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Original Research Article

The role of bed partners in recognizing obstructive sleep apnoea: A cross-sectional analysis from Eastern Saudi Arabia

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Abstract

Background: Obstructive Sleep Apnoea (OSA) is a common yet frequently underdiagnosed disorder with substantial health consequences. Bed partners often play a critical role in the early recognition of OSA symptoms, such as loud snoring, gasping, and observed apnoeic episodes. Enhancing their awareness may facilitate timely diagnosis and management.
Objectives: The present study was conducted to evaluate the knowledge and perceptions of bed partners regarding OSA, including awareness of symptoms, risk factors, management strategies, long-term health consequences, and the impact on personal relationships.
Materials and Methods: A descriptive cross-sectional study was conducted using a validated online questionnaire distributed to bed partners across Saudi Arabia. The survey evaluated participants' knowledge and perceptions of Obstructive Sleep Apnoea (OSA). Descriptive statistics were used to summarize the data, and one-way ANOVA was applied to examine associations between knowledge scores and sociodemographic variables.
Results: A total of 600 responses were collected through convenience sampling. Among respondents, 331 (55%) demonstrated a high level of knowledge about OSA. Significant associations were found between awareness levels and both educational attainment and age. Categorical data were presented as frequencies and percentages, while continuous variables were summarized using means and standard deviations.
Conclusion: The findings highlight the importance of targeted educational interventions to improve partner awareness of OSA. Increased knowledge among partners can contribute to earlier diagnosis and more effective management, ultimately improving patient outcomes and relationship dynamics.

Keywords: Obstructive sleep apnoea (OSA), Partner awareness, Knowledge assessment, OSA symptoms, Risk factors, Educational interventions, Cross-sectional study, Sleep disorders, Public health awareness, Early diagnosis.

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1. Introduction

Obstructive Sleep Apnoea (OSA) is a prevalent and underdiagnosed sleep disorder with significant global health and economic consequences, demanding urgent clinical and public health attention. It is estimated that OSA affects between 9% and 38% of the adult population worldwide, with prevalence rates of approximately 15% in men and 5% in women. Globally, over 936 million individuals are believed to suffer from mild to severe forms of OSA, underscoring its widespread impact.[1-4]

OSA is marked by recurrent upper airway collapse during sleep, leading to intermittent hypoxemia, hypercapnia, and sleep fragmentation due to repeated arousals. The pathophysiology of OSA is multifactorial, involving anatomical and neuromuscular factors. These include increased pharyngeal airway collapsibility due to excessive

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relaxation of the upper airway muscles, a narrowed airway lumen, and increased soft tissue mass, particularly in individuals with obesity.[5] Consequently, affected individuals may experience loud snoring, gasping, or witnessed apnoea's, often without conscious awareness. These episodes trigger brief arousals from sleep to restore airway patency, leading to disrupted sleep architecture and excessive daytime sleepiness.[6]

The clinical consequences of untreated OSA are substantial. OSA is linked to heightened risks of cardiovascular diseases including hypertension, stroke, and heart failure; metabolic disorders such as type 2 diabetes, and neurocognitive impairments like memory loss, mood disturbances, and reduced attention span.[7] Additionally, OSA contributes to increased rates of motor vehicle accidents and occupational injuries due to impaired alertness.[8]

Despite its serious health implications, OSA remains significantly underdiagnosed, with estimates suggesting that 80–90% of affected individuals are unaware of their condition. This diagnostic gap is largely due to the nocturnal nature of OSA symptoms, which often go unnoticed by the individual. As a result, many patients only seek medical attention after prolonged symptom duration or upon the recommendation of a healthcare provider for unrelated issues.

Although diagnostic tools such as polysomnography (PSG) and home sleep apnoea testing (HSAT) are effective, their accessibility is limited by cost, availability, and logistical challenges. Moreover, individuals with mild or unrecognized symptoms may not perceive the need for evaluation until the condition progresses.[9]

In Saudi Arabia, recent data from Riyadh indicate that OSA affects approximately 25% of middle-aged men and 9% of women. National registry data suggest that nearly one-third of middle-aged Saudi males may be affected, with rising obesity rates among women potentially contributing to increased prevalence.[10] These trends highlight the urgent need for enhanced awareness and early detection strategies within the local population.

