

Peer Review

Review of: "Evaluation of Musical Conductors' Exposure to Noise"

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Dear Chief-Editor

I have carefully reviewed the manuscript titled **"Evaluation of Musical Conductors' Exposure to Noise"**. The study presents a case evaluation of noise exposure among musical conductors and compares the findings with established occupational limits. While the research is relevant and addresses an underexplored topic, certain methodological and structural improvements could enhance the manuscript's clarity and scientific rigor. Below, I have provided detailed comments and suggestions regarding the study's strengths, limitations, and areas for improvement. I hope these insights contribute to refining the manuscript for publication.

General Comments:

- **Relevance:** The topic of occupational noise exposure among musical conductors is highly relevant, and the study provides valuable insights into the potential risks faced by individuals in this profession. However, the findings are based on a single subject, which significantly limits the ability to generalize the results. A larger sample size is essential to draw more robust conclusions.
- **Structure:** The article is well-structured and flows logically from introduction to conclusion. The methods, results, and discussion sections are clearly defined, making it easy to follow the progression of the study.
- **Clarity and Writing Style:** The writing is generally clear, though some sections could benefit from more concise language. There are instances where repetitive phrasing occurs, which could be streamlined to improve readability.

Specific Comments:

1. Introduction:

- The introduction does a good job of providing context for the study. However, there could be more emphasis on why this particular case study is unique or important compared to existing studies.
- It would be helpful to include a brief overview of the noise exposure levels reported in previous studies to show a direct comparison.

2. Methodology:

- **Ethics:** The mention that formal ethics approval was not deemed necessary is fine for non-invasive studies, but it would be helpful to clarify whether the study followed institutional review board (IRB) guidelines or similar ethical standards. This would enhance transparency.
- **Sample Size:** As noted in the limitations section, the study only evaluates one conductor, which severely limits the generalizability of the findings. Future studies should aim for a larger sample size to validate the results.
- **Noise Measurement:** The use of a calibrated dosimeter (CEL-350 dBadge) is appropriate, but the article could explain the exact calibration standards and verification of the device's accuracy. This would strengthen the reliability of the data.

3. Results:

- The results section could benefit from additional statistical analysis. Descriptive statistics such as standard deviation or confidence intervals would help provide a clearer understanding of the noise exposure variations between days and between different activities.
- The comparison between the first and second day measurements is useful, but a more detailed explanation of why noise levels differed on the two days (in terms of activities, room configuration, and instrument types) could be more informative.

4. Discussion:

- The discussion highlights key factors contributing to the variation in noise levels (e.g., number of players, room acoustics). However, it would be beneficial to expand on how these factors specifically affect the conductor's exposure and the potential health impacts.

- The article mentions tinnitus, hearing loss, and other auditory issues but could go further in discussing the specific mechanisms by which chronic noise exposure causes these health problems, possibly drawing on more specific studies or biological evidence.
- The conclusion appropriately emphasizes the risks of noise exposure and suggests potential solutions like noise absorption materials and hearing protection. This is valuable advice, but the conclusion could be strengthened by highlighting the need for more comprehensive studies to confirm these findings in a larger population of conductors and music teachers.
- The mention of reverberation in the hall as a contributing factor to noise exposure is a relevant point. Further exploration of how acoustics affect exposure levels in different types of rehearsal spaces could be an interesting direction for future research.

5. Conclusion:

Recommendations for Improvement:

1. **Expand the Literature Review:** Include more studies to strengthen the argument for why this particular case study is significant. Comparing noise exposure levels across different types of musical environments (e.g., orchestras, solo performances) could also add depth.
2. **Provide Statistical Analysis:** Given the nature of the study, some statistical analysis should be included to support the observations and conclusions. Even with a single subject, some basic statistics (like standard deviation) could help clarify the results.
3. **Clarify Limitations:** The limitations section could be more detailed. In addition to the small sample size, mention the lack of long-term follow-up with the subject and the inability to control for all environmental variables (e.g., room acoustics, ambient noise sources).
4. **Address Potential Confounding Factors:** The study could elaborate on potential confounding factors that may affect noise exposure levels, such as the type of instruments used, the specific conductor's positioning within the rehearsal space, and the duration of different activities during the rehearsal.
5. **Visual Aids:** Include more detailed figures or charts to visually represent the noise exposure levels, particularly variations over time during the two days of measurement. This would make the data more accessible to readers.

Best regards,

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Declarations

Potential competing interests: No potential competing interests to declare.