

**PREVALENCE AND RISK ASSESSMENT OF OBSTRUCTIVE SLEEP APNEA AMONG DENTAL PROFESSIONALS: A CROSS-SECTIONAL SURVEY**

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ABSTRACT **Background:** Obstructive Sleep Apnea (OSA) is a common sleep-related breathing disorder. **Aim:** To assess OSA risk among dental professionals. **Methods:** A cross-sectional survey of 102 dental professionals was conducted using OSA-related questionnaire items. **Results:** Snoring was reported by 63.7%, fatigue by 52.0%, BMI >30 by 34.3%, and hypertension by 19.6%. Risk classification identified 18.6% low risk, 50.0% intermediate risk, and 31.4% high risk participants. **Conclusion:** A substantial proportion demonstrated intermediate-to-high risk for OSA, emphasizing the importance of screening and awareness.

KEYWORDS :**INTRODUCTION**

Obstructive Sleep Apnea is characterized by recurrent episodes of upper airway obstruction during sleep resulting in oxygen desaturation and sleep fragmentation. OSA has been associated with cardiovascular disease, hypertension, metabolic disorders, impaired cognitive performance, and reduced quality of life. Healthcare professionals, including dentists, frequently encounter occupational stress, long working hours, and irregular schedules that may contribute to sleep disturbances. Dentists also play a role in screening and management of OSA through recognition of craniofacial risk factors and oral appliance therapy. Therefore, evaluation of OSA risk among dental professionals is clinically relevant. Previous studies have reported increasing prevalence of OSA-related symptoms worldwide, particularly among individuals with obesity, hypertension, and excessive daytime sleepiness.

Aim and Objectives**Aim**

To assess the prevalence and risk of obstructive sleep apnea among dental professionals.

Objectives:

1. To determine prevalence of OSA-related symptoms.
2. To classify participants according to OSA risk.
3. To evaluate associations among risk factors.
4. To improve awareness regarding sleep-disordered breathing.

MATERIALS AND METHODS

A cross-sectional questionnaire-based survey was conducted among 102 dental professionals. Demographic information, snoring characteristics, observed apnea, fatigue, daytime sleepiness, hypertension status, and BMI were recorded. Participation was voluntary and responses were anonymized.

Statistical Analysis

Data were analyzed using descriptive statistics. Frequencies, percentages, means, and standard deviations were calculated. Pearson correlation analysis was used to determine associations among questionnaire variables. Statistical significance was set at $p < 0.05$.

RESULTS

Among 102 participants, 73.5% were male and 26.5% were female. Snoring was reported by 63.7%, observed apnea by 55.9%, fatigue

after sleep by 52.0%, BMI >30 by 34.3%, and hypertension by 19.6%. Risk classification revealed 18.6% low risk, 50.0% intermediate risk, and 31.4% high risk participants.

Table 1. Demographic Characteristics

Variable	Value
Male	75 (73.5%)
Female	27 (26.5%)
Age	28.69±5.99
Years of Practice	3.87±4.27

Table 2. Key Questionnaire Responses

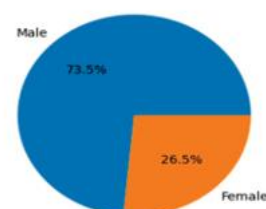
Variable	N (%)
Snoring	65 (63.7)
Observed apnea	57 (55.9)
Fatigue after sleep	53 (52.0)
Hypertension	20 (19.6)
BMI >30	35 (34.3)