Bed partners are uniquely positioned to observe the hallmark symptoms of OSA, such as loud snoring, choking, gasping, and apnoeic episodes. Studies have shown that partners often detect these symptoms before the affected individual becomes aware of them. In many cases, it is the partner's concern that prompts medical consultation and subsequent diagnosis. Therefore, increasing partners' awareness and understanding of OSA is critical for facilitating early recognition and intervention.

While global research on partner awareness of OSA remains limited, only a few studies have explored this topic in Saudi Arabia. A 2019 study in the Asir region assessed general public awareness of OSA, and a 2023 study in Jeddah examined parental knowledge of paediatric OSA.[11,12] However, no studies to date have specifically investigated adult partners' awareness of OSA in the Saudi context.

2. Objective

This study aims to assess the knowledge and awareness of bed partners regarding OSA, including its risk factors, symptoms, management strategies, long-term health consequences, and the impact on interpersonal relationships.

3. Materials and Methods

3.1. Study design and population

This descriptive cross-sectional study was conducted from August 2023 to May 2024 using a non-randomized convenience sampling method. Participants were recruited from the general population in Saudi Arabia. Eligibility criteria included individuals aged 18 years or older who were either married or cohabiting with a room partner.

3.2. Questionnaire development and validation

Data were collected using an electronic survey developed via Google Forms (Google LLC, Mountain View, CA, USA). The questionnaire was disseminated through various social media platforms to maximize reach. A previously validated instrument—the STOP-BANG questionnaire—served as the foundation for the survey (**Table 2**).[11] Minor modifications were made to tailor the content to the study objectives, and a pilot test involving 20 participants was conducted to evaluate clarity, usability, and readability.

The questionnaire comprised three sections:

1. Sociodemographic Information:
   Included variables such as age, gender, region, marital status, education level, occupation, height, weight, and the nature of the respondent's relationship with their partner.
2. Awareness and Perceptions of OSA:
   Assessed participants' prior knowledge of OSA, sources of information, and recognition of common symptoms.
3. Knowledge Assessment:
   Contained nine items evaluating understanding of OSA's definition, risk factors, symptoms, and treatment options. Responses were scored as follows: "Yes" = 2 points, "No" = 1 point, and "I don't know" = 0 points. Based on total scores, participants were categorized into three knowledge levels:
   a. Low knowledge: <7
   b. Moderate knowledge: 7–12
   c. High knowledge: >12

3.3. Ethical considerations

Ethical approval for this study was obtained from the Institutional Review Board (IRB) of the affiliated university (Approval No. 613/03/2023). Informed consent was obtained electronically from all participants prior to survey completion. Anonymity and confidentiality were maintained throughout the study, with no personal identifiers collected.

3.4. Data collection and analysis

A total of 600 valid responses were analysed. Categorical variables were summarized using frequencies and percentages, while continuous variables were reported as means and standard deviations. One-way analysis of variance (ANOVA) was employed to assess differences in knowledge scores across sociodemographic groups. Statistical significance was set at $p < 0.05$ with a 95% confidence interval. Data analysis was performed using Microsoft Excel (Microsoft Corp., Redmond, WA, USA) and IBM SPSS Statistics version 29 (IBM Corp., Armonk, NY, USA).

4. Results

A total of 600 participants completed the survey. The male-to-female ratio was approximately 1:3, with the majority of respondents aged between 18 and 40 years. Most responses (n = 517; 86.17%) were received from the Eastern Province of Saudi Arabia. Regarding educational background, 434 (72%) participants held a bachelor's degree, and 336 (56%) were employed at the time of the study. In terms of relationship status, 431 (72%) of respondents were spouses, while 118 (20%) were siblings of the individuals with whom they shared a room.

