	Moderately dangerous	126(59.7)	105(59.0)	21(63.6)		
	Not at all dangerous	4(1.9)	4(2.2)	0(0)		

Respirator used during COVID-19	2-ply surgical mask	8(3.8)	7(4.0)	1(3.0)	0.068	0.966
	3-ply surgical mask	64(30.5)	54(30.5)	10(30.3)		
	N-95 Mask	138(65.7)	116(65.5)	22(66.7)		
Do you use PPE kits	For every procedures	75(36.2)	61(35.1)	14(42.4)	0.730	0.694
	For aerosol generating procedures only	108(52.2)	92(52.9)	16(48.5)		
	Not at all using	24(11.6)	21(12.1)	3(9.1)		
<b>Outcome parameter (Insomnia)</b>						
Do you have any sleepless night due to stress of COVID-19	Yes	44(20.9)	25(14.0)	19(57.6)	31.963	0.000*
	No	167(79.1)	153(86.0)	14(42.4)		

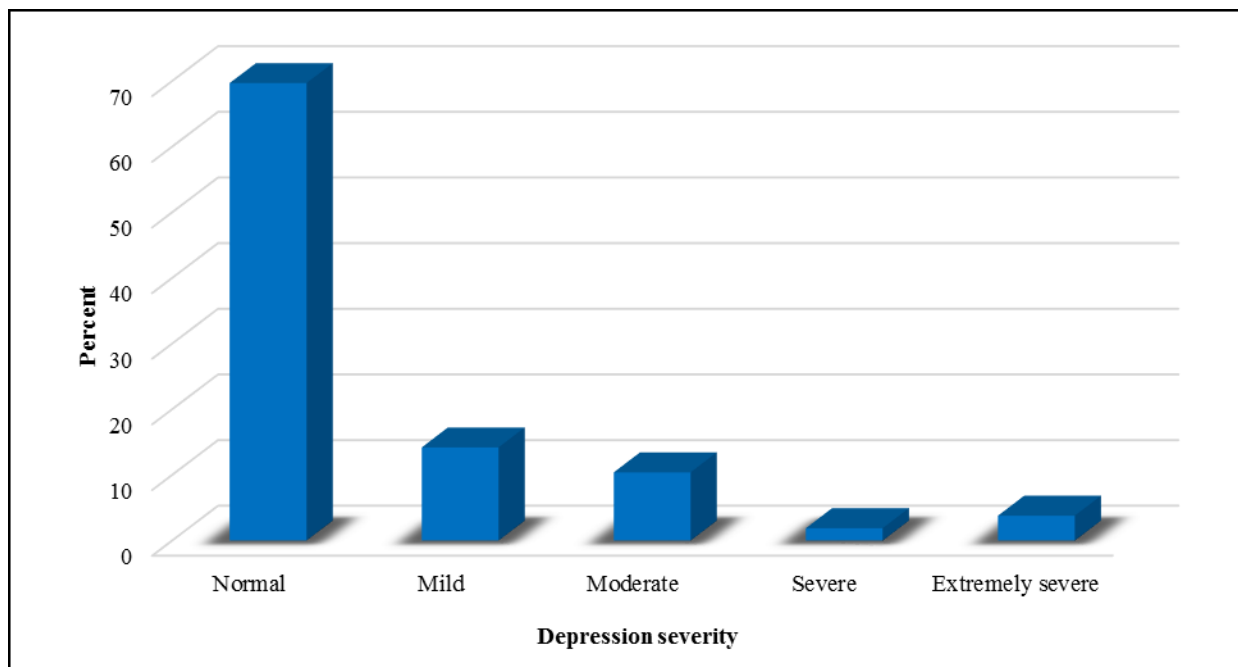
\* $P < .05$  was considered statistically significant

**Table No. 4: Mean Score of Depression, Anxiety and Stress Scale Sub-Items**

Variable	Mean $\pm$ SD
Depression subscale total	8.04 $\pm$ 2.69
Anxiety subscale total	7.02 $\pm$ 2.37
Stress subscale total	11.52 $\pm$ 2.32
DASS score total	3.35 $\pm$ 2.91

**Table No. 5: Distribution of Different Levels of Depression, Anxiety and Stress**

Levels (score)	Depression (%)	Anxiety (%)	Stress (%)
Normal	147(69.7)	154(72.6)	178(84.3)
Mild	30(14.2)	23(10.8)	9(4.3)
Moderate	22(10.4)	13(6.2)	13(6.2)
Severe	4(1.9)	12(5.6)	9(4.3)
Extremely severe	8(3.8)	10(4.8)	2(0.9)



