Dear Mr Ma,

We would like to thank you and the reviewers for your comments on our work. We are delighted with and appreciative of the opportunity to revise the manuscript to address the issues raised. Below are our responses to the comments.

Reviewer #1:

1. It would be helpful to mention in the introduction that the issue of sleep quality had been investigated in patients after cardiac surgery, and to mention the reason here is that sleep quality in patients undergoing cardiac surgery for IE had not been investigated before, hence this study. (In other words, they need to put this study in context).

We agree with the reviewer that we should better summarise our logic for conducting the current study. We have revised the introduction accordingly.

Lines 110-112: The issue of sleep quality has been investigated in patients after cardiac surgery; however, the sleep quality in patients undergoing cardiac surgery for IE has never been investigated. Therefore, we designed this study to…

2. It is not clear if the consent was waived for the study as the study was retrospective, how could the patient have volunteered for the study if it was retrospective?

We apologize for the unclear presentation. This study was a prospective study and we obtained written informed consent. The related information has been revised.

3. I have however one major criticism of the analysis which is the definition of significance of difference at p<0.10 twice: a. In page 10-11: (Univariate analysis was performed to identify the risk factors for disturbed sleep quality at 6 months after surgery (p<0.10) in the entire study cohort as well as in Group 2). b. In page 12 final paragraph and in page 13 first paragraph along with tables 4,5,6, and 7. All these need correcting, as I believe the traditional p value for assessing significance is p<0.05. I would strongly advise the authors to alter this and re-assess the data and the results accordingly.

We apologize for the misleading description. On univariate analysis, an association between a factor and disease may be masked due to confounding factors; that is, there may actually be an association between a factor and disease even though the *P* value is >0.05 due to one or more confounding factors. It is generally accepted that factors with a *P* value of 0.05–0.25 on univariate analysis can be included in the multivariate analysis to avoid missing possible factors that are actually associated with the disease. Here, 0.10 was selected as the "cut-off" *P* value. Therefore, the description should be "Univariate analysis was performed to identify the risk factors for disturbed sleep quality at 6 months after surgery and factors with $p<0.10$ were then included in the multivariate analysis for further determination of the independent risk factors" in the Methods section. In addition, we have revised the table caption to indicate that factors with $p<0.10$ were included in the multivariate analysis.

4. In addition, the linguistic minor errors that need correction are as follows: Page 5 of the manuscript, pre-final line, states: PSQI assessed during hospitalisation may be risked factors for disturbed sleep at 6. It should have been: PSQI assessed during hospitalisation may be risk factors for disturbed sleep at 6.

This grammatical mistake has been amended as requested.

5. Page 7 of the manuscript, under study population, line 6 states: surgeons, the patients were then transmitted to our ward for further supporting. It should have stated: surgeons, the patients were then transferred to our ward for further supporting

This grammatical mistake has been corrected.

Reviewer 2

1. Author did not mention in the manuscript how to deal with another comorbidities in cardiovascular that could influence the sleep disorder or maybe author could add the PSQI or ESS so reader could understand the item in the score.

Unfortunately, due to the scale of the current study, the sample size did not allow us to further analyse how each cardiovascular comorbidity could influence sleep quality. This, however, will be a good research question for future studies.

The PSQI and ESS were designed according to the following references, and we have cited them in the revised manuscript.

1. Chinese Medical Association, Chinese Medical Journals Publishing House, Chinese Society of General Practice, Sleep Related Breathing Disorders Group of Chinese Thoracic Society, Editorial Board of Chinese Journal of General Practitioners of Chinese Medical Association, Expert Group of Primary Guidelines for Primary Care of Respiratory System Disease. Guidelines for primary care of adults with obstructive sleep apnea (2018). Chinese Journal of General Practice, 2019, 18(1):21-29 (In Chinese)

2. Liu X, Tang M, Hu L. Reliability and validity of the Pittsburgh sleep quality index. Chinese J Psychiatr 1996; 29:103-107.

3. Buysse DJ, Hall ML, Strollo PJ, et al. Relationships between the Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), and clinical/polysomnographic measures in a community sample. J Clin Sleep Med. 2008; 4:563-571

Science editor

1. The STROBE Statement needs to add the page number.

The STROBE Statement has been completed as requested and attached.

2. Please add the "Article Highlights" section at the end of the main text.

Article Highlights has been added to the end of the main text.

We hope that we have answered the reviewers' questions adequately and that the revisions have strengthened our manuscript to become acceptable for publication. We thank you once again for providing us with this chance, and we look forward to hearing from you at your earliest convenience.

Kind regards,

Xiang-Ming Hu