

Peer Review

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

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1. The topic underscores the critical importance of stage acoustics in ensemble performance. This investigation was limited to the personal sound exposure assessment of a single participant—a music educator and conductor. Consequently, the 2 days' results presented herein should be interpreted as preliminary observations. Given the constraint of a single-subject design, the findings lack broad generalizability across diverse populations, performance settings, or pedagogical contexts.

2. Furthermore, the spatial relationship between the sound source and the receiver was contextualized within a performance stage setting, specifically considering two stage typologies: a surround stage and an end-stage configuration. Measurements were conducted both in the presence and absence of an overhead stage reflector. These variations are critical in influencing early and late acoustic reflections, directivity, and the resultant personal sound exposure levels at the conductor's location.

3. The Casella CEL-350 dBadge serves as an effective tool for monitoring and evaluating the complex acoustic exposures faced by musical conductors. Its precise measurements can inform strategies to mitigate the risk of hearing damage, such as implementing acoustic modifications to the performance environment or scheduling regular hearing assessments for conductors.

4. Notably, according to the National Institute for Occupational Safety and Health (NIOSH), exposure to 85 dB(A) is permissible for only up to 8 hours per day to prevent hearing damage. Exceeding this threshold can lead to noise-induced hearing loss (NIHL), characterized by permanent damage to the hair cells in the cochlea, resulting in diminished hearing acuity. Proper stage support can significantly influence the perceived sound levels and clarity among musicians. Specifically, architectural elements such as stage enclosures, reflectors, and canopy designs play a pivotal role in directing sound reflections, thereby softening and mitigating sound volume and enhancing ensemble cohesion.

Declarations

Potential competing interests: No potential competing interests to declare.