Among the room partners, 382 (64%) were male, predominantly within the same 18–40 age group. A total of 353 (58.83%) had attained a university degree, and 429 (72%) were employed. Regarding anthropometric characteristics, 435 (73%) of the partners had a normal neck circumference and Body Mass Index (BMI). However, 107 (18%) were classified as Class I obese, 28 (4.7%) as Class II obese, and 17 (2.85%) as Class III obese, all of whom exhibited increased neck circumference. **Table 1**presents the detailed demographic characteristics of the participants and their room partners.

Out of the total sample, 360 participants (60%) reported prior awareness of obstructive sleep apnoea (OSA), with 348 (97%) of them correctly identifying its definition. Additionally, 127 respondents (35%) indicated having a relative or acquaintance diagnosed with OSA. A significant proportion (n = 258; 72%) believed that OSA could adversely affect the sleep quality of the bed partner.

Social media emerged as the most common source of information, cited by 163 participants (45%). The most frequently recognized symptoms of OSA included loud snoring, gasping or choking during sleep, observed apnoeic episodes, and mouth breathing. **Figure 1** illustrates the distribution of symptom recognition among participants.

In the knowledge assessment section, each question was scored based on its complexity and relevance. The aggregated scores were used to classify participants into three knowledge categories: low, medium, and high. As shown in **Figure 2**, 36 participants (6%) demonstrated low knowledge, 233 (39%) had moderate knowledge, and 331 (55%) exhibited high knowledge regarding the risk factors, symptoms, and treatment options for OSA.

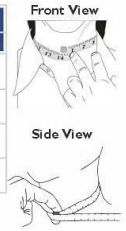
Table 1: Demographic characteristics of the study population and their partners

Characteristics		N(%)	Knowledge score (mean ±SD)	P-Value
Gender	Male	154(26)	11.83±4.07	0.0875
	Female	446(74)	12.45±3.76	
Age group (years)	18-30	193(32)	12.39±3.87	0.0859
	31-40	196(33)	12.35±3.84	
	41-50	143(24)	12.36±3.63	
	51-60	50(8)	10.96±4.30	
	>61	18(3)	13.55±3.70	
Partner age group (years)	18-30	203(34)	12.39±3.78	0.8935
	31-40	150(25)	12.02±4.05	
	41-50	136(23)	12.41±3.94	
	51-60	73(12)	12.40±3.27	
	>61	38(6)	12.15±4.19	
Education	School	135(22)	11.51±4.19	0.0156
	Graduate	434(72)	12.44±3.73	
	Master degree	26(4)	13.27±3.00	
	Doctorate	5(1)	15±5.09	
	Uneducated	7(1)	11.14±4.30	0.1536

Partner education	School	197(33)	11.77±3.99	
	Graduate	353(59)	12.58±3.74	
	Master degree	32(5)	12.18±4.06	
	Doctorate	11(2)	13±3.13	
Partner occupation	Business	106(18)	13.14±3.41	
	Education field	44(7)	12.95±3.32	
	Free lancers	25(4)	10.52±4.73	
	Frontline workers	60(10)	11.86±3.58	
	Law enforcement	19(3)	11.73±3.81	0.0946
	Medical	18(3)	12.11±5.52	
	Retired	51(8)	11.82±3.76	
	STEM &Speciality	105(18)	12.44±3.78	
	Unemployed	171(29)	12.14±3.98	

Table 2: Annexure 1 Online questionnaire items used to evaluate the Partner's Knowledge and Perceptions of Obstructive Sleep Apnoea

Demographic data:		
Participant information:	Gender	Male
		Female
	Age	18-30 years
		31-40 years
		41-50 years
		51-60 years
		>60 years
	Region in KSA	Eastern region
		Western region
		Northern region
		Southern region
		Middle region
	Education status	Uneducated
		School
		Undergraduate
		Post graduate
		PhD or equivalent
	Occupation	
	Relationship with Room partner	Roommate
		Husband/wife
		Sister/brother
		Son/daughter
Partners information	Gender	Male
		Female
	Age	18-30 years
		31-40 years
		41-50 years
		51-60 years
		>60 years
	Education status	Uneducated
		School
		Undergraduate
		Post graduate
		PhD or equivalent
	Occupation	

