

Supplementary Material S1

Questionnaire

Part 1: Demographic data

No.	Questions
1.1	Sex <input type="radio"/> Male <input type="radio"/> Female
1.2	Age (years)
1.3	What year did you receive your Doctor of Medicine degree (M.D.)? (e.g. 2530)
1.4	What is your current professional status? <input type="radio"/> Practicing specialist physician <input type="radio"/> Practicing non-specialist physician <input type="radio"/> Resident / Fellow
1.5	What is your specialty? <i>(You may select more than one answer.)</i> <input type="radio"/> General practitioner <input type="radio"/> Sleep medicine <input type="radio"/> Pediatrics <input type="radio"/> Otolaryngology <input type="radio"/> Psychiatry <input type="radio"/> Neurology <input type="radio"/> Pulmonology <input type="radio"/> Internal medicine <input type="radio"/> Family medicine <input type="radio"/> Other, please specify
1.6	Where do you work? <i>(You may select more than one answer.)</i> <input type="radio"/> Government hospital or non-profit hospital <input type="radio"/> Private hospital <input type="radio"/> Private clinic <input type="radio"/> Medical school <input type="radio"/> Other, please specify

Part 2: Education and training experiences of oral appliances for OSA treatment.

No.	Questions
2.1	Are you a trained sleep medicine specialist? <input type="radio"/> Yes <input type="radio"/> No
2.2	Did you receive any education or attend any lecture/seminar/scientific meeting regarding oral appliances and orthodontic therapy for OSA treatment during your undergraduate medical program? <input type="radio"/> Yes <input type="radio"/> No
2.3	How did you receive any education or trainings in oral appliances and orthodontic therapy for OSA treatment? <i>(You may select more than one answer.)</i> <input type="radio"/> I have not received any education or trainings in oral appliances and orthodontic therapy for OSA treatment. <input type="radio"/> Class/lecture/seminar in undergraduate medical education <input type="radio"/> Class/lecture/seminar in postgraduate medical education <input type="radio"/> Journals in medicine <input type="radio"/> Journals in dentistry <input type="radio"/> Academic conferences and meetings <input type="radio"/> Social media <input type="radio"/> Other, please specify
2.4	Are you familiar with any of the following oral appliances? <i>(You may select more than one answer.)</i> <input type="radio"/> Mandibular advancement device (MAD) <input type="radio"/> Tongue retaining device (TRD) <input type="radio"/> Rapid maxillary expansion (RME) <input type="radio"/> Orthodontic functional appliances (FA)

Part 3: Awareness and usage of various types of oral appliances for OSA treatment.

No.	Questions
3.1	<p>To the best of your knowledge, which of the following is/ are used for OSA treatment in adult patients? (You may select more than one answer.)</p> <ul style="list-style-type: none">○ Mandibular advancement device (MAD)○ Tongue-retaining device (TRD)○ Rapid maxillary expansion (RME)○ Orthodontic functional appliances (FA)○ None of these
3.2	<p>To the best of your knowledge, which of the following is/are used for OSA treatment in children? (You may select more than one answer.)</p> <ul style="list-style-type: none">○ Mandibular advancement device (MAD)○ Tongue-retaining device (TRD)○ Rapid maxillary expansion (RME)○ Orthodontic functional appliances (FA)○ None of these

Part 4: Indications and usage of oral appliances for OSA treatment.

No.	Questions
4.1	<p>In adult patients with primary snoring, oral appliance therapy can be recommended as a first-line treatment.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
4.2	<p>In adult patients with mild to moderate OSA, oral appliance therapy can be recommended as a first-line treatment.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
4.3	<p>In adult patients with severe OSA and failed CPAP therapy, oral appliance therapy can be recommended.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know

Part 5: Perceived effectiveness of oral appliances for OSA treatment.

No.	Questions
5.1	<p>In adult patients with OSA, oral appliance therapy improves the apnea hypopnea index (AHI)/respiratory disturbance index (RDI) and/or oxygen saturation.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
5.2	<p>In adult patients with OSA, oral appliance therapy is effective in improving health outcomes such as reducing blood pressure.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
5.3	<p>In adult patients with OSA, oral appliance therapy improves quality of life.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
5.4	<p>In adult patients with OSA, oral appliance therapy improves daytime sleepiness.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
5.5	<p>In adult patients with OSA, oral appliance users report better compliance and adherence compared to PAP users.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know

5.6	<p>In children with OSA, rapid maxillary expansion (RME) improves the apnea hypopnea index (AHI) and reduces OSA severity.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know
5.7	<p>In children with OSA, orthodontic functional appliances therapy improves the apnea hypopnea index (AHI) and reduces OSA severity.</p> <ul style="list-style-type: none">○ Strongly disagree○ Disagree○ Agree○ Strongly agree○ I do not know

Part 6: Referral practice of oral appliances for OSA treatment.

