

Assessment of Anxiety and Depression among Dental Practitioners in a Dental School in South Kerala

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Abstract

Background: Identification of the potential sources of depression and anxiety is important in dentistry, as it gives opportunity to take various measures to prevent these in a dental environment. This study aimed to investigate the causes of anxiety and depression among dental practitioners in a dental school in South Kerala. **Materials and Methods:** A questionnaire-based cross-sectional study was conducted among 100 dental practitioners working in a dental school in South Kerala. Depression and anxiety status was measured through prevalidated questionnaire Zung Self Rating Anxiety Scale and the Zung Self Rating Depression Scale. A 5-point Likert scale was used to record the responses from the study participants. Statistical analysis was done using SPSS package version 18. **Results:** The prevalence of depression and anxiety was 48% and 52%, respectively. Gender, educational level, choosing dentistry by chance, part-time practicing, marital status, lack of additional source of income, lack of physical exercise, and smoking were associated significantly with depressive symptoms ($P < 0.05$). Almost all sociodemographic, work-related characteristics, lifestyle except years of practicing, number of patients, and sleeping time were significantly associated with anxiety symptoms ($P < 0.05$). **Conclusion:** Dental practitioners were subject to many sources of anxiety and depression in their workplaces, with significant relationships with educational level, choosing dentistry by chance, part-time practicing, marital status, and lack of additional source of income. Dentists should be encouraged to participate in stress management courses to alleviate stress.

Keywords: Anxiety, dentists, depression, lifestyle, mental health

INTRODUCTION

Dentistry is a stressful profession. Dental practitioners experience numerous financial practice management and societal issues for which they often are unprepared after finishing their graduation.^[1] These difficulties in a dentist's life influence their health in a holistic way both physically and mentally which consequently leads to burnout, anxiety, and depression. Dentist's personal and professional relationship, as well as his/her health and well-being, gets negatively affected by depression and anxiety.^[2-5]

Stress is a normal response of a body to any demands, while stressors are the demands and pressure that lead to stress. Stress results due to discrepancy between excessive pressure and different types of demand and individual capacities to fulfill these demands.^[6,7] Perception of stress is under the control of one's personal system of belief and attitude.^[8] Distorted perceptions overemphasize our limitations and make the situation more stressful. Even stressors can vary with individual attitude, belief, and cultural background.^[9]

Depression and anxiety are customary disabling diseases, which is the reason of distress in people from all wants of life. These are common but grave diseases which cannot be ignored. Many people affected with these diseases never look for treatment though they can get better with the treatment, medications, psychotherapies, and other methods which can remarkably treat people with depression as well as anxiety.^[10]

The affected dentists tend to avoid any contact with people, whether they are colleagues, patients, friends, or even family.^[11] It can thus be considered as a serious risk to the dental profession, causing both a threat to the available workforce and personal tragedy for the individual.^[11] Many studies have reported that both anxiety and depressive disorders are

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How to cite this article: Sebastian ST, Mathen A, George B, Soman RR, Mulamoottil VM. Assessment of anxiety and depression among dental practitioners in a dental school in South Kerala. *Int J Community Dent* 2018;6:36-40.

Access this article online

Quick Response Code:



Website:
www.ijcmmment.com

DOI:
10.4103/ijcd.ijcd_6_18

encountered regularly among dentists.^[12-14] Therefore, this study was carried out with the aim to assess the anxiety and depression among dental practitioners in a dental school in South Kerala.

MATERIALS AND METHODS

The present descriptive study was conducted at Pushpagiri College of Dental Sciences, Thiruvalla. The Institutional Ethical Committee had approved the study. The study was conducted during January–March 2018, and the study population consisted of dental practitioners that included both MDS and BDS faculty and postgraduate students in this college. During this period, all 100 dental practitioners of the college were enrolled in this study. Out of the 100 practitioners, 64 were faculty and 36 were postgraduate students. A written informed consent explaining the nature of the study was obtained from the study participants before administering the questionnaire. The study sample comprised of 55 males and 45 females. The response rate of the study was 100%.

The questionnaire consisted of four parts: sociodemographic information, lifestyles, work-related characteristics, and self-reported health status. Self-perceived physical health was calculated using a single 5-point Likert scale varying from “very bad” to “very good.” It was given coding ranging from 1 to 5. Mental health condition was assessed by Zung Self Rating Anxiety Scale (SAS) and Zung Self Rating Depression Scale (SDS).^[15,16] There were twenty items in each scale in a multiple-choice format. It was given a score in order of increasing severity from 1 (where very seldom the anxiety/depression symptoms are present) to 4 (where anxiety/depression symptoms are present most of the time). The total score was considered to be an original score which was then multiplied by 1.25 to get the standard score, with higher scores reflecting the severity of the illness.

