

# Musikphysiologie und Musikermedizin in anderen Publikationen

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## Setting the Stage: Using Virtual Reality to Assess the Effects of Music Performance Anxiety in Pianists

ThompSon N, Pan X, Ruiz MH

IEEE Trans Vis Comput Graph. 2025 May;31(5):2504-2514.

<https://doi.org/10.1109/TVCG.2025.3549843>

**Abstract:** Music Performance Anxiety (MPA) is highly prevalent among musicians and often debilitating, associated with changes in cognitive, emotional, behavioral, and physiological responses to performance situations. Efforts have been made to create simulated performance environments in conservatoires and Virtual Reality (VR) to assess their effectiveness in managing MPA. Despite these advances, results have been mixed, underscoring the need for controlled experimental designs and joint analyses of performance, physiology, and subjective ratings in these settings. Furthermore, the broader application of simulated performance environments for at-home use and laboratory studies on MPA remains limited. We designed VR scenarios to induce MPA in pianists and embedded them within a controlled within-subject experimental design to systematically assess their effects on performance, physiology, and anxiety ratings. Twenty pianists completed a performance task under two conditions: a public 'Audition' and a private 'Studio' rehearsal. Participants experienced VR pre-performance settings before transitioning to live piano performances in the real world. We measured subjective anxiety, performance (MIDI data), and heart rate variability (HRV). Compared to the Studio condition, pianists in the Audition condition reported higher somatic anxiety ratings and demonstrated an increase in performance accuracy over time, with a reduced error rate. Additionally, their performances were faster and featured increased note intensity. No concurrent changes in HRV were observed. These results validate the potential of VR to induce MPA, enhancing pitch accuracy and invigorating tempo and dynamics. We discuss the strengths and limitations of this approach to develop VR-based interventions to mitigate the debilitating effects of MPA.

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## Perceptions and Prevalence of Anxiolytic Medication Usage for Performance Enhancement Among Musicians

Kuwabara A, Miller Olson E, Stanek JL

Med Probl Perform Art. 2024 Dec;39(4):155-161.

<https://doi.org/10.21091/mppa.2024.04018>

**Abstract:** OBJECTIVE: While anecdotal reports of the use of performance-enhancing medications to curb anxiety in performing artists abound, there has been no research to date assessing the prevalence of usage and attitudes towards use amongst the artists themselves. The objective of this study was to evaluate the perceptions, acquisition, and use of potentially performance-enhancing medications (benzodiazepines, beta-blockers, and cannabinoids) in the performing artist community to clarify the use of these medications to improve patient counseling and patient safety.

DESIGN: Cross-sectional survey.

SETTING: Anonymous survey administered through an online platform (REDCap).