Research supports that joint replacement surgeries have a positive impact on health-related quality of life (Baumann et al., 2009). Providers and Healthcare administrators are looking for cost-effective ways to deliver treatment interventions that are evidenced-based and have positive health outcomes. Opioid medications are frequently used to treat acute pain following total knee, hip, or shoulder procedures with possible dangerous side effects (Benyamin et al., 2008). Factors such as pain and anxiety can impact overall treatment outcomes (Montin et al., 2007). Goals of pilot study research includes:

- Reduce pain, stress, anxiety, length of stay in the hospital, and increase overall health related qualities of life in orthopedic surgical patients.

### Data Collection Tools

1. Questions about Demographics and Anticipated Outcomes
2. Arthritis Self-Efficacy Scale
3. Multidimensional Health Locus of Control
4. PROMIS- Health Related Quality of Life

### Methods

- Three weeks prior to surgery date, patients completed several questionnaires that assessed health-related quality of life variables.
- Consenting participants were randomized into treatment and control groups (N= 39 treatment; 39 control).
- **Treatment Condition:**
  - Provided with an MP3 player with 60 minutes of pre-recorded cognitively-mediated relaxation exercises prior to surgery
  - Educated to listen 2-3 times daily for approximately 15 minutes before and after surgery.
  - Received 15 minute upper body, soft tissue massage on day one post-op.
- **Control Condition:**
  - Received MP3 player during post-op follow-up appointment (approximately 2 weeks post-op).
  - Voucher given for 15-minute upper-body, soft tissue massage.
  - Received both after all questionnaires were completed for the study.

### Outcomes and Discussion

- At baseline, there were significant differences between the control group and treatment group regarding confidence in their ability to cope with pain, without medications, and anticipated stressfulness of the surgery.
- Control group more optimistic about outcomes.
- Post surgery, control patients lost confidence in their ability to cope with pain, while no mean difference emerged for the treatment group.
- Results suggests relaxation may act as a buffer to stabilize coping post-surgery.
- A correlation was identified related to the amount of time practiced and overall effect of pain.
- Participants who practiced two or more times per day reported less pain post-operatively.
- The results suggest that increased use of relaxation exercises may decrease the effects of pain.

### Future Implementation

- Meet with hospital management and key stake holders to determine next steps and hospital-wide implementation:
  - Options for guided relaxation delivery in all departments
  - Budget for increased massage therapy in the hospital
- Partner with Pain Resource Nurse/Pain Committee for change champions to help with the implementation.
- Develop policy and education for frontline staff.

### References