A score of 45 and above was considered to have anxiety symptoms. A score of 50 and above was considered to have depression.^[15,16]

Statistical analysis

The collected data were analyzed using the Statistical Package for the Social Sciences v. 18.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics and Chi-square test were applied.

RESULTS

The questionnaire-based study was carried among 100 dental professionals regarding depression and anxiety. The study sample comprised of 55 males and 45 females. The study participants had a mean age of 33.9 years. Table 1 shows the prevalence of depression and anxiety among dental practitioners. Among the dental practitioners, 48% suffered from depression and 52% suffered from anxiety. Majority of the study participants were affected by mild and moderate forms of depression, and similarly majority suffered from mild-to-severe form of anxiety.

Table 2 summarizes the prevalence of depression and anxiety among dental practitioners based on sociodemographic characteristics. The study showed that female participants (37%) suffered from depression more than their male counterparts (23%). The difference was statistically significant ($P=0.03$). Similarly, more female participants (33%) suffered from anxiety when compared to their male counterparts (20%) and the difference was statistically significant ($P=0.01$). Participants who were married were found to have depression and anxiety when compared to participants who were single. This could be attributed to the stress of the profession and the stress involved in family life. The present study revealed that most of the young dental practitioners were affected by depression (22%) and anxiety (24%) when compared to 6% depression and 4% anxiety among senior dental practitioners. The difference was not statistically significant.

Table 3 summarizes the prevalence of depression and anxiety among dental practitioners based on lifestyle characteristics. Dental practitioners who sleep for >8 h per day had less depression and anxiety when compared to dental practitioners who slept for <5 h per day. The present study showed that dental practitioners who performed physical exercise suffered from less depression and anxiety compared to those who did not perform physical exercise.

Table 4 summarizes the prevalence of depression and anxiety among dental practitioners based on work-related characteristics. Dental practitioners who treated less number of patients in a day had greater depression and anxiety when compared to their counterparts who treated more number of patients. Dental practitioners who worked for 25–36 h/week had highest depression (39%) and anxiety (42%) when compared to their counterparts.

Table 5 summarizes the prevalence of depression and anxiety among dental practitioners based on self-reported physical health. Forty-four percent of the dental practitioners who

Table 1: Prevalence of depression and anxiety among dental practitioners

Variable	Severity of variable	n (%)
Total number of dental professionals	100	
Depression	Mild depression (scoring 50-59)	23
	Moderate depression (scoring 60-69)	25
	Severe depression (scoring 70 and above)	0
	Normal	52
	Total depression	48
Anxiety	Minimum-to-moderate anxiety (scoring 45-59)	40
	Marked-to-severe anxiety (scoring 60-74)	12
	Most extreme anxiety (scoring 75 and above)	0
	Normal	48
	Total anxious	52

Table 2: Prevalence of depression and anxiety among dental practitioners according to sociodemographic characteristics

Variable	Depression symptoms		P	Anxiety symptoms		P
	Present (n)	Absent (n)		Present (n)	Absent (n)	
	Gender					
Male	23	32	0.03	20	35	0.01
Female	37	8		33	12	
Educational level						
BDS	4	22	0.004	4	22	0.006
MDS	56	18		51	23	
Reasons for choosing dentistry						
Chance	44	15	0.02	46	13	0.03
Choice	16	25		13	28	
Type of practitioner						
Full time	20	8	0.03	22	6	0.05
Part time	40	32		35	37	
Marital status						
Married	42	18	0.02	45	15	0.03
Single	18	22		20	20	
If married, partner is						
Working	6	13	0.06	3	16	0.04
Not working	27	14		30	11	
Additional source of income						
Present	12	17	0.04	14	15	0.03
Absent	48	23		46	25	
Years of practicing						
0-5	22	16	0.61	24	14	0.83
5-10	20	17		22	15	
10-15	12	5		9	8	
>14	6	2		5	3	

suffered from depression were considered to have good physical health. Only 1% of the dental practitioners who had depression considered to have very good physical health. Forty-seven percent of dental practitioners who had anxiety were considered to have good physical health.

Gender, educational level, choosing dentistry by chance, part-time practicing, marital status, lack of additional source of income, lack of physical exercise, and smoking were associated significantly with depressive symptoms ($P < 0.05$). Almost all sociodemographic, work-related characteristics, lifestyle except years of practicing, number of patients, and sleeping time were significantly associated with anxiety symptoms ($P < 0.05$).

DISCUSSION

Dentists perceive dentistry as being more stressful than other occupations.^[12] A study of more than 3500 dentists found that

Table 3: Prevalence of depression and anxiety among dental practitioners according to lifestyle characteristics

Variable	Depression symptoms		P	Anxiety symptoms		P
	Present (n)	Absent (n)		Present (n)	Absent (n)	
	Sleeping time (h)					
>8	7	28	0.94	5	28	0.83
6-8	26	9		28	11	
<5	27	3		27	1	
Physical exercise						
Yes	14	30	0.002	11	30	0.031
No	46	10		49	10	
Smoking						
Yes	18	36	0.04	17	38	0.036
No	42	4		43	2	

38% of those surveyed always or frequently were worried or anxious.^[17] Moreover 34% of the respondents said that they always or frequently felt physically or emotionally exhausted and 26% said that they always or frequently had headaches or backaches. These symptoms were associated with anxiety and depression.