<table>
<tr><td rowspan="2"></td><td>Neck circumference
<table><tr><th rowspan="2">Size</th><th colspan="2">Neck Circumference</th></tr><tr><th>In cms.</th><th>In Inches</th></tr><tr><td>Small</td><td>30-34</td><td>12-13.4</td></tr><tr><td>Medium</td><td>34-38</td><td>13.4-15</td></tr><tr><td>Large</td><td>38-42</td><td>15-16.5</td></tr><tr><td>X-Large</td><td>42-46</td><td>16.5-18</td></tr></table>  </td><td>Small
Medium
Large
X-large</td></tr>
<tr><td colspan="2">Height and weight
BMI</td></tr>
<tr><td colspan="3">Items related to evaluate the awareness and knowledge of OSA</td></tr>
<tr><td colspan="2">1. Have you ever heard about Obstructive Sleep Apnoea before?</td><td>Yes
No</td></tr>
<tr><td colspan="3">If answer is “yes ” to the question 1</td></tr>
<tr><td colspan="2">What is Obstructive Sleep apnoea?</td><td>An airway obstruction causes the patient to sleep
Airway obstruction during sleep
A breathing limitation when the patient thinks about sleep</td></tr>
<tr><td colspan="2">Do you know anyone from your Family\Friends with OSA?</td><td>Yes
No
May be</td></tr>
<tr><td colspan="2">What are the symptoms you know about OSA? (you can choose more than one option)</td><td>Mouth breathing
Snoring
Lack of sleep during night
Excessive daytime Sleepiness
Waking up gasping or chocking
Waking up with dry mouth or sore throat
High blood pressure
Noticeable episodes of breath pause
Laziness during the day
Difficulty in focusing while awake
Mood swings , irritability
Morning headaches
Low sexual desire
Others</td></tr>
<tr><td colspan="2">Do you think OSA can affect the room partner?</td><td>Yes
No
I don’t know</td></tr>
<tr><td colspan="2">Where have you heard about OSA?</td><td>Medical article
Social media
Newspapers and magazines
Others</td></tr>
<tr><td colspan="2">Does your partner experience any of these symptoms?(choose all symptoms applied)</td><td>Mouth breathing
Snoring
Lack of sleep during night
Excessive daytime Sleepiness
Waking up gasping or chocking
Waking up with dry mouth or sore throat
High blood pressure
Noticeable episodes of breath pause
Laziness during the day
Difficulty in focusing while awake</td></tr>
</table>

	Mood swings , irritability
	Morning headaches
	Low sexual desire
	Others
The presence of more than 3 symptoms are suggestive that your partner can develop OSA in future, so we advise to seek medical professional help.	
If answer is "no" to the question 1	
Does your partner experience any of these symptoms?(choose all symptoms applied)	Mouth breathing
	Snoring
	Lack of sleep during night
	Excessive daytime Sleepiness
	Waking up gasping or chocking
	Waking up with dry mouth or sore throat
	High blood pressure
	Noticeable episodes of breath pause
	Laziness during the day
	Difficulty in focusing while awake
	Mood swings , irritability
	Morning headaches
	Low sexual desire
	Others
The presence of more than 3 symptoms are suggestive that your partner can develop OSA in future, so we advise to seek medical professional help.	
General items	
Do You think That these signs\symptoms are genetic?	Yes
	No
	I don't know
Do you know that these signs\symptoms may affect your partner's performance at work\school?	Yes
	No
	I don't know
Do you know that these signs\symptoms may affect your partner's attention and behaviour?	Yes
	No
	I don't know
Do you think your partner's signs\symptoms are causing you anxiety\depression?	Yes
	No
	I don't know
Do you think your partner's signs\symptoms are affecting your relationship with them?	Yes
	No
	I don't know
Do you think your partner's signs\symptoms is affecting your sleep?	Yes
	No
	I don't know
Do you think your partner's signs\symptoms can be treated and managed?	Yes
	No
	I don't know
Do you think early diagnosis and treatment of these signs\symptoms may reduce its risks?	Yes
	No
	I don't know
Do you think partner's Awareness of Obstructive Sleep Apnoea might help in reducing undiagnosed Sleep Apnoea Patients?	Yes
	No
	I don't know

