

The Level of Knowledge and Attitude About Obstructive Sleep Apnea and Its Determinants Among Ministry of Health's Primary Health Care Physicians in Jeddah 2021

Rayan Abdulbasit Marzuqi¹, Saeed Abdulrahim Alamoodi¹,
Maher Ghazi Alsharif¹, Akram Abdulwahed Atbay¹

¹Family Medicine Resident, Jeddah, Saudi Arabia.

ABSTRACT

Background: According to the American Academy of Sleep Medicine the Obstructive sleep apnea (OSA) is "a sleep-related breathing disorder that involves a decrease or complete halt in airflow despite an ongoing effort to breathe. The diagnosis of sleep apnea done either by polysomnogram or clinically by vital signs chart at sleep center at night while sleeping.

Methods: Analytical cross-sectional study was carried out. The participants of the study are going to be the ministry of health's primary health care physicians. There are 47 Primary Health Care Center in Jeddah each center has about four physicians (7), therefore they are approximately 188 physicians. Sample size measured by Roasoft with an estimated total of 188 population the prevalence of the problem of 50%, and a confidence level of 95%, and margin of error 5%.

Results: Out of total 200 respondent's female were 60.5% while males were 39.5% mean (SD) age was 39.5(12.5). No significant relation between genders and opinion about relationship between OSA and hypertension.

Conclusion: The majority of recent medical students and professionals were unaware of OSA risk factors and proper management; inability to recognize and effectively refer patients at high risk of OSA for testing adds to underdiagnosis and treatment of OSA.


Keywords: Attitude, Knowledge, Obstructive Sleep Apnea.

*Correspondence to:

Dr. Rayan Abdulbasit Marzuqi,
Family Medicine Resident,
Jeddah, Saudi Arabia.

Article History:

Received: 24-12-2021, Revised: 13-01-2022, Accepted: 29-01-2022

Access this article online	
Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2022.8.1.013	

INTRODUCTION

According to the American Academy of Sleep Medicine the Obstructive sleep apnea (OSA) is "a sleep-related breathing disorder that involves a decrease or complete halt in airflow despite an ongoing effort to breathe".¹ The diagnosis of sleep apnea done either by polysomnogram or clinically by vital signs chart at sleep center at night while sleeping.¹ Therefore, the obstructive sleep apnea classified by apnea-hypopnea index to Mild: AHI of 5-15, Moderate: AHI of 15-30, and Severe: AHI of more than 30.^{1,2}

Obstructive sleep apnea has been known as an independent risk factor for cardiovascular disease (40%), hypertension (50%), depression, sleepiness-related accidents (63%), and abnormalities in glucose metabolism.³⁻⁵

The overall estimated prevalence of OSAS and clinical Obstructive Sleep Apnea Syndrome (COSAS). In Saudi Arabia was 2.8% (4.0% in men and 1.8% in women) and 8.5% (12.4% in men and 4.8% in women), respectively.⁴ A multivariate analysis revealed age, gender, obesity, and hypertension as independent risk factors of OSA.⁶

The determinants in this stud are age, gender, job title, income, nationality, duration since graduation, and duration of working in PHC.⁷

The study team could not find reliable data regarding the disease's mortality rate in Saudi Arabia. Any level of severity of Obstructive sleep apnea could affect the patient's quality of life. Regarding the treatment, continuous positive airway pressure (CPAP) remains the gold stander treatment.¹

The researchers choose this topic because one member of the research team suffered from late diagnosis of OSA, which has negative impact on his daily activities.

OSA increase all-cause mortality, particularly vascular mortality, which leads to increased utilization of health-care services.^{3,4} More importantly, treating OSA may reduce not only morbidities and mortalities but also the related economic burden. Furthermore, the research team could not find similar research in Saudi Arabia, Jeddah last five years.⁵

To evaluate the level of knowledge and attitude about obstructive sleep apnea among physicians.

METHODOLOGY

Analytical cross-sectional study was carried out. The participants of the study are going to be the ministry of health’s primary health care physicians. There are 47 Primary Health Care Center in Jeddah each center has about four physicians⁷, therefore they are approximately 188 physicians.

