

Peer Review

Review of: "Music Therapy for Alleviating Pain and Enhancing Quality of Life During Endodontic Treatment in Lagos, Nigeria"

Yufan Chen¹

1. David Geffen School of Medicine, University of California, Los Angeles, United States

The authors present a study evaluating the effect of music listening during endodontic treatment. The strengths are the randomized design of the study; however, the authors seem to downplay this. It isn't clear why this study is not considered a randomized controlled trial.

There are several problematic areas in this study to discuss:

1. "Music Therapy" is the clinical & evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program (www.musictherapy.org). As such, music therapy is individualized and provided by a music therapist. What is described in this study is considered "music listening" but not "music therapy" in the clinical sense. I suggest changing the term music therapy to music listening.
2. The sample size determination has several issues:
 1. The authors forgot to multiply the calculated number by 2. $[n=2 \times ((Z_a+Z_b)sd/\delta))^2]$. Therefore, the actual number of participants needed is twice that. This means the study is underpowered without additional data collected.
 2. Not sure how the authors determined the post-op RCT standard deviation because the reference was not included. It appears that 2 standard deviations are being added (5.16 + 3.61), which seems inappropriate.
 3. A more appropriate outcome to study would be to compare the absolute difference in Pre-intervention and Post-intervention scores among interventions, which is what was

collected in Table 4.

4. How are the VAS scores used in the sample size analysis generalizable to the NPRS score used in the study?
3. The study outcome assessed pain 30 minutes after the procedure, when it is expected for most people's pain and anxiety to be decreased after the procedure. That would explain why the pain scores were low even in the control group. A more relevant outcome would be the perceived pain during the procedure, with or without music listening. I suggest asking the patients for a verbal pain score during the procedure. The study findings, which did not show a difference in the reduction of pain scores between groups, could have been due to being underpowered or not assessing the pain at the right time.
4. Have the study instruments been validated for short-term test-retest reliability?
5. What are the minimum clinically important differences (MCID) of the study instruments? Did the findings meet the MCID?

Declarations

Potential competing interests: No potential competing interests to declare.