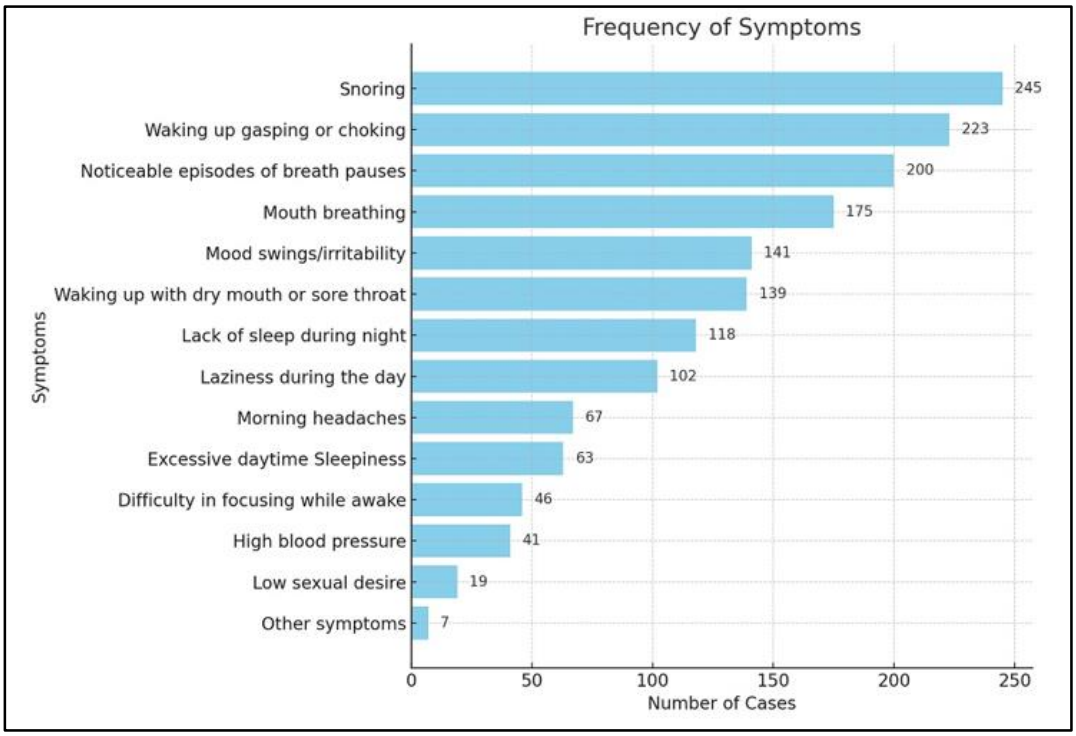


Figure 1: Common symptoms recognized by the room partner for OSA

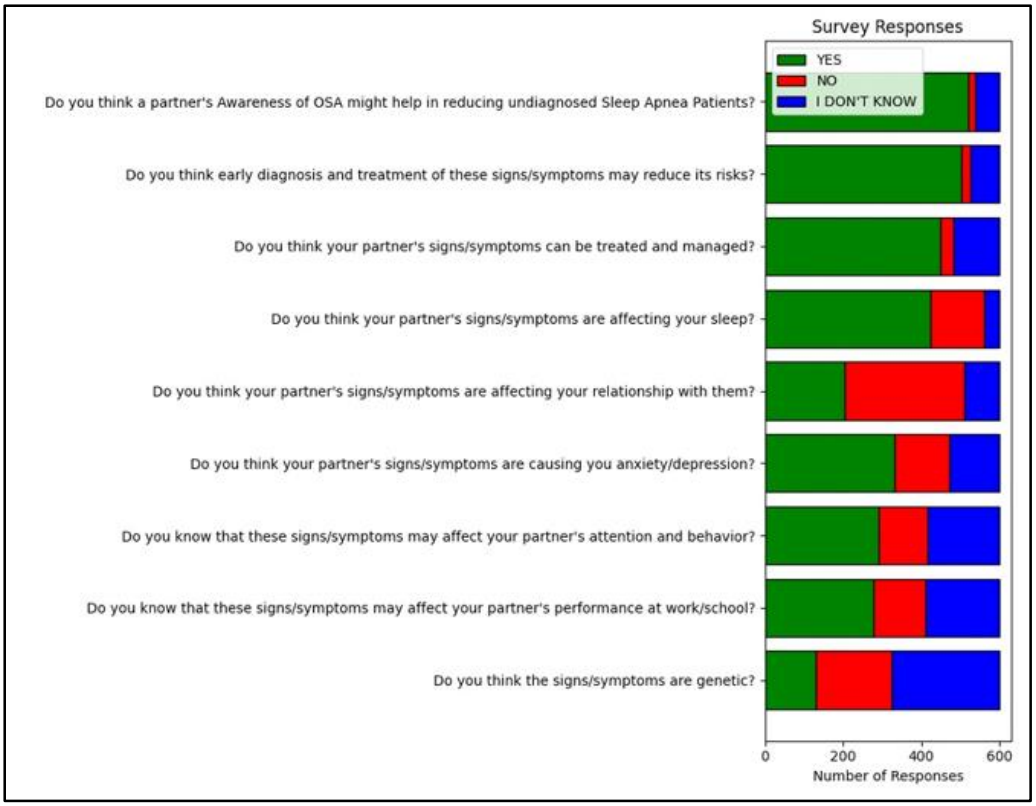


Figure 2: Shows the participant's knowledge about OSA and its implications as assessed in sections 3 of the questionnaire.

5. Discussion

This cross-sectional study explored the awareness and knowledge of obstructive sleep apnoea (OSA) among bed partners in Saudi Arabia, a topic that remains under-researched both globally and nationally. By focusing on individuals who share sleeping environments with potential OSA sufferers, this study highlights the critical role partners

play in the early recognition and management of the condition.

Among the 600 participants, 331 (55%) demonstrated a high level of knowledge regarding OSA. Educational attainment emerged as a significant predictor of awareness, with higher knowledge scores observed among participants holding a bachelor's degree or higher ($p = 0.0156$). These findings align with previous studies, such as those by Rasool et al. and Yaqoob et al., which reported generally low awareness levels in the Saudi population.[13-15] The improvement observed in our study may reflect increased access to education and digital health information.

Gender differences in awareness were also noted. While some studies, including a 2018 national survey in Saudi Arabia, reported higher awareness among men despite greater female participation, our findings suggest that women may now exhibit higher levels of understanding.[14] This discrepancy may be influenced by cultural, educational, and regional factors. Similar studies in Singapore found no significant gender-based differences in awareness, further emphasizing the need for context-specific research.[16]

