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Perioperative Music: A Survey and Interview-Based Analysis of Prevalence, Demographics, and Perception in British Columbia, Canada

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Introduction

Perioperative music describes the use of background music during a surgical procedure that is intended to benefit those involved during the operation[1]. Surgeons often describe their experience with perioperative music anecdotally; however, little research has been conducted into the topic. This study examines the attitudes of surgeons towards perioperative music and correlates parameters such as surgeon age and specialty with said attitudes. Opinions on the effects of characteristics such as volume and genre were explored, as well as surgeons' beliefs regarding the effects of perioperative music on concentration, communication, surgical efficiency, and error rate.

Methodology

Qualitative data was collected regarding beliefs about perioperative music in two phases:

- **Phase I.** Surveys were distributed to surgeons working in British Columbia, Canada via emails, recruitment posters, and word of mouth.
- **Phase II.** Survey respondents further discussed their beliefs about perioperative music through a series of telephone interviews.

Results

- 75 individual survey responses were tracked (recruitment rate of 90.7%); 12 responses were "incomplete", resulting in a final completion rate of 82.4%
- 6 out of the 56 respondents who completed surveys consented to be interviewed (10.7% of total)
- Surgeons significantly disagreed that perioperative music decreases error rate ($n = 50$, $p < 0.001$); however, relative volume influenced both perceptions of error rate as well as beliefs regarding concentration, communication, and efficiency ($n = 50$, $p < 0.001$ for all)
- While some major themes such as the perceived prevalence of perioperative music had relative consistency across all interview responses, every major interview theme had a portion of responses that were contrary to the majority

Statements for Consideration

Statement 1: "Perioperative music increases my operative concentration during surgical procedures."
Statement 2: "With respect to total time spent in the operating room, the presence of perioperative music increases my operative efficiency during surgical procedures."
Statement 3: "Perioperative music decreases communication efficiency among surgical team members during surgical procedures."
Statement 4: "The presence of perioperative music increases the rate of errors during surgical procedures."

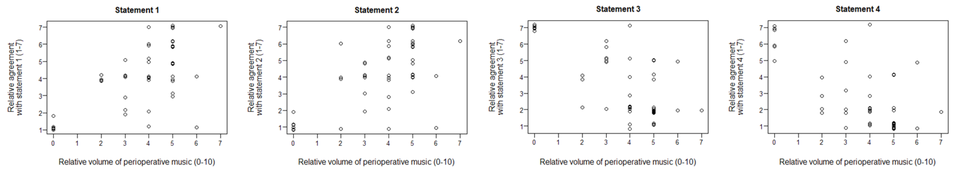


Figure 1. *Relative agreement with statements 1 through 4 ("Statements for Consideration" above) vs. relative volume of perioperative music. Spearman; r = 0.58, 0.54, -0.56, -0.62; n = 50 for all; P < 0.001 for all.*

Table 1. *Aggregated interview themes and descriptions.*

Theme	Description
General Music Usage	Musical genres, sources, and controller are extremely variable.
Perceived Prevalence	Prevalence has increased over time due to personal device access and procedure comfort.
Concentration & Communication	Volume is minimized and proactively managed to prevent distraction and decreased communication efficiency. However, some surgeons "drown out" distractions with music, allowing for increased focus.
Efficiency	A pleasant mood may increase efficiency, allowing for better surgical "flow".
Error Rate	Generally, music is not perceived to affect error rate when it is proactively managed.
Effects on the Surgical Team	Improved mood, team member engagement. Anesthesiologists may find it more difficult to pick up on machine alerts.
General Benefits	Increased surgical "flow", less tension. During conscious procedures, music may improve patient relaxation.
General Harms	Proactive music management is another task to remember and may detract from surgical concentration.
Learning Efficiency	Music is perceived to both foster improved learning through relaxation as well as potentially reduce "resident bandwidth" that could otherwise be used to learn.

Interpretation

- Proactive management of perioperative music is a commonly utilized approach, reducing volume to increase focus and potentially reduce errors
- Those who play music at higher relative volumes tend to disagree that music volume impairs their communication or error rate; this is in agreement with previous studies that have also found increased music volume generally does not objectively affect surgical performance[2]
- Playing music in the operating room when learners are present is generally avoided and aligns with previous research suggesting that music may distract surgical students[3]

Conclusion

Perioperative music in the operating room was found to be highly dependent on individual surgeon preferences, with music volume playing a key role in determining the perceived effect of music on the surgical environment. However, when music is proactively managed, surgeons do not generally believe their performance is affected by music in the operating room. Further study would benefit from a larger sample size.

References

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