

Introduction

- Critical care units generate stress and anxiety for patients through increased noise levels, pain, sleep disturbances, and lack of knowledge about their disease²
- Providers manage comfort with increased sedation
- Sedation can cause bradycardia, hypotension, weakness, delirium, and prolonged time spent in the ICU²

Background

- 70-80% of patients admitted to the ICU are affected by anxiety³
- Anxiety in the ICU can cause increased respiratory rates, heart rates, blood glucose levels, and increase myocardial oxygen demand²
- Sustained sympathetic nervous system with anxiety decreases a patient's ability to relax, rest, and concentrate, further hindering the healing process²
- Music listening is most effective nonpharmacological intervention to decrease stress, anxiety, and pain⁴
- Music listening can decrease blood pressure, heart rate, respiratory rate, and decrease sedation rates⁴

Methodology

Design

- Quantitative design with pre/post-test

Setting

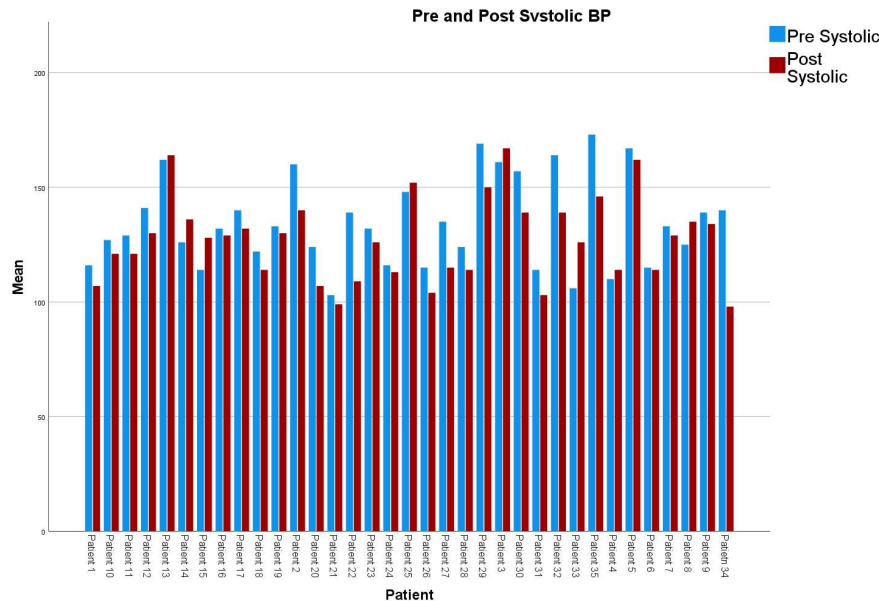
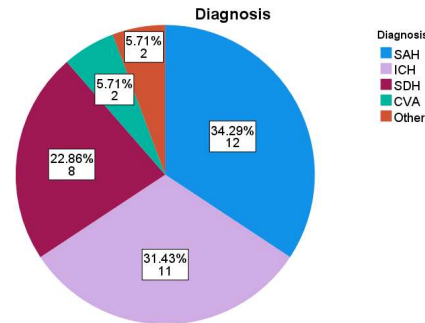
- 10 bed adult Neurological ICU
- Northern New Jersey community medical center
- Magnet® designated and accredited comprehensive stroke center

Intervention

- Record pre-intervention blood pressure, heart rate, respiration rate, pulse oxygenation, pain score, and RASS score
- Play patient directed music for 30 minutes uninterrupted
- Record post-intervention blood pressure, heart rate, respiration rate, pulse oxygenation, pain score, RASS score, and any changes in sedation level

Measured Outcomes

- Change in vital signs, pain level, RASS scores, and sedation levels as a measure of stress and anxiety
- Primary end point of decreased systolic blood pressure



Results

- 35 patients enrolled
- Statistically significant decrease in heart rate ($p = 0.020$), systolic blood pressure ($p = 0.002$), respiratory rate ($p = 0.031$), pain ($p = 0.006$), and improved oxygenation levels ($p = 0.027$)
- 4 patients had a decrease in sedation post-intervention
- Change in diastolic and RASS scores were not statistically significant
- Men had statistically significant decrease in systolic blood pressure, respiratory rate, pain, and improved oxygenation over women
- No significant results based on diagnosis

Discussion

- Music listening was shown to be effective in decreasing stress and anxiety in the Neuro-ICU
- Primary end point of decreased systolic blood pressure was found to be statistically significant
- Secondary end points were all statistically significant except for diastolic blood pressure and RASS score

Implications

Clinical Practice

- Results provide evidence practice change can be made and introduce music listening as the initial treatment for anxiety and stress

Health Care Policy

- This practice can be a part of standard of care for patients in the ICU
- New policies can be made at the project site to include this intervention as an alternative to sedation

Quality and Safety

- Music listening is a safe alternative to improve patient conditions
- Little to no side effects of music listening

Education

- Educate stakeholders on the benefit of music listening with the intent it will become standard practice

Economics

- Music listening is a cost-effective alternative to decrease stress and anxiety in critical care¹

Summary

This project provides further proof of the benefit of music listening; the intervention was able to improve heart rate, systolic blood pressure, respiration rate and pulse oxygenation. Including this therapy as an alternative practice will benefit the hospital system and patient care.

References

Scan QR code for reference list



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