Age was another influential factor. Participants aged 18–30 years demonstrated higher awareness, likely due to greater educational exposure and digital literacy. This contrasts with findings from Saudi Arabia and Singapore, where older adults (aged 40 and above) were more knowledgeable about OSA.[14,16] These differences may reflect generational shifts in health information access and consumption.

Educational level consistently correlated with OSA awareness. Participants with higher education levels were more informed, echoing findings from a French study that linked educational attainment with health literacy.[17] These results underscore the importance of targeting awareness campaigns toward less-educated populations to bridge the knowledge gap.

Regarding sources of information, the internet was the most frequently cited (45%), followed by medical literature (25%) and personal networks (15%). This trend mirrors findings from national and international studies, highlighting the growing reliance on digital platforms for health information.[13,14] However, the potential for misinformation necessitates that health authorities actively disseminate accurate content through social media and other online channels.

Symptom recognition was variable. While common symptoms such as snoring (41%), gasping (37%), and breath cessation (33%) were widely recognized, less obvious indicators like morning headaches (11.2%), excessive daytime sleepiness (10.5%), and cognitive difficulties (7.6%) were underreported. These findings suggest that while partners may identify overt symptoms, they may lack awareness of the broader clinical spectrum of OSA. This gap reinforces the need for comprehensive educational interventions. Similar symptom patterns were reported by Alosaimi et al.[12]

In terms of defining OSA, 58% of participants correctly identified the condition, consistent with findings by Bashir et al. but higher than those reported by Alosaimi et al. and Pan Z et al.[18-20] This suggests a moderate level of conceptual understanding, which could be further enhanced through targeted public health messaging.