Sample size measured by Roasoft with an estimated total of 188 population.

The prevalence of the problem of 50%, and a confidence level of 95%, and margin of error 5%, Therefore the total sample size will be around 127 and 10% will be added to compensate for non-respondents, therefore the total will be 140 physicians. A valid Obstructive Sleep Apnea Knowledge and Attitude (OSAKA) questionnaire was used, which measure the level of knowledge and attitude of OSA, Sociodemographic variables such as: age, nationality, education and income will be included in the questionnaire. All participants will be requested to take a self-administered printed and electronic questionnaire will be

distributed by the research team to the physicians in the MOH PHC at the break time, at their clinics. Data entered into personal computer through SPSS version 25, for analysis p value <0.05 will be considered for significant chi-square and t-test and other appropriate test was used for data analysis.

The study was conducted taking the Joint Program of Family Physicians’ and permission of the IRB of MOH and acceptance from any higher governmental authority and sector director and administrative of the PHC. Written consent was obtained from all participants.

RESULTS

Out of total 200 respondent’s female were 60.5% while males were 39.5% mean (SD) age was 39.5(12.5).

As per table 3 as a doctor opinion Identifying patients with possible OSA is important 36.0 agreed with this statement.

Table 4 depicted the no significant relation between genders and opinion about relationship between OSA and hypertension

Table 1: Gender wise and age wise distribution

Gender	Frequency	Percent
Female	121	60.5
Male	79	39.5
Age		
26-30	125	62.5
30-34	1	.5
35-39	1	.5
40-45	49	24.5
45+	24	12.0

Table 2: Awareness & Knowledge about Obstructive Sleep Apnea

	Frequency	Percent
A craniofacial and oropharyngeal examination is useful in the assessment of patient with suspected OSA		
FALSE	40	20.0
I Don't Know	32	16.0
TRUE	128	64.0
Alcohol or bedtime improves OSA		
FALSE	95	47.5
I Don't Know	42	21.0
TRUE	63	31.5
An overnight sleep study is the gold standard for diagnosing OSA		
FALSE	35	17.5
I Don't Know	25	12.5
TRUE	140	70.0
Cardiac arrhythmias may be associated with untreated OSA		
FALSE	33	16.5
I Don't Know	28	14.0
TRUE	139	69.5
CPAP (continuous positive airway pressure) therapy may cause nasal congestion		
FALSE	44	22.0
I Don't Know	32	16.0
TRUE	124	62.0
CPAP is the first line therapy for severe OSA		
FALSE	28	14.0
I Don't Know	29	14.5
TRUE	143	71.5

In men, a collar size 17 inches or greater is associated with OSA		
FALSE	56	26.0
I Don't Know	42	21.0
TRUE	106	53.0
laser-assisted uvuloplasty is an appropriate treatment for severe OSA		
FALSE	45	22.5
I Don't Know	48	24.0
TRUE	107	53.5
Less than 5 apneas or hypopneas per hour is normal in adults		
FALSE	81	40.5
I Don't Know	41	20.5
TRUE	78	39.0
OSA is associated with hypertension		
FALSE	41	20.5
I Don't Know	26	13.0
TRUE	133	66.5
OSA is more common in women than in men		
FALSE	91	45.5
I Don't Know	36	18.0
TRUE	73	36.5
The estimated prevalence of OSA is between 2 and 10%		
FALSE	50	25.0
I Don't Know	45	22.5
TRUE	105	52.5
The loss of Upper airway muscle tone during sleep contribute to OSA		
FALSE	37	18.5
I Don't Know	42	21.0
TRUE	121	60.5
The majority of patient with OSA snore		
FALSE	46	23.0
I Don't Know	29	14.5
TRUE	125	62.5
The most common cause of OSA in children is the presence of large tonsils and adenoids		
FALSE	44	22.0
I Don't Know	32	16.0
TRUE	124	62.0
Untreated OSA is associated with a higher incidence of automobile crashes		
FALSE	32	16.0
I Don't Know	33	16.5
TRUE	135	67.5
Uvulopalatopharyngoplasty is curative for the majority of patients with OSA		
FALSE	51	25.5
I Don't Know	36	18.0
TRUE	113	56.5
Women with OSA may present with fatigue alone		
FALSE	49	24.5
I Don't Know	40	20.0
TRUE	111	55.5