In this study, we tried to determine the prevalence of depression and anxiety among the dental professionals and the relationship of sociodemographic features, work-related characteristics, and lifestyle variables with depression and anxiety. The prevalence of depressive symptoms in our study was 48% which was low when compared to a study conducted by Alkhazrajy *et al.* among medical and administrative staffs (70.2%).^[18] However, in a similar study conducted by Mathias *et al.* among dentists, the prevalence of depressive symptoms was low (9%) when compared to our study (48%).^[19]

The prevalence of anxiety among dental practitioners in our study was 52%, which was similar to a study conducted by Abbas *et al.* among nursing staffs (47%).^[20] This could be because of the additional patient load resulting in longer working hours, the increased need for concentration, time pressures, tiredness, and the repetitive nature of the work.

In the present study, females were more depressed (82%) and anxious (73%) when compared to males, and this association was found to be significant. Based on our study results, it was found that socioeconomic factors such as additional source of income and marital status may be predictors of psychological symptoms which may lead to anxiety and depression. Our study also revealed that there was a significant association between physical exercise and smoking and anxiety and depressive symptoms, similar to the findings found in the study conducted by Gong *et al.*^[5]

Surprisingly, concerning the level of dental education, there was significant difference in the depression and anxiety score

Table 4: Prevalence of depression and anxiety among dental practitioners according to work-related characteristics

Variable	Depression symptoms		P	Anxiety symptoms		P
	Present (n)	Absent (n)		Present (n)	Absent (n)	
Income (per month) (Rs.)						
0-30,000	12	12	0.071	12	12	0.083
30,001-60,000	25	8		27	6	
60,001-80,000	13	6		6	13	
>80,000	10	14		15	9	
Frequency of conflicts and violence in workplace						
None	46	36	0.04	47	33	0.02
Sometimes	14	4		13	7	
Average number of patients/day						
1-3	33	14	0.51	35	14	0.73
4-6	13	3		14	17	
>7	14	23		11	9	
Working hours/week						
18-24	0	0		0	0	
25-36	39	15		42	18	
37-48	21	25		18	22	
>48	0	0		0	0	

Table 5: Prevalence of depression and anxiety among dental practitioners according to self-reported physical health

Variable	Depression symptoms		Anxiety symptoms	
	Present (n)	Absent (n)	Present (n)	Absent (n)
Very good	1	10	1	9
Good	44	22	47	24
Fair	0	5	0	7
Bad	15	3	12	0
Very bad	0	0	0	0

between those who had a bachelor degree and those who had masters’ degree. Higher patient expectations and higher targets for provision of dental care will put increased demands upon specialist dentists.^[17]

The SDS^[15] and the SAS^[16] are two such norm-referenced scales. Both are 20-item Likert scales, in which items tap psychological and physiological symptoms and are rated by respondents according to how each applied to them within the past week, using a 5-point scale ranging from 1 (none, or a little of the time) to 5 (most, or all of the time). The choice of SDS items was based on factor analytic studies of depression symptoms,^[15] whereas the SAS taps affective symptoms based on diagnostic criteria listed in the major American psychiatry literature.^[16]

To the best of the author’s knowledge, the present study is the first of its kind to evaluate depression and anxiety among dental professionals in South Kerala. However, the study is limited by its cross-sectional nature. In addition, the study focused on the experience of dental professionals working in a dental college and, as a result, it was not possible to generalize conclusions to other dentists who

have exclusively clinical practice. In future studies, a larger sample size as well as the inclusion of general dentists, specialists, and clinicians is recommended. Psychological and personal characteristics may also have an impact on depression and anxiety management. These were not analyzed in this study and should be considered in future researches.

CONCLUSION

This study showed that many dental professionals in South Kerala face several sources of depression and anxiety. Therefore, it is recommended that workshops, seminars, and education programs on depression and anxiety management be organized for dental professionals periodically. This may help them to manage stress levels and improve their working condition.

Recommendations

1. Stress management and coping behaviors should therefore be included in the dental curriculum of undergraduate and postgraduate courses in order to avoid physical and psychological problems that may occur later as a result of occupational stress
2. Workshops, seminars and continuing dental education programs should be conducted periodically for the management of depression and anxiety among dentists
3. The practice of yoga should be encouraged among dentists which is helpful in reducing stress.

Financial support and sponsorship

Nil

Conflicts of interest

There are no conflicts of interest.

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