

# **TONSILS WITH A TUNE: A RANDOMIZED CONTROL TRIAL EVALUATING THE EFFECTS OF MUSIC MEDICINE ON PEDIATRIC ADENOTONSILLECTOMY ANXIETY AND PAIN**

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**Introduction:** Literature shows that music interventions exhibit positive effects in reducing patients' pain and anxiety. However, there are few research studies that examine the effect of music in pediatric patients' pain and anxiety, specifically in perianesthesia settings.

**Identification of the problem:** Pediatric adenotonsillectomy patients' postoperative pain, widely considered as moderate to severe in intensity, is often under-treated and hard to manage. Anxiety can exacerbate the perceptions of pain.

**Purpose of the Study:** The purpose of this study was to evaluate the effects of passive-listening to music, or 'music medicine,' on pediatric adenotonsillectomy patients' postoperative anxiety, pain, satisfaction, opioid consumption and length of stay.

**Methodology:** Eighty pediatric adenotonsillectomy patients, aged 7 to 18 years, were enrolled in this two-group randomized control trial. The intervention group listened to music preoperatively and for thirty minutes postoperatively. The Control Group did not listen to music. Preoperative and postoperative anxiety was measured using the 6-item State-Trait Anxiety Inventory (STAI). Preoperative and postoperative pain was measured using the FLACC, Faces and/or Children's Numerical Pain analog scale. Patient satisfaction was assessed by patient questionnaire. Other outcome measures, including length of stay and opioid consumption, were obtained in retrospective chart review.

**Results:** Postoperative Anxiety was significantly lower in the music medicine group than the control group ( $p=0.028$ ). The majority of patients who listened to music ( $n = 40$ ) reported they enjoyed it (89.2%) and stated music improved their hospital stay (80%). The majority of patients, regardless of intervention group, stated they "think music helps make them feel calm" (86.5%). There were no statistically significant differences between groups in postoperative pain scores, intra-operative and postoperative opioid consumption, and length of stay.

**Discussion:** The passive listening to music is effective in improving pediatric adenotonsillectomy postoperative anxiety and patient satisfaction. Music medicine did not have an effect in pain outcomes as hypothesized.

**Conclusion:** Music can improve patient postoperative anxiety and patient satisfaction and is inexpensive, convenient, and easy to administer.

**Implications for perianesthesia nurses and future research:** Music medicine is an effective perianesthesia nursing intervention that can improve pediatric patient outcomes. Further research is encouraged to examine the clinical impact of music in the multifactorial patient outcome of pain.