Frontiers in Health Informatics
ISSN-Online: 2676-7104
www.healthinformaticsjournal.com
2024; Vol 13: Issue 8
Open Access

A Study To Assess Knowledge Of Obstructive Sleep Apnea Among Medical Graduates

Ekta Yadav
Research Scholar, Department of Orthodontics and Dentofacial orthopaedics, Teerthanker Mahaveer Dental college and Research Centre, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India, Email ID: ekta.dental@tmu.ac.in

Dr. Mukesh Kumar
Professor and Head of Department, Department of Orthodontics and Dentofacial Orthopaedics, Teerthanker Mahaveer Dental College and Research Centre, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India, Email ID: drmukesh.dental@tmu.ac.in
*Corresponding Author: Ekta Yadav, Email ID: ekta.dental@tmu.ac.in

Cite this paper as: Ekta Yadav, Dr. Mukesh Kumar (2024) A Study To Assess Knowledge Of Obstructive Sleep Apnea Among Medical Graduates". *Frontiers in Health Informatics,* (8), 5662-5669

ABSTRACT

Introduction

This study aimed to evaluate the knowledge and attitude of obstructive sleep apnea (OSA) among medical graduates.

Methodology

The sample of 221 was calculated based on 95% confidence interval and 5% type I error. For knowledge questionnaire, three choices were provided: 1-true, 2-false, and 3-don't know. Strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree were the choices for attitude-related questions.

Results

In knowledge section, the participants score more than 50% for all the questions. the highest score is 89% for question no 7 and the lowest score is 52% for question no 8. In attitude section questions in which respondents shows positive attitude are question no 1, 2,3. While for question no 4 they show negative attitude.

Conclusion

Although the response for knowledge section is good for all the questions but still it is not up to the mark.

Keywords: Attitude, Knowledge, Medical graduates, Obstructive sleep apnea, Questionnaire

INTRODUCTION

Sleep fragmentation and oxy-haemoglobin desaturation are the outcomes of recurrent episodes of

upper airway closure during sleep, which is known as obstructive sleep apnea (OSA). This causes drowsiness throughout the day and may result in cardiovascular morbidity and cognitive decline [1].

OSA has been shown to be a separate risk factor for depression, heart disease, hypertension, problems in glucose metabolism, and accidents involving excessive drowsiness [2,3]. Full-night sleep tests utilizing respiratory polygraphs or polysomnography (PSG) may be performed at home or at a clinic to make a diagnosis.

Around the globe, OSA is often misdiagnosed; even in industrialized nations, up to 82% of men and 93% of women with OSA go untreated [4, 5]. The OSA issue in underdeveloped nations with limited access to diagnostic resources, a shortage of sleep medicine experts, and less sleep medicine education in medical schools, under diagnosis is probably more severe [6,7].
Two hospital-based investigations conducted in Nigeria that found no individuals at high risk of OSA had ever been assessed pointed to the burden of under diagnosis. Even though more than 30% were determined to be at high risk for or diagnosed with OSA [8,9]. Medical students' understanding of sleep problems hzas been evaluated in recent studies conducted in Saudi Arabia and China, but neither the research assessed participants' understanding of OSA and its management [10,11].

Physicians' attitudes and understanding of OSA are likely to affect their capacity to recognize high-risk patients and make the right diagnostic referrals.
The level of knowledge and attitude of these resident doctors also indirectly assesses the adequacy of sleep medicine training received in the residency training program.
This study was conducted to assess the knowledge and attitude of medical graduates in India towards the OSA.

MATERIAL AND METHODS

This is a cross sectional study used to assess the knowledge and attitude of medical graduates towards OSA. The sample of 221 was calculated based on 95% confidence interval and 5% type I error.