Partner awareness is crucial not only for early detection but also for treatment adherence. Partners often observe symptoms that patients overlook and can encourage timely medical consultation. Moreover, they play a vital role in supporting adherence to continuous positive airway pressure (CPAP) therapy, the gold standard for OSA management. Studies have shown that partner involvement improves CPAP compliance and overall treatment outcomes.[21,22]

These findings highlight the need for future awareness campaigns to include partners as key stakeholders in OSA management. Policymakers and healthcare providers should prioritize educational initiatives that equip partners with the knowledge necessary to recognize symptoms, seek timely care, and support treatment adherence. Further research should explore regional variations in partner awareness across Saudi Arabia to inform localized interventions.

6. Limitations

This study has several limitations. First, the use of convenience sampling and the geographic focus on the Eastern Province may restrict the generalizability of the findings to broader populations. Second, reliance on self-reported data introduces the potential for recall bias. Additionally, participants may have accessed online resources while completing the survey, possibly inflating knowledge scores. The length of the questionnaire could have contributed to respondent fatigue, potentially affecting the accuracy of responses. Lastly, the limited availability of prior regional studies constrained opportunities for comparative analysis.

7. Recommendations based on our Study

1. Implement nationwide public awareness campaigns tailored to cultural contexts.
2. Integrate OSA education into primary care and dental practices.
3. Promote routine screening using validated tools.
4. Expand access to diagnostic services, including home sleep testing.
5. Encourage family involvement in symptom recognition and support.

8. Conclusion

This study highlights a relatively high level of awareness of obstructive sleep apnoea (OSA) among partners residing in the Eastern Province of Saudi Arabia. Many participants were able to identify key symptoms, although gaps remain in recognizing the full spectrum of clinical manifestations. Enhanced understanding of OSA's risk factors, symptoms, and complications among bed partners can significantly contribute to early detection and timely intervention, ultimately improving patient outcomes.

To build on these findings, public health initiatives should prioritize educational campaigns, clinical consultations, and community outreach programs aimed at increasing partner awareness. Expanding the study to include other regions of Saudi Arabia would improve the generalizability of the results and help tailor awareness strategies to diverse populations. Additionally, refining survey tools to minimize recall bias and improve response accuracy will strengthen future research efforts.

9. Sources of Finding

None.

10. Conflicting of Interest

There are no conflicts of interest

11. Data availability statement

The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request.

12. Acknowledgements

None.