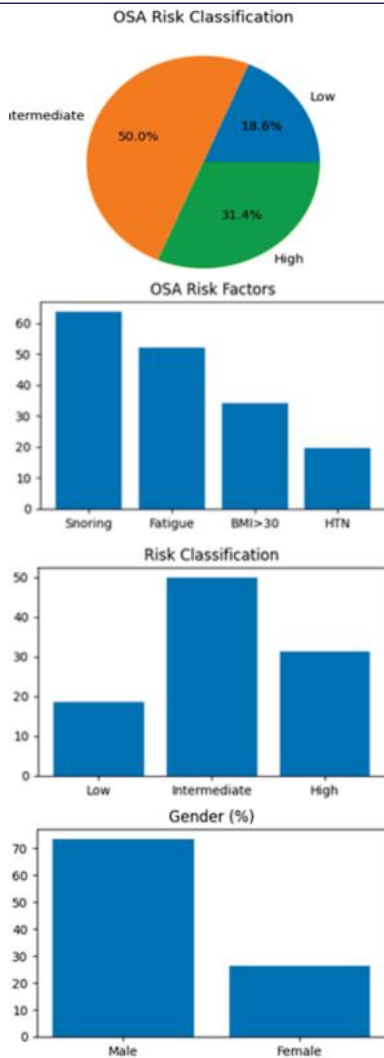
Table 3. OSA Risk Classification

Risk Category	N (%)
Low Risk	19 (18.6)
Intermediate Risk	51 (50.0)
High Risk	32 (31.4)

Table 4. Correlation Summary

Significant positive correlations were observed between snoring, daytime fatigue, BMI and other OSA-related variables, indicating clustering of risk factors.

Figures**Gender Distribution**



DISCUSSION

The present study was conducted to assess the prevalence and risk of Obstructive Sleep Apnea (OSA) among dental professionals. The findings revealed a considerable burden of OSA-related symptoms, indicating that sleep-disordered breathing may be an important yet underrecognized health concern in this population.

Snoring was the most commonly reported symptom, with 63.7% of participants reporting a history of snoring. This finding is consistent with previous studies that have identified habitual snoring as one of the strongest predictors of OSA. Additionally, 55.9% of participants reported episodes suggestive of witnessed apnea, further indicating the presence of potential sleep-disordered breathing among the study population. Similar observations have been reported by Netzer et al. and Chung et al., who demonstrated a strong association between snoring, witnessed apnea, and increased risk of OSA.

Daytime fatigue was another significant finding, with more than half of the participants (52.0%) reporting tiredness after sleep. Furthermore, 43.1% experienced fatigue during waking hours. Excessive daytime sleepiness is a characteristic symptom of OSA and may adversely affect concentration, decision-making, and work efficiency. Since dental professionals perform procedures requiring precision and sustained attention, the presence of fatigue may negatively influence professional performance and overall well-being.

Obesity is a well-established risk factor for OSA. In the present study, 34.3% of participants had a body mass index (BMI) greater than 30 kg/m². This finding is in agreement with previous epidemiological studies that reported a positive association between obesity and OSA severity. Excess adipose tissue around the upper airway contributes to airway narrowing and increases the likelihood of airway collapse during sleep. Similarly, hypertension was reported by 19.6% of participants, supporting existing evidence regarding the close

relationship between OSA and cardiovascular disorders.

Risk classification showed that only 18.6% of participants belonged to the low-risk category, whereas 50.0% and 31.4% were classified as intermediate and high risk, respectively. The large proportion of participants falling into intermediate- and high-risk categories highlights the need for increased awareness, early screening, and appropriate referral for further diagnostic evaluation.

Correlation analysis revealed significant associations among several OSA-related variables, suggesting that symptoms such as snoring, fatigue, elevated BMI, and hypertension frequently coexist. These findings reinforce the multifactorial nature of OSA and emphasize the importance of comprehensive assessment rather than evaluating individual symptoms in isolation.

Overall, the results of the present study indicate that dental professionals exhibit a substantial prevalence of OSA-related risk factors and symptoms. Routine screening programs, lifestyle modifications, and educational initiatives may help promote early diagnosis and reduce the long-term health consequences associated with obstructive sleep apnea. Clinical Significance Routine screening for OSA among dental professionals may improve health, productivity, and quality of life while enhancing awareness for patient care.

Limitations

The study relied on self-reported responses, had a relatively modest sample size, and used questionnaire-based screening rather than polysomnography.

CONCLUSION

A considerable proportion of dental professionals demonstrated intermediate-to-high risk for obstructive sleep apnea. Early screening and preventive strategies are recommended.

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