

## Peer Review File

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### Reviewer A

The study is interesting since there are very few data on CPAP in elderly subjects and the issue is debated. I have some concerns since the data should have been analyzed for different decades instead than all together. In addition, the statistical analysis on personal reasons non to use CPAP is lacking.

In this study, the authors analyzed retrospectively the acceptance and adherence to CPAP in OSA patients older than 60 years. They found that about a third of the sample did not accept treatment, and among those who accepted it about 25% were lost at follow-up at 1 year, and 16% were non-adherent. Overall, 41% of the original sample (139/336) were adherent at one year. The authors provide a qualitative analysis of the reasons for lack of acceptance or adherence.

**Comment 1:** The paper would be more interesting if patients were stratified according to increasing decades of age. Is a patient aged 60 similar or different from a patient who is 80 years old? This information could be easily provided and the data would be very interesting.

**Reply:** We re-analyzed per your suggestion. Revised manuscript in Table 3 and Table 4, page no. 24-25.

**Comment 2:** Another interesting result that could be derived is the pattern of CPAP use over one year at different time points. It is known that there are different trajectories of CPAP use, and these may identify subgroups.

**Reply:** Thank you for your thoughtful comment. That would be a kindly suggestion for our future research. We have added this interesting comment to our conclusion. Revised manuscript in the conclusion section, page no.14, line 327-330, highlighted.

**Comment 3:** Finally, were the data on different factors associated with lack of acceptance or poor adherence at one year analyzed statistically? I did not find mention in the methods.

**Reply:** The factors associated with lack of acceptance were added per your suggestion. Revised manuscript in the method section, page no. 10 line 234-237, highlighted and in Table 3, page no. 24.

**Comment 4:** Minor comments: what was the adherence of middle-aged patients? This would give the possibility to compare whether elderly were similar to adults or their compliance was higher or lower.

**Reply:** Thank you for your comment. There are studies compare the CPAP adherence of young and elderly patients available already but our study aim to find the factors that influence CPAP adherence in specific population; the elderly. Health-related problems and attitude issues of the elderly are different from other population group and these can impact on their CPAP adherence.

#### **Reviewer B**

The authors have performed a study aimed to explore factors associated to the adherence of CPAP in elderly OSA patients. This is an observational retrospective study. Patient's data were obtained from computerized medical reports. Finally 221 patients were included, 55 were lost to follow-up and 27 had non-adherence.

The study has important methodological limitations in my opinion.

**Comment 1:** The group of non-adherent is very limited (n=27).

**Reply:** This issue was added in the limitation of this study. Revised manuscript in the discussion section, page no.13, line 312-314, highlighted.

**Comment 2:** The authors considered elderly those patients with at least 60 years. I think this is not a true elderly sample. Randomized clinical trials on their effect of CPAP in elderly included patients with at least 65-70 years. People with 60-65 years is too young to be considered as elderly.

**Reply:** We agree and feel that people with 60-65 years today is look younger compares to the past. However, our research was granted by the Center of Medical Excellence, Faculty of Medicine, Chiang Mai University which had focus on the elderly health and used the reference from official statistic registration system of Thailand that age 60 years old and more are considered as elderly.

**Comment 3:** From those patients with more than 60 years old, 115 did not accept CPAP. What were the reasons?

**Reply:** This is the great comment and question, we still have no precise answer or reason, most of the time were subjective opinion and would be our next future study. Furthermore, according to a retrospective cohort study, we did not collect qualitative or survey data which would have additionally allowed us to assess the reasons for patients who did not accept CPAP. We have added this sentence in the limitation. Revised manuscript in the discussion section, page no.13-14, line 318-320, highlighted. We have tried to use the objective measurement (table1) and discovered no significant factors correlated with CPAP acceptance in our patients except the marginal difference in baseline AHI between CPAP acceptance and non-acceptance. External factors such as healthcare coverage and the expense of CPAP equipment may contribute to CPAP acceptance rates as well. This small difference might not be enough to make a strong conclusion.

**Comment 4:** Not the number but the types of comorbidities are very important. For example it is not the same a neurocognitive disorder, a cerebrovascular disease, a respiratory disease or diabetes. The impact of the different comorbidities on CPAP adherence could be very different.

**Reply:** The co-morbidities were categorized in to diabetes mellitus, neurological disorders, cardiovascular diseases, and respiratory diseases and the impact of comorbidities on CPAP adherence were analyzed. Revised manuscript in the Table 3 and Table 4, page no. 24-25.

**Comment 5:** The authors did not use validate questionnaires to analyze the outcomes.

**Reply:** We use electronic recording data from CPAP devices to reflect the CPAP adherence rather than the validate questionnaires because of the need for the objectively assessment.

**Comment 6:** Maybe it would be useful to determine which variables were associated with the initial acceptance or not of CPAP.

**Reply:** The factors associated with lack of acceptance were added per your suggestion. Revised manuscript in the Table 3, page no. 24.

**Comment 7:** In sum, I sincerely think that the limitations of the study could affect the conclusions.

**Reply:** The conclusion was changed according to new results. Revised manuscript in the conclusion section page no.14, line 322-330, highlighted.

### **Reviewer C**

The authors, in their work, investigated possible factors influencing adherence to CPAP treatment in a cohort of elderly people. In this work, they show that elderly OSA patients treated with CPAP with long-term follow-up adherence rates were associated with personal life problems and adverse attitudes toward treatment, as well as health problems.

The paper is interesting and well-designed; however, I just have a few points to clarify:

**Comment:** Page 9 line 216 says that comorbidities do not influence treatment adherence; however, some comorbidities do influence treatment adherence, such as cognitive decline and cardiovascular comorbidities. These papers might be useful (doi: 10.1007/s11739-023-03220-z.; doi: 10.3389/fmed.2021.667522). Please develop these topics in the discussion.

**Reply:** The co-morbidities were categorized into diabetes mellitus, neurological disorders, cardiovascular diseases, and respiratory diseases and the impact of comorbidities on CPAP adherence were analyzed. Revised manuscript in Table 3 and Table 4, page no. 24-25. The discussion section was added according to new results. Revised manuscript in the discussion section page no.12-13 line 292-298, highlighted.