Is there a relationship between obstructive sleep apnea (OSA) and obesity?

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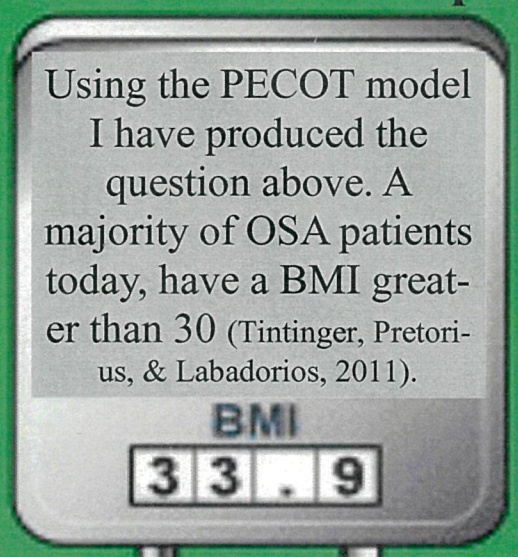
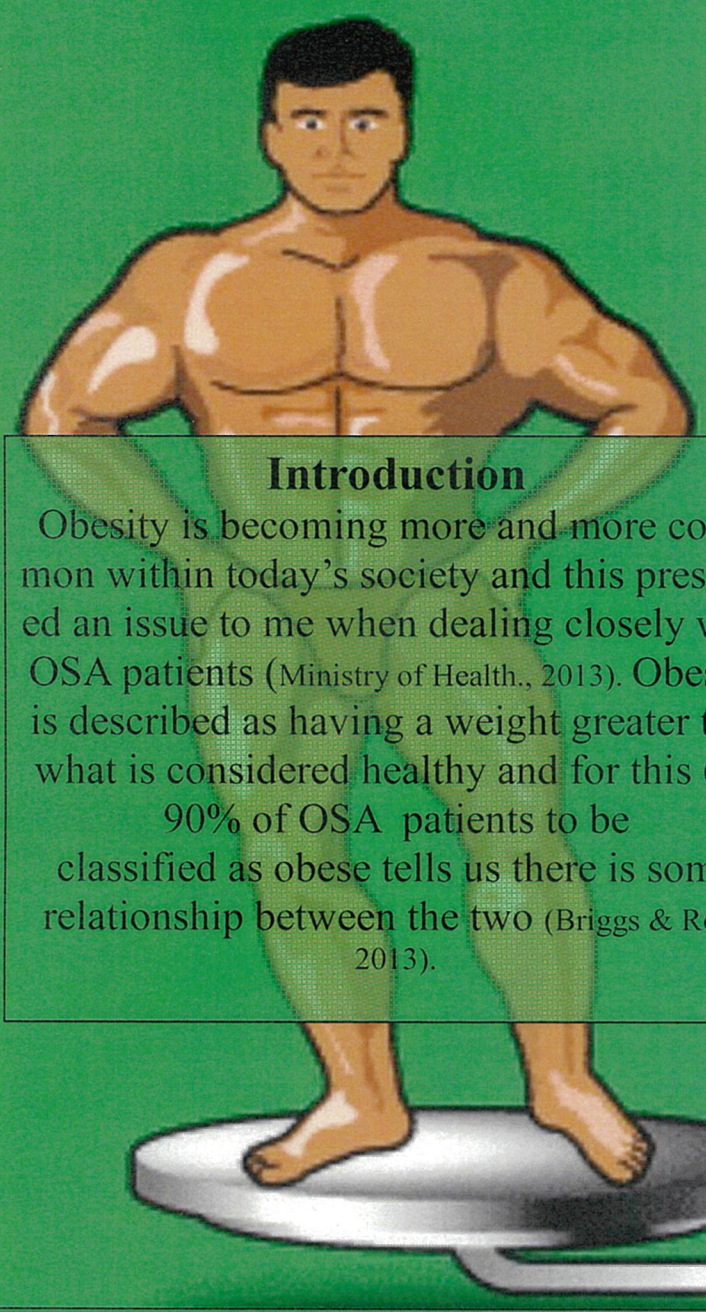
