

1. **Clarity and Relevance**
  - The research question is well defined, clinically meaningful, and directly relevant to an unmet need in OSA screening.
  - The rationale for focusing on  $BMI < 35 \text{ kg/m}^2$  populations is clear and justified by prior literature indicating poorer performance of STOP-Bang in non-obese patients.
2. **Methodological Rigor**
  - Use of polysomnography as the gold standard diagnostic tool strengthens the validity of the findings.
  - Statistical methods (logistic regression, ROC curves, sensitivity/specificity analysis) are appropriate and clearly reported.
  - Ethical approval and informed consent are mentioned, demonstrating adherence to appropriate standards.
3. **Transparency**
  - Raw data are provided, in line with PeerJ's data sharing policy. This allows readers to evaluate and potentially replicate the findings.
4. **Presentation**
  - Figures and tables are clearly labeled, relevant, and effectively support the text.
  - The manuscript follows a standard scientific structure and is coherent throughout.

## 1. Language and Readability

While the manuscript is understandable, the flow would benefit from careful editing. Many sentences are long or awkwardly phrased, which may make the article harder to follow for an international audience.

- Example: *“Due to high prevalence of OSA, a waiting list for polysomnography is long”* → *“Because of the high prevalence of OSA, waiting times for polysomnography are often prolonged.”*
- Example: *“Patients were asked to fill in STOP-Bang questionnaire”* → *“Patients were asked to complete the STOP-Bang questionnaire.”*

Recommendation: A professional language edit to shorten sentences, clarify phrasing, and maintain consistent tense would make the manuscript more polished.

## 2. Methods and Study Design

- **Cutoff Justification:**  
The selection of modified thresholds (age 40, BMI 23, neck circumference 35 cm) is central to the paper, but the rationale for these specific values needs stronger explanation. Were these cutoffs chosen based on ROC optimization from this dataset, prior Asian studies, or both? Please expand and cite relevant work.
- **Neck Circumference:**  
Clarify whether sex-specific thresholds were considered. Neck circumference differs significantly between men and women, and a uniform cutoff may reduce accuracy.
- **Sample Characteristics:**  
Provide more detail on the study cohort (e.g., comorbidities, referral source). Were

patients with COPD, neuromuscular disease, or other sleep-related conditions excluded? If so, state explicitly. If not, discuss how this might affect generalizability.

- **Representativeness:**

Since the study population is from a single center with high OSA prevalence (84%), please discuss whether results are generalizable to community-based populations or primary care.

- **Data Handling:**

Clarify whether any patients were excluded due to incomplete questionnaires, missing data, or failed polysomnography. State the number of excluded cases, if any.

### 3. Results and Figures

- **Abstract:**

The abstract could more directly highlight the improvement of the modified STOP-Bang compared with the original, with absolute sensitivity/specificity values clearly presented.

- **Tables:**

Consider adding a summary table directly comparing diagnostic performance (AUC, sensitivity, specificity, PPV, NPV) of the original vs. modified STOP-Bang across mild, moderate, and severe OSA categories. This would make the key findings more accessible.

- **Figures:**

The ROC curve figures are clear, but the legends should emphasize the comparative advantage of the modified model. For example, state explicitly: *“The modified STOP-Bang achieved AUC of X vs. Y for the original version.”*

### 4. Discussion

- **Contextualization:**

The discussion could be expanded to better situate the findings within existing literature. How do your results compare with previous attempts to adapt STOP-Bang for Asian or non-obese cohorts? For instance, some studies have tested different BMI thresholds or added waist circumference—how does your approach differ and why is it superior?

- **Clinical Implications:**

Expand on how this modified tool could be implemented in practice. Would it be suitable for use in general clinics, by primary care physicians, or in resource-limited settings where polysomnography is not readily available?

- **Steroid Dose Equivalent:** (Not relevant here, sorry, mis-copy from earlier case review! Let's ignore that.)

- **Limitations:**

Please strengthen the limitations section:

- Single-center design.
- Retrospective analysis.
- High OSA prevalence may inflate sensitivity and affect generalizability.
- Lack of validation in an independent cohort.

Acknowledging these limitations will make the conclusions more balanced.

- **Future Directions:**

Suggest replication in multi-center or community-based populations to confirm applicability. You may also discuss whether your modified STOP-Bang could be tested prospectively against outcomes like treatment adherence or long-term clinical endpoints.

## 5. Conclusions

The conclusions are clear and appropriately limited to the results. However, they could be strengthened by restating the **practical takeaway**: that in patients with  $\text{BMI} < 35 \text{ kg/m}^2$ , the modified STOP-Bang substantially improves sensitivity and therefore may be a more reliable screening tool in this subgroup.

### General Recommendation

This manuscript is **methodologically sound and clinically relevant**. It contributes valuable evidence toward improving OSA screening in non-obese populations. With revisions to:

- polish the language,
- strengthen explanation of cutoff choices,
- expand the discussion and limitations,
- and refine figures/tables,

the paper would be significantly improved and ready for publication.