Response to Reviewers

Dear Editor-in-Chief and Reviewers,

Thank you very much for the careful evaluation of our manuscript entitled **"Effects of Lullaby Exposure on Pain and Physiological Outcomes in Preterm Infants in Neonatal Intensive Care Units: A Systematic Review and Meta-Analysis"** (Submission ID: 31044).

We sincerely appreciate the reviewers' positive assessment and constructive comments. We have carefully reviewed the manuscript and revised the text to improve clarity and to ensure that the interpretation of the findings remains appropriately cautious, particularly regarding the non-significant pooled effect and the heterogeneity of the available evidence.

All revisions have been incorporated into the revised manuscript.

Reviewer A

Comment:

The reviewer noted that the study addresses an important aspect of neonatal care and highlighted the clear focus on lullaby-based auditory interventions. The reviewer also considered the objective clear, the methodology appropriate, and the combination of meta-analysis and narrative synthesis suitable. The reviewer further noted the meaningful findings regarding maternal voice lullabies and physiological stability, and considered the conclusion appropriate and practical.

Response:

We sincerely thank the reviewer for the positive and encouraging assessment of our manuscript. We appreciate the recognition of the focused scope of the review, particularly its emphasis on lullaby-based auditory interventions rather than broadly defined music therapy.

In response to the reviewer's overall assessment, we carefully reviewed the manuscript to ensure consistency between the quantitative findings and their interpretation. We also refined the conclusion to emphasize the potential adjunctive role of lullaby interventions while avoiding overly strong clinical claims, given the non-significant pooled effect and methodological heterogeneity across the included studies.

Reviewer B

Comment:

The reviewer noted that the pooled effect sizes were modest and trending toward benefit, but emphasized that the evidence base remains insufficient to support strong practice guidelines. The reviewer also recommended that readers interpret the magnitude of benefit conservatively.

Response:

We thank the reviewer for this important observation. We agree that the magnitude of the pooled effect should be interpreted conservatively, particularly because the pooled analysis did not reach statistical significance and the included studies differed in intervention modality, timing and duration of exposure, comparator conditions, and clinical context. Accordingly, we revised the manuscript to strengthen the cautious interpretation of the quantitative findings. Specifically, we clarified that the observed reduction in NIPS scores represents a potential benefit rather than definitive evidence of efficacy. We also revised the discussion to emphasize that between-study heterogeneity and methodological limitations may have contributed to variation in the observed effect estimates.

In addition, we revised the conclusion to avoid implying that the current evidence is sufficient to establish strong clinical recommendations. The revised conclusion now emphasizes the potential adjunctive role of lullaby exposure while explicitly acknowledging the non-significant pooled effect, heterogeneity, and methodological limitations of the available evidence. We believe these revisions provide a more balanced interpretation of the findings and are consistent with the reviewer's recommendation for conservative interpretation.