

BEYOND THE BEEP:

EXPLORING MUSIC AS THERAPY IN THE ICU

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BACKGROUND

Patients admitted to the intensive care unit (ICU) frequently experience pain, anxiety, sleep disruption and delirium, which may contribute to increased morbidity and prolonged recovery. Pharmacological therapies such as sedatives and analgesics are commonly used but carry risks including oversedation¹ and delirium.² Music is a low-cost, non-invasive intervention⁴ that may reduce stress, anxiety and pain through modulation of autonomic, neuroendocrine and reward pathways.³ However, findings across ICU studies remain inconsistent, and the optimal patient population, intervention duration and delivery of music remain unclear.^{2,4}



RESEARCH AIM

To evaluate the effectiveness of music interventions in adult ICU patients and identify limitations in the current evidence to inform future research and clinical practice.



METHOD

A structured literature search was conducted using PubMed, MEDLINE, EMBASE and CINAHL to identify studies evaluating music interventions in critically ill adults. Search terms included music therapy, music intervention, intensive care unit, mechanical ventilation, delirium, anxiety, and sedation. Studies examining physiological, psychological or clinical outcomes in adult ICU or closely related acute-care populations were included. Randomised controlled trials, systematic reviews and meta-analyses were prioritised, with reference lists manually screened for additional relevant studies.



RESULTS

SEDATION

↓ **36 - 38%**

Sedative dose frequency / intensity⁵

DELIRIUM

RR 0.49

Delirium risk

95% CI 0.40–0.61⁶

3 vs 12

Post-CABG delirium cases

Music (n=100) vs Control (n=100)

p=0.016⁷

AGITATION & CPAP COMPLIANCE

RASS ↓

2.14 ± 0.69 → 0.74 ± 0.61 (Music)

vs

2.06 ± 0.53 → 1.46 ± 0.61 (Control)

p=0.001⁸

**LOWER CPAP
AIR LEAK**

9.00 ± 8.67 vs 20.03 ± 14.14 L/min

Music vs Control

p=0.001⁸

CLINICAL OUTCOMES

**NO SIGNIFICANT
DIFFERENCE**

↔ Mechanical ventilation

↔ ICU length of stay

↔ Hospital length of stay

2.5 vs 3 days

Delirium/coma-free days

p=0.66²



KEY FINDINGS



Patient engagement matters

Positive effects may be greater in patients able to actively engage with music.^{2,5}



Benefits are mainly symptom-level

Improvements were more apparent for anxiety, pain, agitation and sedative use than for major clinical outcomes (e.g. length of stay, duration of mechanical ventilation).^{4,5,8}



Evidence remains heterogeneous

Variation in interventions, populations and outcome measures limits comparison between studies.⁹

CONCLUSION

Music is a promising, low-cost and non-invasive adjunct to ICU care, with benefits most apparent for anxiety, pain, agitation, and sedative exposure. However, these benefits do not consistently translate into improvements in major clinical outcomes such as duration of mechanical ventilation or ICU and hospital length of stay. Current evidence is limited by substantial methodological heterogeneity. Larger, well-designed multicentre trials with standardised interventions and outcome measures are needed to determine which patients are most likely to benefit.

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