The inclusion criteria for the study includes all general medical practitioners having bachelor’s degree. Participants should have registration in Medical Council of India (MCI) and should have 5 years of experience. The exclusion criteria include participants who are not registered in MCI.
To gather general information on the individuals' attitudes about obstructive sleep apnea, a structured questionnaire was given to them that asked questions about their knowledge, awareness, and practice regarding its treatment. A questionnaire was created by adapting pertinent OSA literature and dentistry standards. An invitation message and a permission agreement for participation were sent out before the questionnaire was launched. Questions on respondents' demographics, OSA knowledge, and OSA management were all included of the questionnaire. Among the demographic factors were experience,

professional title (general dentist), and sex (male or female).

A yes, no, or don't know self-assessment question asking whether they had ever heard of obstructive sleep apnea opened the first segment. The following questions on knowledge, attitude, and treatment strategy were then posed. Additionally, three choices were provided: 1-true, 2-false, and 3-don't know. Strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree were the choices for attitude-related questions.
The validity and reliability of the questionnaire was checked.

STATISTICAL ANALYSIS

The study's data will be scored and input into a Microsoft Excel document. The research will have a power of 80% and a significance level of 5% (0.05). Both quantitative and categorical variables were shown as frequencies, or percentages. The data distribution will be evaluated using the Shapiro-Wilk test of normalcy. Statistical Product and Service Solutions (SPSS) Statistics for Windows, Version 21.0, will be used for all statistical analysis. NY: IBM Corporation, Armonk. We will perform all statistical analyses at 95% confidence interval. A p value and below 0.05 will be regarded as statistically significant.

RESULTS

There were 51% females and 49% males in the group surveyed. Each correct response was given a rating of 1, and every incorrect response or "don't know" choice was given a score of 0. The percentage of correct responses was calculated separately for the knowledge and attitude portions. The findings are interpreted as follows: Good: at least half of dentists gave correct answers; poor: less than half did. When fifty percent of the people surveyed said they agree or strongly agree, it shows a favourable attitude. It is indicative of a negative attitude because less than half of dentists selected "strongly disagree," "disagree," and "neither agree nor disagree."
In knowledge section, the participants score more than 50% for all the questions. the highest score is 89% for question no 7 and the lowest score is 52% for question no 8.
In attitude section questions in which respondents shows positive attitude are question no 1, 2,3. While for question no 4 they show negative attitude.

