



## Letters to the Editor

## Sleep education in Italy

To the editor,

We appreciate the study by Mindell et al. [1], which highlights a very limited coverage of sleep in medical school education in 12 different countries. We recently performed a similar survey in Italy, asking members of the Italian Association of Sleep Medicine how sleep medicine was taught in their Universities.

We collected information from 21 of the 39 Italian universities (54%). Sleep and sleep disorders were taught in 19 of them (90%), but in medical school a mean of only 2.5 h was dedicated to sleep and its diseases throughout more than 1400 h of lessons along the six years of medical education in Italy. As far as concerns other courses of the Faculty of Medicine, 1.8 h in the nurse school and 23.17 h in the school for neurophysiology technicians were spent in this activity. Sleep was mostly taught during the courses of Neurology (18 universities), Pneumology (three universities), Dentistry (two universities), and other medical specialties in single cases. In 13 universities sleep teaching was organized as an optional didactic activity.

We are aware of the limitations of our survey, mainly biased by selection of the sample, but we can still propose some considerations. The situation in Italy seems quite similar to other Western countries, in which few hours are dedicated to sleep medicine [1,2]. Considering the high and growing incidence of sleep disorders in the general population, mainly OSAS and insomnia, and the role that general practitioners may play in the diagnosis and follow up of these diseases [3], this neglect can compromise appropriate clinical management. A short integrated course followed by an optional practical training in a sleep centre during medical school has been suggested as a solution for this problem [4], but only a few universities in Italy have arranged an activity of this sort. Although there were no questions about barriers to sleep education, even in Italy insufficient time and lack of qualified staff represent topical limitations [1].

To overcome these problems and ensure continuous professional education after the medical degree, National Sleep Societies are expected to play a major role in the educational field. In this regard, the Italian Association of Sleep Medicine organizes an annual residential teaching course necessary for becoming an expert in sleep medicine and collaborates with general practitioners to develop guidelines and consensus reports [5].

## Conflict of interest

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: [doi:10.1016/j.sleep.2011.12.002](https://doi.org/10.1016/j.sleep.2011.12.002).

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**The STOP-BANG questionnaire was a useful tool to identify OSA during epidemiological study in São Paulo (Brazil)\***

The STOP-BANG (snoring, daytime tiredness, observed apnea, high blood pressure, body mass index, age, neck circumference,

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and gender) questionnaire has been used to identify obstructive sleep apnea patients (OSA) in a preoperative evaluation for bariatric surgery [1]. However, we fail to note any description of the use of the STOP-BANG questionnaire in a general population. In a study in the city of São Paulo (Brazil), 32.9% of the participants had OSA [2]. The diagnosis of OSA is not easy [3]. Therefore, simple tools to identify candidates who will require a sleep study are welcome [4,5]. Eight questions of the STOP-BANG questionnaire completed by 743 (71.30%) subjects studied in a population-based survey of a representative population in São Paulo were useful for identifying OSA patients. Direct interviews and overnight sleep studies using nasal pressure cannula were performed on all subjects. The prevalence of OSA was determined according to the criteria of the most recent version of the International Classification of Sleep Disorders (ICDS-2) from the American Academy of Sleep Medicine (2005), which was published by Tufik et al. [2]. According to the STOP-BANG questionnaire, 345 (46.43%) volunteers were classified as being at low risk for OSA and 398 (53.57%) volunteers were classified as being at high risk. The sensitivities of the STOP-BANG screening tool for the first analysis (AHI >5 plus daytime sleepiness or AHI >15) and the second analysis (AHI >30) were 83.77% and 89.83%, respectively, with negative predictive values of 87.50% and 98.26%. The area under the ROC curve was 0.891 (0.783–0.931) during the first analysis and 0.830 (0.746–0.929) during the second analysis. This study suggests the usefulness of the STOP-BANG questionnaire in identifying OSA in the general population. We suggest that other studies must be done to test the effectiveness of the STOP-BANG questionnaire in specific populations that have variations of OSA symptoms.

#### Conflict of interest

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: doi:10.1016/j.sleep.2012.01.008.

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