References

1. Benjafield AV, Ayas NT, Eastwood PR, Heinzer R, Ip MSM, Morrell MJ et al. Estimation of the global prevalence and burden of obstructive sleep apnoea: a literature-based analysis. *Lancet Respir Med*. 2019;7(8):687–98.
2. Eckert DJ, Malhotra A, Jordan AS. Mechanisms of apnea. *Prog Cardiovasc Dis*. 2009;51(4):313–23.
3. Young T, Palta M, Dempsey J, Peppard PE, Nieto FJ, Hla KM. Burden of sleep apnea: rationale, design, and major findings of the Wisconsin Sleep Cohort study. WMJ. 2009;108(5):246–9.
4. Peppard PE, Young T, Barnet JH, Palta M, Hagen EW, Hla KM. Increased prevalence of sleep-disordered breathing in adults. Am J Epidemiol. 2013;177(9):1006–14.
5. Eckert DJ. Phenotypic approaches to obstructive sleep apnoea - New pathways for targeted therapy. *Sleep Med Rev*. 2018;37:45–59.
6. Sowho M, Amatoury J, Kirkness JP, Patil SP. Sleep and respiratory physiology in adults. *Clin Chest Med*. 2014;35(3):469–81.
7. Partinen M, Jamieson A, Guilleminault C. Long-term outcome for obstructive sleep apnea syndrome patients. Mortality. *Chest*. 1988;94(6):1200–4.
8. Kapur VK, Auckley DH, Chowdhuri S, Kuhlmann DC, Mehra R, Ramar K, et al. Clinical Practice Guideline for Diagnostic Testing for Adult Obstructive Sleep Apnea: An American Academy of Sleep Medicine Clinical Practice Guideline. *J Clin Sleep Med*. 2017;13(3):479–504.
9. Schlosshan D, Elliott MW. Sleep. 3: Clinical presentation and diagnosis of the obstructive sleep apnoea hypopnoea syndrome. *Thorax*. 2004;59(4):347–52.
10. National Sleep Disorders Registry. King Saud University Sleep Disorders Center (Last updated on: January 12, 2023 4:15am; cited Jan 2024). Available from https://sleep.ksu.edu.sa/en/NationalSleepDisordersRegistry
11. Alshehri AM, Alshehri MS, Alamri OM, Alshehri FS, Alshahrani M, Alflan MA, et al. Knowledge, Awareness, and Attitudes Toward Obstructive Sleep Apnea among the Population of the Asir Region of Saudi Arabia in 2019. *Cureus*. 2020;12(3):e7254.
12. Alosaimi RM, Alqarni G, Musslem MT, Filfilan FF, Alazmi EA, Alsaedi JR, et al. Knowledge and Awareness of Parents About Pediatric Obstructive Sleep Apnea in Jeddah: A Cross-Sectional Study. *Cureus*. 2023;15(5):e38960.
13. Rasool G, Alenezi WH, Alanazi RMS, Almadai HA, Alsharif NN. Knowledge of Obstructive Sleep Apnea Among the General Population in Arar, Northern Region of Saudi Arabia. *Cureus*. 2024;16(1):e51529.
14. Shehata SF, Mardhamah NHA, Alrushaydan AK, Alqahtani NT, Alzahrany AA, Alfentokh OK et al. Population awareness regarding obstructive sleep apnea in Saudi Arabia. *IJMDC*. 2019;3(3):239–45.
15. Yaqoub A, Azyabi F, Ameer MA, Suhail H, Muqri K, Awlaqi A, et al. Knowledge and Awareness of Obstructive Sleep Apnea among the Population of the Jazan Region, Saudi Arabia. *Saudi J Otorhinolaryngology Head Neck Surg*. 2003;25:91-100.
16. Sia CH, Hong Y, Tan LWL, van Dam RM, Lee CH, Tan A. Awareness and knowledge of obstructive sleep apnea among the general population. *Sleep Med*. 2017;36:10-17.
17. Arous F, Boivin JM, Chaouat A, Rumeau C, Jankowski R, Nguyen DT. Awareness of obstructive sleep apnea-hypopnea syndrome among the general population of the Lorraine Region of France. *Eur Ann Otorhinolaryngol Head Neck Dis*. 2017;134(5):303–8.
18. Bashir AF, Al-Ghamdi A, Alsaadi AS, AlQahtani BG, Alshihri SA, Alshahrani HA, et al. Knowledge and Awareness of Parents about pediatric obstructive sleep apnea in KSA, crosssection study 2019. *World Fam Med*. 2021;19(1):206–14.
19. Alosaimi RM, Musslem MT, Filfilan FF, Alqarni GS, Alazmi EA, Alghamdi TY, et al. Knowledge and Awareness of Parents Attending Pediatric Clinic Regarding Pediatric Obstructive Sleep Apnea in Jeddah: A Cross-Sectional Study. *Cureus*. 2023;15(2):e35339.
20. Pan Z, Ma T, Zeng Q, Xu T, Ran Q, Li T, et al. People's knowledge, attitudes, practice, and healthcare education demand regarding OSA: a cross-sectional study among Chinese general populations. *Front Public Health*. 2023;11:1128334.
21. Ye L, Malhotra A, Kayser K, Willis DG, Horowitz JA, Aloia MS, et al. Spousal involvement and CPAP adherence: a dyadic perspective. *Sleep Med Rev*. 2015;19:67–74.
22. Martire LM, Schulz R, Helgeson VS, Small BJ, Saghafi EM. Review and meta-analysis of couple-oriented interventions for chronic illness. *Ann Behav Med*. 2010;40(3):325–42.

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