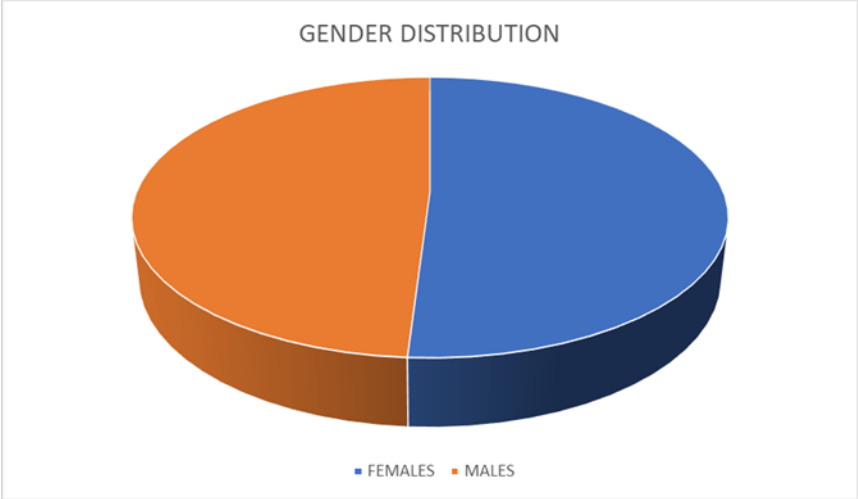

FIGURE 1. Gender distribution for medical graduates group

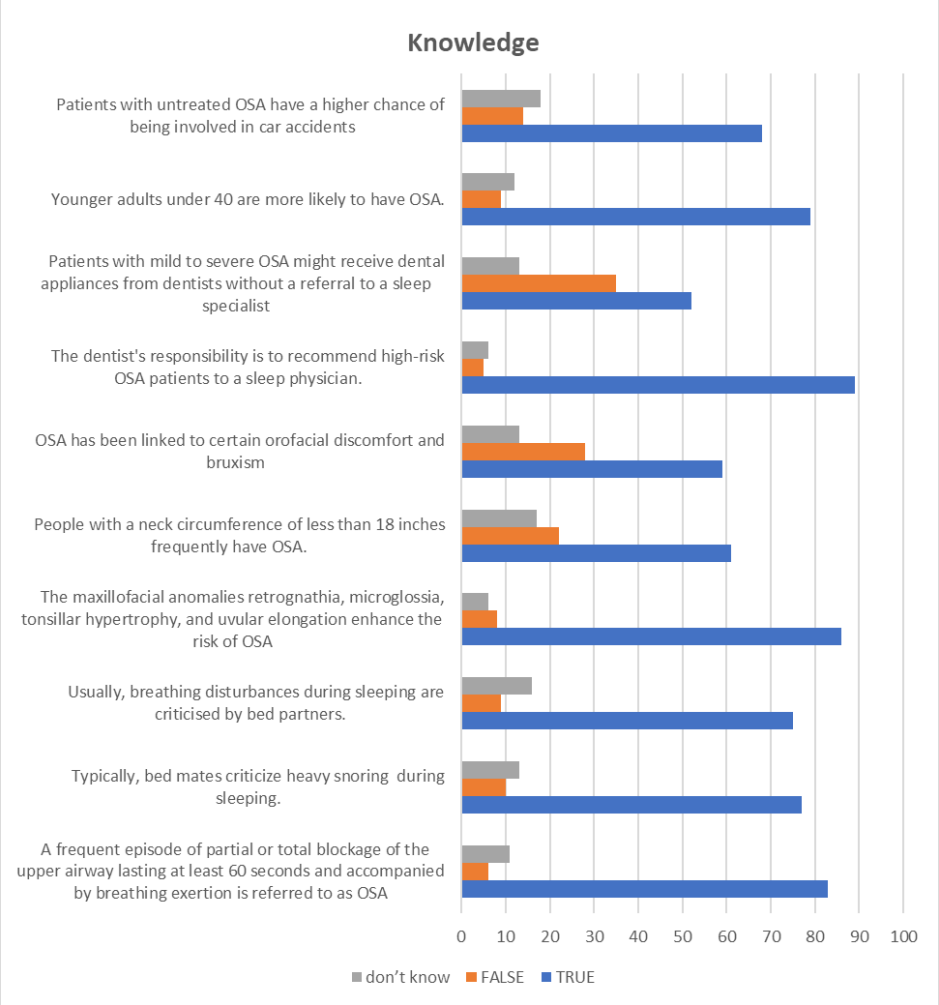

Figure 2. Percentage of respondents knowledge towards obsrtuctive sleep apnea

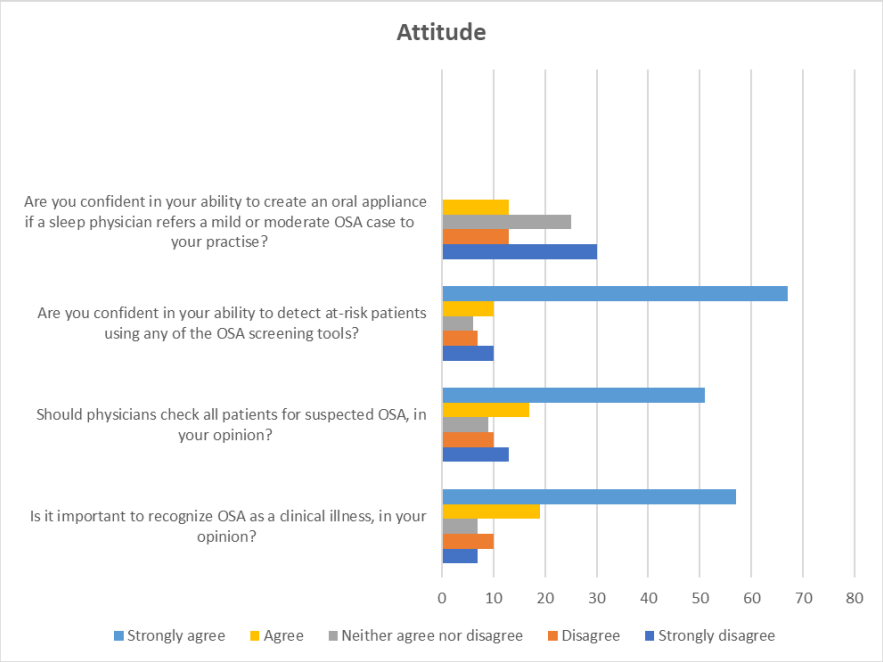

Figure 3. Percentage of respondents attitude towards obsrtuctive sleep apnea

DISCUSSION

In the general public, OSA is still a very underdiagnosed illness. Additionally, the majority of primary care physicians do not systematically screen patients for OSA and do not detect comorbidities in high-risk patients [12,13]. In the present a validated questionnaire was used to check the knowledge and attitude of medical graduates towards OSA. Although for all the questions about knowledge the average score was good but in none of the question the score was 100%, this shows the lack of knowledge towards OSA among the medical graduates. This research suggests that clinical experiences of medical graduate curriculum should be enhanced to support training in the detection and management of OSA patients.

The lowest score achieved was for question no 8 which asked that whether dentists can deliver the oral appliance for mild to moderate cases without sleep specialist referral. They observed that the degree of expertise among doctors in the USA increased with time [14]. Factors including improved diagnostic facility accessibility and longer training hours.

For attitude section they have shown the positive attitude for all the questionnaire except the 4th question which was about their ability to create the oral appliance in case of mild to moderate OSA. The reason for their negative attitude may be the study curriculum which does not include the fabrication of the appliances.

This development was facilitated by training hours devoted to sleep medicine in medical schools [4]. In order to ameliorate the situation in developing nations, undergraduate and postgraduate training programs on sleep disorders must be improved, and teaching hospitals must build specialized sleep clinics and sleep labs.

