



Patient-Selected Music Association with Post-Procedural Anxiety and Pain Reduction: A Randomized Clinical Trial



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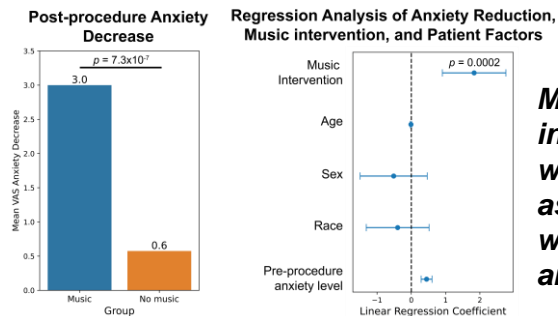
Introduction

- Procedural anxiety is a significant concern for patients
- It has been shown that anxiety significantly increases post-operative pain in elective procedures (1)
- Pharmacologic treatments often have poor side effect profiles
- We sought to answer: How would music interventions affect anxiety and pain reductions during awake chronic pain interventions?

Methods

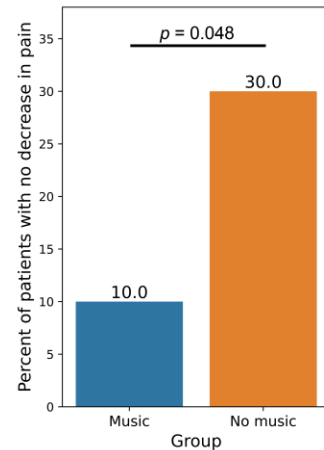
- Open-label, prospective, randomized controlled trial that included 80 patients randomly assigned in a 1:1 ratio to music or control groups
- Anxiety and pain quantified pre-procedure and 15 minutes post-procedure via validated scales:
 - Visual Analog Scale for Anxiety
 - Visual Analog Scale for Pain
- Intervention group listened to patient-selected music during the procedure

Results

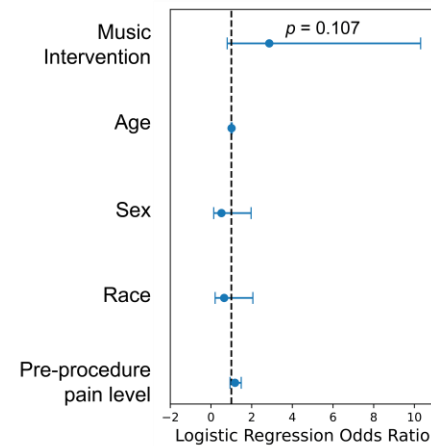


Music intervention was strongly associated with reduced anxiety

Post-procedure Pain Decrease



Regression Analysis of Pain Reduction, Music intervention, and Patient Factors

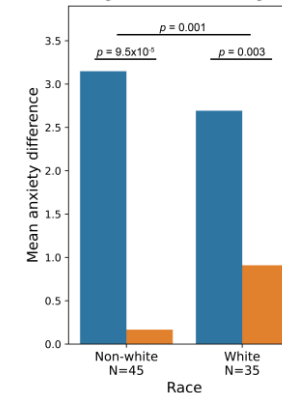


Music intervention was associated with an increased frequency of post-procedure pain reduction



Overall, music interventions promote reductions in pain and anxiety, and may be a promising non-pharmacologic alternative to current therapies

Anxiety Reduction by Race



Music intervention was associated with larger anxiety reductions in Non-White patients

Discussion

- Music effectively reduces pain and anxiety levels in awake chronic pain interventions and can serve as a non-pharmacological treatment alternative
- We demonstrated that intra-procedural music may be particularly effective in non-white patients, who often lack access to chronic pain care (2)
- We showed that when controlling for age, gender, race, and pre-procedure anxiety or pain, music had a significant effect on anxiety reduction

Limitations:

- Limited sample size precluded investigations of how procedure type impacted music interventions
- May not be effective in patients with impaired hearing

References

1. Tadesse, M., Ahmed, S., Regassa, T., Girma, T., Hailu, S., Mohammed, A., & Mohammed, S. (2022). Effect of preoperative anxiety on postoperative pain on patients undergoing elective surgery: Prospective cohort study. *Annals of medicine and surgery*, 73, 103190.
2. Morales, M. E., & Yong, R. J. (2021). Racial and ethnic disparities in the treatment of chronic pain. *Pain Medicine*, 22(1), 75-90.