No.	Questions
6.1	<p>Have you ever referred any patient with OSA for oral appliances and/or orthodontic therapy?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No <p><i>(If the answer is 'Yes' please skip to question 4.3. If not, please answer next question.)</i></p>
6.2	<p>What are reasons for not referring patients with OSA for oral appliances and orthodontic therapy?</p> <p><i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> <input type="radio"/> I do not see patient with OSA. <input type="radio"/> I can treat patients with other treatment modality. <input type="radio"/> I do not know about oral appliances and orthodontic therapy. <input type="radio"/> I am not certain about the efficacy and benefits of oral appliances and orthodontic therapy. <input type="radio"/> I do not know to whom and/or where I should refer my patients. <input type="radio"/> There is no dentist that offer this type of treatment in my geographical area. <input type="radio"/> Other, please specify <p><i>(Please skip to part 5)</i></p>
6.3	<p>Do you have dentist(s) that you regularly refer patients for treatment of OSA?</p> <ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No
6.4	<p>In the past 12 months, how many times have you referred adult patients with OSA for oral appliance therapy?</p> <ul style="list-style-type: none"> <input type="radio"/> Never <input type="radio"/> Less than 5 times <input type="radio"/> 5 to 10 times <input type="radio"/> 11 to 20 times <input type="radio"/> More than 20 times
6.5	<p>In the past 12 months, how many times have you referred children with OSA for orthodontic therapy?</p> <ul style="list-style-type: none"> <input type="radio"/> Never <input type="radio"/> Less than 5 times <input type="radio"/> 5 to 10 times <input type="radio"/> 11 to 20 times <input type="radio"/> More than 20 times

Part 7: Decision making and treatment planning toward oral appliances for OSA treatment.

No.	Questions
7.1	<p>In adult patients with OSA, what treatment options do you usually recommend? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Oral appliance therapy ○ CPAP ○ Behavioral modification ○ Surgical treatment ○ Other, please specify
7.2	<p>What is/are your criteria when referring patients for oral appliance therapy? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Severity of OSA ○ Patient preference ○ CPAP intolerance ○ Underlying diseases (e.g. cardiovascular diseases, neurodegenerative disease, epilepsy, etc.) ○ Affordability ○ Insurance coverage ○ Patients have restriction to other treatment options. ○ Other, please specify
7.3	<p>Which of the following diagnosis that you consider referring adult patients with OSA for oral appliance therapy? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ I never refer adult patients with OSA for oral appliance therapy. ○ Patient is diagnosed with primary snoring. ○ Patient is diagnosed with mild OSA. ○ Patient is diagnosed with moderate OSA ○ Patient is diagnosed with severe OSA ○ Other, please specify.....
7.4	<p>Which of the following diagnosis that you consider recommending oral appliance therapy as the first-line treatment for adult patients with OSA? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ I never refer adult patients with OSA for oral appliance therapy as a first-line treatment. ○ Patient is diagnosed with primary snoring. ○ Patient is diagnosed with mild OSA. ○ Patient is diagnosed with moderate OSA. ○ Patient is diagnosed with severe OSA. ○ Other, please specify

7.5	<p>In children with mild OSA, what treatment options do you usually recommend? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Orthodontic therapy (e.g., RME, OFA, etc.) ○ Adenotonsillectomy ○ PAP therapy ○ Medications ○ Others, please specify
7.6	<p>In children with moderate to severe OSA, what treatment options do you usually recommend? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Orthodontic therapy (e.g., RME, OFA, etc.) ○ Adenotonsillectomy ○ PAP therapy ○ Medications ○ Others, please specify
7.7	<p>What is/are the information about oral appliance therapy that you usually explain to your patients before making a referral to a dentist? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Cost ○ Insurance coverage ○ Time needed for the treatment ○ Treatment mechanism ○ Types of appliances ○ Efficacy/effectiveness ○ Advantages ○ Disadvantages ○ Complications ○ Others, please specify
7.8	<p>In your opinion, who is involved in multidisciplinary team to manage patients with OSA? <i>(You may select more than one answer.)</i></p> <ul style="list-style-type: none"> ○ Sleep medicine specialist ○ Cardiologists ○ Neurologist ○ Pulmonologist ○ Otolaryngologist ○ Endocrinologist ○ Bariatric surgeon ○ Pediatrician ○ Dental sleep medicine specialist ○ Orthodontist ○ Maxillofacial surgeon ○ Dentist ○ Others, please specify

Part 8: Perceived importance of oral appliances and orthodontic therapy as an option for OSA treatment.

No.	Questions
8.1	<div>Do you think that physicians should be educated in oral appliances and orthodontic therapy for OSA treatment? And why? (Please provide reason(s) for your answer.)</div> <div><div></div><div></div><div></div><div></div></div>