Referrals for sleep examination have also been shown to be significantly influenced by patients' level of sleep literacy. In evaluating the elements that influence referral, Williams et conclude regardless of the doctor's degree of expertise or attitude toward OSA, medical practices revealed that patients' inquiries about the condition were the most significant factor influencing primary care providers' referrals of OSA [15]. This implies that increasing sleep literacy in both patients and the broader public might significantly increase the number of OSA diagnoses.
Inadequate understanding of OSA therapy affects clinicians' ability to provide patients with proper counselling. Even when recommended, a patient's choice to have a diagnostic assessment may be influenced by the quality of the advice they get. Conformity to medical advice has been linked to a number of factors, including patients' comprehension of their diseases, their literacy level, and the way in which healthcare professionals communicate with them [16]. According to Jean-Louis et al., fewer than fifty percent of the patients sent to the sleep clinic showed up for assessment [17].

LIMITATIONS

This research has a number of limitations despite the insightful information it offers. This limited the study's focus to a certain subset of dental practitioners, and the findings may apply to more recent medical graduates or folks from different areas. Furthermore, the study's cross-sectional methodology only records a moment in time of the medical graduate’s attitudes and knowledge. To monitor changes in attitudes and knowledge across time, longitudinal research would be required. Finally, considering the differences in medical education and healthcare systems among nations, the results of this study may not accurately represent the worldwide view on doctor’s knowledge and attitudes concerning OSA since it was carried out in a specific area.

CONCLUSION

Although the response for knowledge section is good for all the questions but still it is not upto the mark. This may be due to the lack of instruction or seriousness towards OSA. As this is the emerging disease which is affecting the health of the patients negatively, it needs more attention and proper initiative should be taken in the curriculum of the students. More workshops or seminars regarding OSA should be conducted.

