Reviewer's report

Title: Translation and validation of Berlin Questionnaire in primary health care in Greece.

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Reviewer: Adriana Salvaggio

Reviewer's report:

The need to develop expeditious and cost-effective tools to screen Obstructive Sleep Apnea Syndrome (OSAS) remains a challenge and an issue worthy of on-going investigation. In this study the authors want to validate a Greek translation of the Berlin Questionnaire (BQ) for OSAS and to explore whether this screening questionnaire could be used to help identify primary care patients at greater risk of having OSAS. The study was performed on 189 OSA patients.

The authors conclude that based on their data, collected on mostly obese subjects, is a valid and reliable instrument for identifying patients at risk for OSAS in primary health care in Greece.

The findings confirm that such screening tools should be used by primary care clinicians for OSAS prediction.

The title of the manuscript was clear in regards to the intent of the study and the question well defined. The abstract has a clear background and conclusion.

There are some concerns.

Major Compulsory Revisions

1. The methods are mostly appropriate, however, it must be better clarified which subjects underwent nocturnal polysomnography. It is not quite so simple for the community clinician to reproduce not well defined rules with particular characteristics of population. The population analyzed by Netzer et al. had a BMI <30 kg/m2 in 370 (49.7) and ##30 kg/m2 in 276 (37.1) subjects. Your 189 subjects had a BMI of 35.0 ± 25.1 kg/m2 (103 were obese). It is relevant to better report in Table 1 characteristics of the population studied (normal, overweight, obese, …). A wide range of BMI is what we expect in a primary care population, and is relevant for the influence of different pathophysiological mechanism of upper airway obstruction during sleep. The reasons for excluding some participants from the sleep study are unclear. For example, why were non-obese so few in the study? PSG study was performed in 129 out of 189 patients (68.3%) and the diagnosis of OSAS was confirmed in 91.5% of these (n = 118).

2. Only high risk subjects at the questionnaire underwent nocturnal PSG? What about low risk subjects? This part of the methods is a major limitation and must be reported in the Results and discussed in the Discussion.

3. Predictive results are referred only to subjects with specific questionnaire results. Please clarify what happened to the remaining 71 subjects. The 118
included all 103 obese subjects? This must be clearly stated through the paper. Respiratory disturbances during sleep was offered to both high-risk and lower-risk patients in the paper by Netzer et al.

Minor Essential Revisions

1. The 2nd paragraph needs to be more focused on the main topic of the paper. The topic is a screening and not a diagnostic tool. As the authors well know, there have been a multitude of techniques purposed to be "screening" tools for OSAS. However, overnight study is still necessary to diagnose sleep apnea.

2. Please use Berlin questionnaire (BQ) just the first time and than BQ is enough.

3. Page 6: “diurnal somnolence …… (ESS)”. Was this and high blood pressure measured used to evaluate patients risk or just to characterize the population? The BQ addresses items for the presence and frequency of snoring behaviour, wake time sleepiness or fatigue, and history of obesity and hypertension. How ESS is reported in the text is confounding. It must be better distinguished between values that characterize the population studied from the use of BQ.

Discretionary Revisions

Tables need to be improved. Table 2: Is not clear. It must report the findings on the 129 patients.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

'I declare that I have no competing interests'