

The Effects of Music Intervention on Pain and Anxiety in the Immediate Postoperative Period in Adults Undergoing Total Knee Arthroplasty and Total Hip Arthroplasty

Primary Investigator: Peggy Olsen BS BSN RN CPAN
Providence Portland Medical Center, Portland, Oregon
Co-Investigator: Mary Waldo PhD RN GCNS-BC

Introduction: This study evaluated the effect of music on acute and/or acute on chronic pain and anxiety during the immediate postoperative period. A standardized music intervention (Music Care) was used with patients who had undergone elective joint replacement.

Identification of the problem: The current opioid crisis has led us to examine adjunct therapies for pain control in postoperative care. One such therapy, music, has demonstrated value in the treatment of pain and anxiety in multiple clinical settings. Patients who receive fewer opioid analgesics postoperatively have shown fewer respiratory events and a decreased length of stay.

EBP Question/Purpose: PICO question. Databases utilized: Does the addition of music reduce postoperative pain, anxiety and analgesia during the initial recovery phase of orthopedic surgery patients?

Methods/Evidence: Study participants included patients of who underwent elective joint replacement in 2019 and early 2020.

Historical data was gathered from the electronic health record (EHR) of patients January to April 2019 (n=50).

From December 2019 to March 2020, the music intervention was initiated upon admission to the PACU (Phase 1 of recovery) and discontinued when patients entered Phase 2 of recovery (n=50)

Perioperative data collected from EHR of all patients included: vital signs, Pasero Opioid Induced Sedation Scale (POSS), narcotics and benzodiazepines administered and pain ratings.

Significance of the findings/Outcomes: There was a statistically significant decrease in the amount of Dilaudid administered in the study participants, with a p value of 0.03, as well as statistically significant decrease in heart rate (p value 0.006), respiratory rate (p value 0.05) and POSS (p value 0.05).

Implications for perianesthesia nurses and future research: These findings are important in supporting the use of adjunct therapies for pain control thus decreasing the use of narcotics and their untoward side effects and related sequelae. A lower POSS and decreased narcotic use may promote early mobility and discharge.

Further research in the use of music throughout the entire operative experience, and beyond, may be of interest.