Table 3: Attitude and Practice

	Frequency	Percent
As a clinical disorder, OSA is		
Extremely important	41	20.5
Important	83	41.5
Not Important	17	8.5
Somewhat important	20	10.0
Very important	39	19.5

Duration of Working in PHC		
0-5 years	99	49.5
11-15 years	24	12.0
16+ years	22	11.0
6-10 years	55	27.5
I am confident in my ability to manage patient on CPAP therapy		
Agree	23	11.5
Disagree	61	30.5
Neither agree nor disagree	59	29.5
Strongly agree	24	12.0
Strongly Disagree	33	16.5
I am confident in my ability to manage patient with OSA		
Agree	44	22.0
Disagree	56	28.0
Neither agree nor disagree	48	24.0
Strongly agree	28	14.0
Strongly Disagree	24	12.0
I feel confident identifying patient at risk for OSA		
Agree	58	29.0
Disagree	39	19.5
Neither agree nor disagree	55	27.5
Strongly agree	30	15.0
Strongly Disagree	18	9.0
Identifying patients with possible OSA is		
Extremely important	48	24.0
Important	72	36.0
Not Important	14	7.0
Somewhat important	30	15.0
Very important	36	18.0

Table 4: Gender wise comparisons

Gender	Female	Count	OSA is associated with hypertension			Total
			FALSE	I Don't Know	TRUE	
			20	18	83	121
		% within Gender	16.5%	14.9%	68.6%	100.0%
	Male	Count	21	8	50	79
		% within Gender	26.6%	10.1%	63.3%	100.0%
Total		Count	41	26	133	200
		% within Gender	20.5%	13.0%	66.5%	100.0%

P=0.184

DISCUSSION

The majority of the participants were females this was comparable with another study in France in which there was a female predominance (61.9%). The general populations have an overall poor knowledge of OSA. These results matched the knowledge of France population as their knowledge was fairly well aware of symptoms suggestive of OSA. Since more than 75% knew the main symptoms like respiratory breaks during sleep, daytime fatigue, and non-restorative sleep, while other signs such as nocturia and morning headache were less well-known.^{9,10}

A study was conducted by in Europe found that there was no significant correlation between male and female in the knowledge of OSA. However, consistent with our study.¹¹

We observed that the level of knowledge among medical school graduates in our country was higher when we compared the current study to a previously published study using the OSAKA

questionnaire.¹² The Assessment of Sleep Knowledge in Medical Education (ASKME) Survey was used in Saudi Arabia to measure medical students' sleep knowledge. The results showed that medical students in selected Saudi Arabian schools had very little knowledge about sleep and sleep disorders.^{13,14} There were no distinctions between public and private universities that we discovered.

Our findings were similar to those of a prior study of Latin-American physicians already in practice, which revealed low levels of knowledge among new medical graduates. Patients with OSA symptoms are seen by practically all clinicians, regardless of specialty, and a basic understanding of OSA is deemed necessary to identify these patients and send them for proper therapy. However, our students showed limited understanding of the link between OSA and hypertension. This remark is in line with the findings of a Nigerian survey of medical students.¹⁵⁻¹⁷

CONCLUSION

The majority of recent medical students and professionals were unaware of OSA risk factors and proper management; inability to recognize and effectively refer patients at high risk of OSA for testing adds to underdiagnosis and treatment of OSA. OSA-focused educational initiatives in medical school should help recent medical graduates gain a better understanding of OSA, its diagnosis, and therapy recommendation. The addition of sleep medicine education to the current medical school curriculum, as well as a greater number of hours of sleep education exposure for medical students, may enhance results in OSA patients.

