Use of standardized patient interviews to assess dental student ability to screen for obstructive sleep apnea
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METHODS & RESULTS

Method
Second-year dental students (n = 110) in a required simulated patient interview were asked to screen a patient actor for obstructive sleep apnea. Certain markers for successful engagement and screening as scored by the standardized patients included:

1. Correctly identifying the patient’s major risk factors for OSA in a provided health history.
2. Inquiring about the patient’s sleeping patterns.
3. Using the StopBang and Epworth Sleepiness Scale to score the patient and determine their risk.
4. Making an appropriate referral.
5. Explaining the significance of the referral.
6. Verifying the patient’s understanding.
7. Establishing good rapport with the patient.
8. Pre and post-reflection questions captured student perceptions of the experience.

Critical Error- Part 1

Critical Error- Part 2

Results

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DISCUSSION

1. Overall, students performed well in the SPI experience, with an overall pass rate of 90%.
2. 94.5% of the simulated patients agreed they would return to their student provider in the future.
3. Students had a higher failure rate in inquiring about the patient’s sleeping patterns. 23.4 percent of students did not inquire about the patient’s sleeping patterns and 17.1 percent only partially inquired.
4. The failure rates for not using the StopBang and Epworth Sleepiness Scale and not making the appropriate referral were low (0.9%) for the entire sample.
5. The highest critical error resulted from failure to verify patient understanding. 41.4 percent of students did not verify patient understanding at all and 17.1 percent only partially verified understanding.
6. No students failed to explain their reasoning in a clear, concise, comprehensible manner.
7. Failure to provide the next step to the patient and failure to establish good rapport were only 0.9%.
8. 96.4% of students behaved in a professional manner throughout the experience.

SUMMARY

- University of Michigan second year dental students excel at patient communication. They are competent at establishing rapport, engaging in a professional manner, and communicating clearly.
- The didactic courses that preluded this SPI experience adequately prepared students to screen patients using the StopBang and Epworth Sleepiness Scale.
- Improvement could be made in preparing students to fully inquire about their patient’s sleeping patterns as part of the OSA screening process.
- We need to develop methods to verify patient understanding of OSA and the referral process.
- Because this SPI experience was conducted entirely virtually in the height of the COVID-19 pandemic, this opens up exciting possibilities in the realm of tele dentistry. In the future, tele dentistry could be used to improve access to OSA screening for dental patients.
- Considering the health concerns related to this sleep disorder, the economic impact of insomnia and daytime sleepiness, as well as the fact that the dentist is well poised to reduce symptoms and increase the quality of life among sufferers, further action should be taken to equip dental students with autonomy in OSA screening.

BACKGROUND

A public health crisis has surfaced in the form of obstructive sleep apnea. It is characterized by multiple occurrences of complete or partial upper airway obstruction during sleep (Epstein et al, 2009). OSA has a profound effect on public health—causing impaired cognition, dangerous daytime sleepiness, and an increased risk of heart disease, stroke, hypertension, obesity, diabetes, and mortality. The vast majority of OSA cases (75.4 million) are left undiagnosed and untreated. Dentists are in a unique position to screen for OSA due to increased chair time with patients compared with physicians. Simple screening methods are available to identify patients at high risk for OSA, including the Berlin Questionnaire (BQ), Epworth Sleepiness Scale (ESS), and STOP-BANG questionnaire. However, research suggests the time currently dedicated to teaching pre-doctoral students about obstructive sleep apnea is insufficient to prepare oral health providers who are prepared to screen for OSA in practice.

INTRODUCTION

A study on education in sleep disorders in US dental school programs (Simmons and Pullinger, 2011) found most of the dental education in sleep medicine was didactic (18.4%) and a 100% didactic experience was the most frequent report by 22 schools. Implementing this information into clinical practice would therefore be problematic for most students without offering additional clinical labs, workshops, and hands on experience in screening. In fact, observational and clinical experiences were reported by only 35% (13 of 37) of schools. These research findings suggest that supplemental education may be necessary to prepare pre-doctoral students to screen for OSA. The general dental graduate should demonstrate competency in conducting a routine screening for OSA in all dental patients. This includes:

1. Being able to take a screening sleep history using questions selected to screen for daytime somnolence, problem snoring, pauses in breathing during sleep, and sleep qualities.
2. Students must understand that evaluation of patients at high risk for OSA requires referral for a sleep study with sleep specialist interpretation for adequate diagnosis.

The University of Michigan School of Dentistry has long provided didactic instruction in OSA to its predoctoral students. Additional changes to the curriculum have been made in the past year to include a simulated patient interview experience for the second-year dental students in order to provide them with interpersonal engagement and hands on training in OSA screening. This study will examine results from the simulated patient experience to answer the question: Can a virtual SPI significantly prepare dental students for autonomy in screening for OSA?