**Figure No. 1: Depression Severity among Dentists**

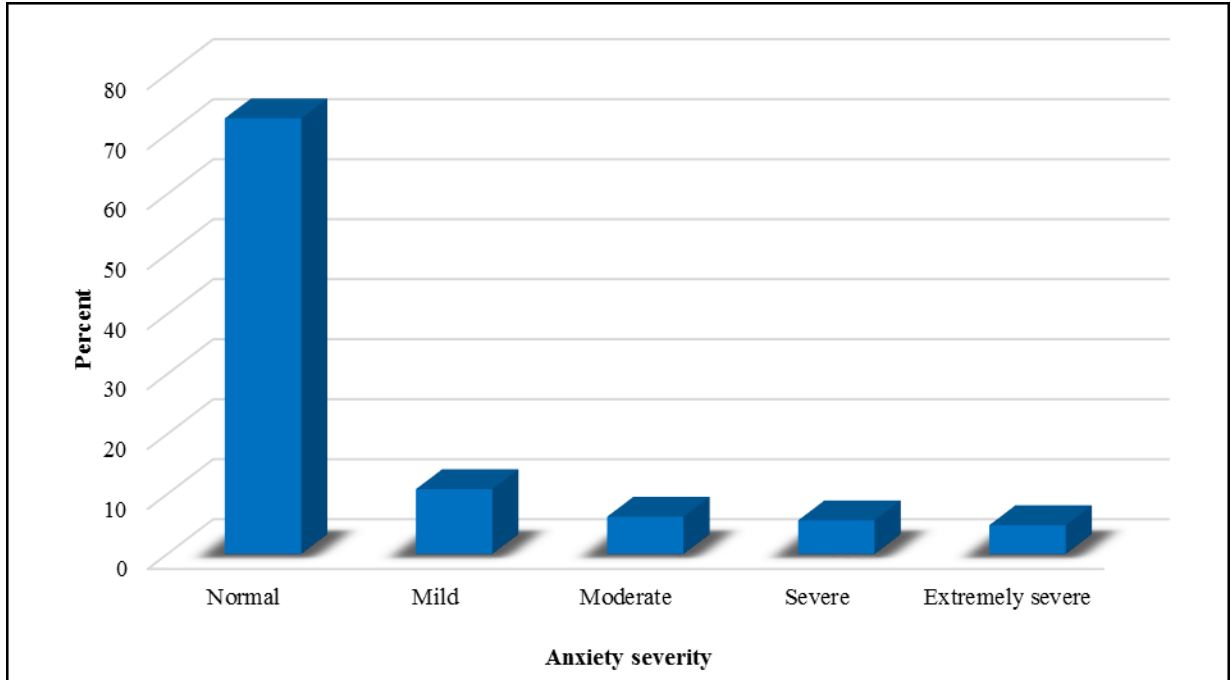


Figure No. 2: Anxiety Severity among Dentists

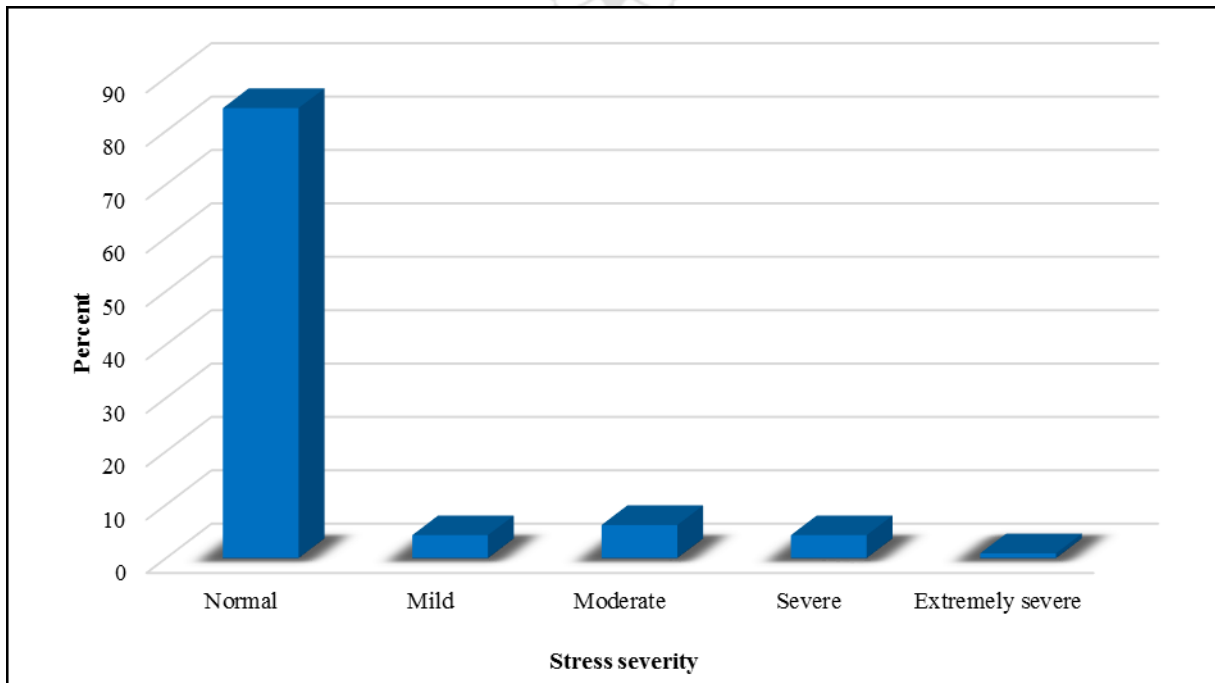


Figure No. 3: Stress Severity among Dentists