Peer-Review
Lee, Eric. 2025. "The Impact of Live versus Recorded Classical Music on Friends and Family of Patients in an Ambulatory Surgical Waiting Room: A Randomized Trial." *Journal of High School Science* 9 (4): 311–21. https://doi.org/10.64336/001c.153899

This is a very well designed and executed study. Congratulations. I do have a few comments.
1.Is the author a high school student? Please provide high school name and address.
2.Put these three points down in limitations. (1) No control (no-music) group: limits interpretation — Regression to the mean or natural decrease in anxiety over time cannot be ruled out. (2) Attrition is relatively high and could introduce bias if dropout is related to anxiety level (which is plausible). Impact: Statistical tests assume that the analyzed sample is representative of the randomized groups. Here, there may be attrition bias, particularly if highly anxious participants left early. (3) "A potential limitation of this study is the use of a parallel-group rather than a crossover design. In crossover studies, each participant serves as their own control, which can reduce inter-individual variability and increase sensitivity to detect small differences between interventions. However, in our ambulatory surgical setting, participants were only present for a single surgical event, making it impractical to expose the same individual to both live and recorded music. As a result, the study relied on randomization to balance baseline anxiety levels between groups. While this design is appropriate for the clinical context, it may reduce sensitivity to detect subtle differences between interventions, and the null finding of no significant difference between live and recorded music should be interpreted cautiously."
3.An ANCOVA adjusting for baseline differences, or subgroup analyses, could be performed to strengthen validity.

Response to Reviewer Comments
Manuscript title: *The Impact of Live versus Recorded Classical Music on Friends and Family of Patients in an Ambulatory Surgical Waiting Room: A Randomized Trial*
Author: Eric Lee

Reviewer Comment 1:
Is the author a high school student? Please provide high school name and address.
Response:
I have provided my status as a high school student, my high school name, and my high school address on the title page.
Change made:
The author line now reads:

Eric Lee
Class of 2026, Christian Brothers Academy, 6245 Randall Road, Syracuse, NY, USA (Independent Researcher)

Location in revised manuscript:
Page 1, Title page, immediately below the article title.

Reviewer Comment 2:
Put these three points down in limitations. (1) No control (no-music) group: limits interpretation — Regression to the mean or natural decrease in anxiety over time cannot be ruled out. (2) Attrition is relatively high and could introduce bias if dropout is related to anxiety level (which is plausible). Impact: Statistical tests assume that the analyzed sample is representative of the randomized groups. Here, there may be attrition bias, particularly if highly anxious participants left early. (3) "A potential limitation of this study is the use of a parallel-group rather than a crossover design. In crossover studies, each participant serves as their own control, which can reduce inter-individual variability and increase sensitivity to detect small differences between

interventions. However, in our ambulatory surgical setting, participants were only present for a single surgical event, making it impractical to expose the same individual to both live and recorded music. As a result, the study relied on randomization to balance baseline anxiety levels between groups. While this design is appropriate for the clinical context, it may reduce sensitivity to detect subtle differences between interventions, and the null finding of no significant difference between live and recorded music should be interpreted cautiously."

2a. High attrition and possible attrition bias
Response:
I expanded the limitations section to explain how attrition may have introduced bias, specifically if more anxious participants were more likely to leave early, and to make explicit that this challenges the assumption that the analyzed sample fully represents the randomized groups.
Key added text (paraphrased):
The revised Discussion now notes that individuals who left early or did not complete the surveys may have done so because of elevated anxiety, creating the possibility of attrition bias.
It explicitly states that statistical tests assume the analyzed sample represents the randomized groups, and that if caregivers with higher anxiety were more likely to leave, the observed changes in anxiety may not fully reflect the true effects of the interventions.

Location in revised manuscript:
Page 6, Discussion, limitations section (paragraph beginning "A key limitation of this study was participant attrition…").

2b. No control (no music) group, regression to the mean, and natural decrease over time
Response:
I added a specific limitation describing the absence of a no music control group and its implications for interpretation, including the possibility of regression to the mean and natural anxiety decline over time.
Key added text (paraphrased):
The revised Discussion states that the absence of a no music control group makes it impossible to determine whether the modest reductions in anxiety were caused by the music, regression to the mean, or a natural decline in anxiety as caregivers adjusted to the waiting-room environment.
It further notes that this limitation affects how confidently the within-group changes in STAI-S scores can be interpreted and recommends including a no music control condition and measuring acoustic parameters in future studies.

Location in revised manuscript:
Page 6, Discussion, limitations section (continuation of the same paragraph as above, beginning "Another limitation is the absence of a no music control group…").

2c. Parallel-group versus crossover design and cautious interpretation of the null result
Response:
I added a separate paragraph explaining the choice of a parallel-group design rather than a crossover design, why a crossover design would be more statistically sensitive in principle, and why it was not feasible in this clinical context. I also clarified that the null finding should be interpreted with caution.
Key added text (paraphrased):
The revised Discussion explains that a crossover design, where each participant serves as his or her own control, can reduce inter-individual variability and increase the ability to detect small differences between interventions.

It notes that in this ambulatory surgical setting, friends and family were present for only a single surgical event, making it impractical to expose the same individual to both live and recorded music; thus, a parallel-group randomized design was used instead.
The paragraph explicitly states that although this design was appropriate for the clinical setting, it may have reduced sensitivity to detect subtle differences between live and recorded music, and therefore, the null finding of no significant difference between interventions should be interpreted with caution.

Location in revised manuscript:
Page 6, Discussion, limitations section (paragraph beginning "The study also used a parallel group design rather than a crossover design.").

Reviewer Comment 3:
An ANCOVA adjusting for baseline differences, or subgroup analyses, could be performed to strengthen validity.

Response:
I acknowledge in the revised Discussion that ANCOVA and subgroup analyses were not performed in the present study and identify this as a limitation. I also specify how future work could use these methods to strengthen validity.
Key added text (paraphrased):
The revised Discussion notes that subgroup analyses examining whether education level moderated responses to live versus recorded music were not conducted, and that the imbalance in education between groups may have influenced the findings.
It further states that the analyses did not use analysis of covariance (ANCOVA) to adjust for baseline STAI-S scores or education level, so residual confounding by these factors cannot be ruled out.
The text recommends that future studies apply ANCOVA and prespecified subgroup analyses to provide more precise estimates of any differences between live and recorded music across subgroups of friends and family members.

Location in revised manuscript:
Page 6, Discussion, limitations section (paragraph beginning "In addition, subgroup analyses examining whether education level…").

All reviewer comments have been carefully addressed, and all requested changes have been incorporated into the revised manuscript. Thank you for your thoughtful feedback and for the opportunity to strengthen this study.

Eric Lee

Thank you for addressing my comments. Accepted. Please PROVIDE THE CLASSICAL MUSIC COMPOSITION NAME/ID THAT WAS PLAYED.
Please review the attached galley proof for errors and revert to us in 48 hours to ensure a timely publication.