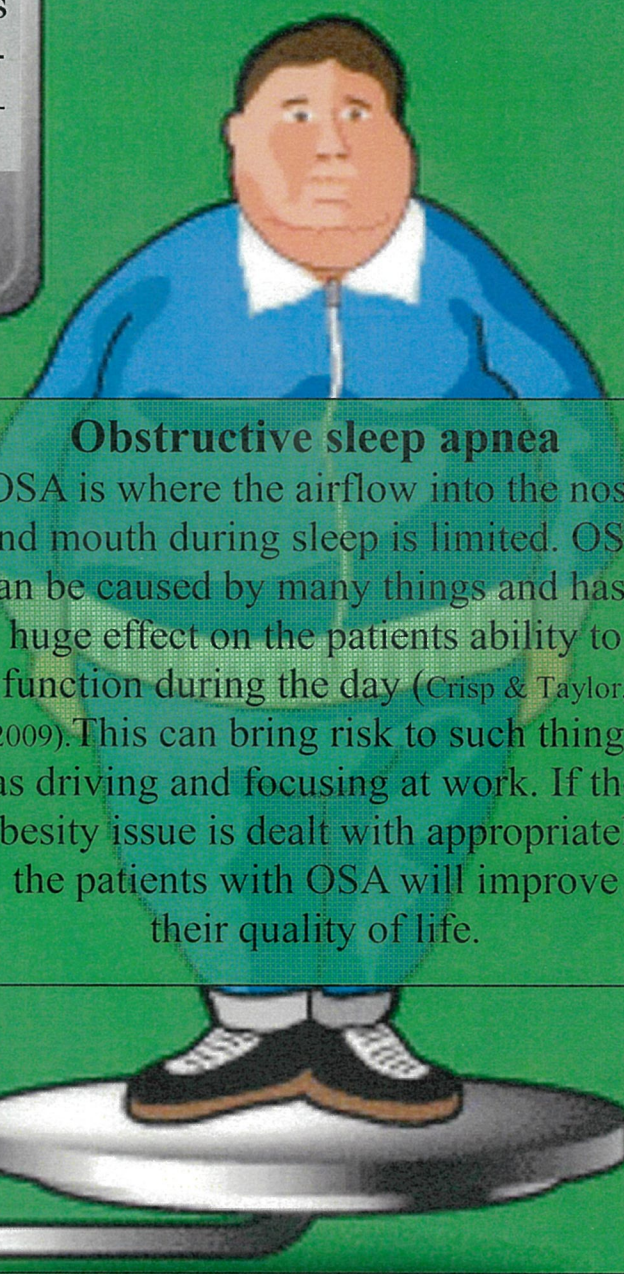
Using the PECOT model I have produced the question above. A majority of OSA patients today, have a BMI greater than 30 (Tintinger, Pretorius, & Labadorios, 2011).