CONFLICT OF INTEREST: Nil
FINANCIAL SUPPORT: Nil

REFERENCES

1. Riha RL. Clinical assessment of the obstructive sleep apnoea/hypopnoea syndrome. Ther Adv Respir Dis. 2010;4(2):83–91.
2. Malhotra A, White DP. Obstructive sleep apnoea. Lancet. 2002;360(9328):237–45.
3. Budhiraja R, Budhiraja P, Quan SF. Sleep-disordered breathing and cardiovascular disorders. Respir Care. 2010;55(10):1322.-32-2.
4. Young T, Finn L. Epidemiological insights into the public health burden of sleep disordered breathing: sex differences in survival among sleep clinic patients. Thorax. 1998;53 (Suppl 3):S16-9.
5. Fuhrman C, Fleury B, Nguyên XL, Delmas MC. Symptoms of sleep apnea syndrome: high prevalence and underdiagnosis in the French population. Sleep Med. 2012;13(7):852-8.
6. Ozoh OB, Iwuala SO, Desalu OO, Ojo OO, Okubadejo NU. An Assessment of the Knowledge and Attitudes of Graduating Medical Students in Lagos, Nigeria, Regarding Obstructive Sleep Apnea. Ann Am Thorac Soc. 2015;12(9):1358-63.
7. Mindell JA, Bartle A, Wahab NA, Ahn Y, Ramamurthy MB, Huong HT, Kohyama J, Ruangdaraganon N, Sekartini R, Teng A, Goh DY. Sleep education in medical school curriculum: a glimpse across countries. Sleep Med. 2011;12(9):928-31.
8. Ozoh OB, Okubadejo NU, Akinkugbe AO, Ojo OO, Asoegwu CN, Amadi C, Odeniyi I, Mbakwem AC. Prospective assessment of the risk of obstructive sleep apnea in patients attending a tertiary health facility in Sub-Saharan Africa. Pan Afr Med J. 2014;21(17):302.
9. Obaseki DO, Kolawole BA, Gomerep SS, Obaseki JE, Abidoye IA, Ikem RT, Erhabor GE. Prevalence and predictors of obstructive sleep apnea syndrome in a sample of patients with type 2 Diabetes Mellitus in Nigeria. Niger Med J. 2014;55(1):24-8.
10. Almohaya A, Qrmli A, Almagal N, Alamri K, Bahammam S, Al-Enizi M, Alanazi A, Almeneessier AS, Sharif MM, Bahammam AS. Sleep medicine education and knowledge among medical students in selected Saudi Medical Schools. BMC Med Educ. 2013;27(13):133.
11. Luo M, Feng Y, Li T. Sleep medicine knowledge, attitudes, and practices among medical students in Guangzhou, China. Sleep Breath. 2013;17(2):687–93.
12. Heffner JE, Rozenfeld Y, Kai M, Stephens EA, Brown LK. Prevalence of diagnosed sleep apnea among patients with type 2 diabetes in primary care. Chest. 2012;141(6):1414-1421.
13. Chung SA, Jairam S, Hussain MR, Shapiro CM. Knowledge of sleep apnea in a sample grouping of primary care physicians. Sleep Breath. 2001;5(3):115-21.
14. Akarolo-Anthony SN, Willett WC, Spiegelman D, Adebamowo CA. Obesity epidemic has emerged among Nigerians. BMC Public Health. 2014;15(14):455.
15. Williams NJ, Nunes JV, Zizi F, Okuyemi K, Airhihenbuwa CO, Ogedegbe G, Jean-Louis G. Factors associated with referrals for obstructive sleep apnea evaluation among community physicians. J Clin Sleep Med. 2015;11(1):23-6.
16. Dennison Himmelfarb CR, Hughes S. Are you assessing the communication "vital sign"? Improving communication with our low-health-literacy patients. J Cardiovasc Nurs. 2011;26(3):177-9.

17. Jean-Louis G, von Gizycki H, Zizi F, Dharawat A, Lazar JM, Brown CD. Evaluation of sleep apnea in a sample of black patients. J Clin Sleep Med. 2008;4(5):421-5.