REFERENCES

1. Ryan S. Obstructive Sleep Apnea. *Int Encycl Public Heal*. 2016; 308–14.
2. Corso RM, Sorbello M, Buccioli M, Carretta E, Nanni O, Piraccini E, et al. Survey of knowledge and attitudes about obstructive sleep apnoea among Italian anaesthetists. *Turk Anesteziyoloji ve Reanimasyon Dern Derg*. 2017;45(3):146–52.
3. Malhotra A, White DP. Obstructive sleep apnoea. *Lancet* (London, England) [Internet]. 2002 Jul 20 [cited 2019 Oct 21];360(9328):237–45. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/12133673>
4. Budhiraja R, Budhiraja P, Quan SF. Sleep-disordered breathing and cardiovascular disorders. *Respir Care*. 2010;55(10):1322–30.
5. Bahammam AS. Knowledge and attitude of sleep. 2000;966(August).
6. Wali SO, Abalkhail B, Krayem A. Prevalence and risk factors of obstructive sleep apnea syndrome in a Saudi Arabian population. *Ann Thorac Med*. 2017;12(2):88–94.
7. Arabia S, Bakarman MA, Alghamdi SM. Utilization and Sources among Primary Health Care Physicians in Jeddah, Saudi Arabia. *Life Sci J* [Marwan A Bakarman, Sami M Alghamdi *Contin Med Educ* [Internet]. 2014;4(11):1097–8135. Available from: <http://www.lifesciencesite.comhttp://www.lifesciencesite.com>.187
8. Indicators of MOH PHC centers 2018.
9. Budhiraja R, Budhiraja P, Quan SF. Sleep-disordered breathing and cardiovascular disorders. *Respir Care*. 2010;55(10):1322. 32-2.
10. Dutt N, Janmeja AK, Mohapatra PR, Singh AK. Quality of life impairment in patients of obstructive sleep apnea and its relation with the severity of disease. *Lung India*. 2013;30(4):289–94.
11. Giles TL, Lasserson TJ, Smith BH, White J, Wright J, Cates CJ. Continuous positive airways pressure for obstructive sleep apnoea in adults. *Cochrane Database Syst Rev*. 2006;3:CD001106.
12. Marin JM, Agusti A, Villar I, Forner M, Nieto D, Carrizo SJ, et al. Association between treated and untreated obstructive sleep apnea and risk of hypertension. *JAMA*. 2012;307(20):2169–76.
13. Cherrez Ojeda I, Jeffe DB, Guerrero T, Mantilla R, Santoro I, Gabino G, et al. Attitudes and knowledge about obstructive sleep apnea among Latin American primary care physicians. *Sleep*. 2013;14(10):973–7.
14. Hayes SM, Murray S, Castriotta RJ, Landrigan CP, Malhotra A. (Mis) perceptions and interactions of sleep specialists and generalists: obstacles to referrals to sleep specialists and the multidisciplinary team management of sleep disorders. *J Clin Sleep Med*. 2012;8(6):633–42.
15. Tamay Z, Akcay A, Kilic G, Suleyman A, Ones U, Are GN. Physicians aware of obstructive sleep apnea in children? *Sleep Med*. 2006;7(7):580–4.
16. Schotland HM, Jeffe DB. Development of the obstructive sleep apnea knowledge and attitudes (OSAKA) questionnaire. *Sleep Med*. 2003;4(5):443–50.
17. Schotland HM, Jeffe DB. Erratum to “development of the obstructive sleep apnea knowledge and attitudes (OSAKA) questionnaire” [sleep medicine 4 (2003) 443–450]. *Sleep Med*. 2008;9(6):705.

Source of Support: Nil.

Conflict of Interest: None Declared.

Copyright: © the author(s) and publisher. IJMRP is an official publication of Ibn Sina Academy of Medieval Medicine & Sciences, registered in 2001 under Indian Trusts Act, 1882.

This is an open access article distributed under the terms of the Creative Commons Attribution Non-commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Cite this article as: Rayan Abdulbasit Marzuqi, Saeed Abdulrahim Alamoodi, Maher Ghazi Alsharif, Akram Abdulwahed Atbay. The Level of Knowledge and Attitude About Obstructive Sleep Apnea and Its Determinants Among Ministry of Health's Primary Health Care Physicians in Jeddah 2021. *Int J Med Res Prof*. 2022 Jan; 8(1): 56-60. DOI:10.21276/ijmrp.2022.8.1.013