Introduction

Obesity is becoming more and more common within today's society and this presented an issue to me when dealing closely with OSA patients (Ministry of Health., 2013). Obesity is described as having a weight greater that what is considered healthy and for this 60-90% of OSA patients to be classified as obese tells us there is some relationship between the two (Briggs & Reid, 2013).



Obstructive sleep apnea

OSA is where the airflow into the nose and mouth during sleep is limited. OSA can be caused by many things and has a huge effect on the patients ability to function during the day (Crisp & Taylor, 2009).This can bring risk to such things as driving and focusing at work. If the obesity issue is dealt with appropriately the patients with OSA will improve their quality of life.

Evidence and Findings

Weight loss improves OSA symptoms (Kant, Gupta, Natu, Chand, & Singh, 2010). Excessive adipose tissue around pharynx decreases upper airway flow and causes hyperventilation. Airways have an increased collapsibility due to the excess tissue and neck circumference plays a role in OSA (Meenakshi & Raghunath, 2012). Excessive weight around the chest decreases lung volume leading to airway collapse. Oxygen demand increases with the decrease in lungs ability.

Signs and symptoms of OSA

- Daytime sleepiness or fatigue
- Loud snoring
- Periods of apnea during sleep
- Dry mouth or sore throat upon awakening
- Headaches and restlessness
- Abrupt awakenings.

Implications

Treatment isn't always going to be suitable for patient. Continuous positive airway pressure (CPAP) is the main treatment for OSA along with other therapies such as surgery and weight loss. CPAP involves wearing a mask at night that blows air into the upper airway passage holding it open (Tintinger, Pretorius, & Labadorios, 2011).

Recommendations

Education seminars on the effects obesity has on sleep disorders to increase health professionals Knowledge. Adequate health education for patients about weight and lifestyle choices. Providing basic knowledge on posters and in brochures will benefit the public's knowledge. Allowing the respiratory nurses to educate general practices about the relationship between OSA and obesity. Correct education will not treat OSA but it is a part of a multidisciplinary approach for long lasting therapeutic success.

Ministry of Health. (2013). *New Zealand Health Survey: Annual update of key finding 2012/13*. Wellington: Ministry of Health. Briggs, G., & Reid, T. J. (2013). Medical Directors Guide on Obesity. *Journal Of Managed Care Medicine*, 164-29. Crisp, J., & Taylor, C. (2009). Potter & Perry fundamentals of nursing. (3rd ed.). Australia: Mosby Elsevier. Tintinger, G. R., Pretorius, L. L., & Labadarios, D. D. (2011). Obstructive sleep apnoea and obesity. *South African Journal Of Clinical Nutriction, 24,* 174-177. Kant, S., Gupta, H., Hatu, S. M., Chand, P., & Singh, S. (2010). Obstructive Sleep Apnea and Genes. *Sleep & Hypnosis, 12,* 23-34. Meenakshi, S., & Raghunath, N. (2012). Sleep Apnea: More thank Just a Noise. J*ournal of Orofacial Research, 2*, 76-81.

Search question - PECOT

PECOT is an acronym standing for population, exsposure or intervention, comparison, outcome and time, with this particular clinical question time is not applicable. The PECOT model is used to produce a well defined clinical question. A majority of obstructive sleep apnea patients today, have a BMI greater than 30. Using the PECOT model I have refined my topic and decided on the question, How are obstructive sleep apnea and obesity related?

PECOT Category	Information relating to question	Explanation
Population	The population of my question includes any individual with a BMI greater than 30.	Having a BMI greater than 30 is classified as obese. Obesity within today's society is increasing. Obesity can affect children, adults and older adults.
Exposure (Intervention)	Patients who have obstructive sleep apnea and have a BMI greater than 30	We will be looking for articles where they are looking at the relationship between having a BMI greater than 30 and presenting with obstructive sleep apnea.
Comparison	Patients who have obstructive sleep apnea and have a BMI less than 30	We are interested to see if patients with obstructive sleep apnea present in any way different when they are carrying extra weight.
Outcome	We want to know what effects obesity has on obstructive sleep apnea.	Since we want to know if there is a relationship between obstructive sleep apnea and obesity we also want to know if obese patients are at higher risk of getting obstructive sleep apnea.
Time	There is no time frame on this question.	

(Schneider, Whitehead, LoBiondo-Wood, & Haber, 2013). From the PECOT model I was able to come up with a more defined search question of, Is there a relationship between obstructive sleep apnea and obesity? This question will help me to research if obesity has any effect on obstructive sleep apnea and how the effects of obesity affect the disorder. I will be researching articles that focus on the clinical issue refined by the PECOT model to search the question I have asked.