The effect of music therapy on patients' perception and manifestation of pain, anxiety, and patient satisfaction

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CRD summary
This review evaluated the effects of music therapy on patients in a hospital setting. The authors' conclusions that music therapy may improve patient care and that further research was needed appeared to be supported by the evidence presented. Weaknesses and uncertainties in the review process and quality assessment made the reliability of the findings unclear.

Authors' objectives
To evaluate the effects of music therapy on patients in a hospital setting

Searching
PubMed, The Cochrane Library, CINAHL and EBSCO databases were searched up to 2004. No information was provided on search terms.

Study selection
Studies had to assess the effects of a music intervention on pain, anxiety or patient satisfaction in a hospital setting. All included studies were experimental studies that compared recorded music to one or more of the following: jaw relaxation, music video, white noise, ibuprofen, distraction, rest, no music and unspecified control. Across the studies patients underwent a range of procedures including emergency laceration repair, abdominal surgery, coronary artery bypass graft, chest tube removal after open heart surgery, lumbar microdiscectomy, colonoscopy and medical procedures for cancer (unspecified). A variety of tools were used to measure outcomes. The authors stated neither how the papers were selected for the review nor how many reviewers performed the selection.

Assessment of study quality
Studies were assessed using the Rosswurm-Larrabee model for evidence-based practice change, which included assessments of the following: identification of research variables, settings, sample characteristics, tools, study design, limitations, findings and quality of evidence. The authors did not state how the validity assessment was performed.

Data extraction
The authors stated neither how the data were extracted for the review nor how many reviewers performed the data extraction. Data were extracted into a matrix. Outcomes other than pain, anxiety and patient satisfaction appeared to be extracted where investigated in the included studies.

Methods of synthesis
Studies were combined in a narrative synthesis and were grouped by the outcomes of pain, anxiety and patient satisfaction.

Results of the review
Ten comparative studies were included in the review (n=986). Nine studies investigated the effects of music on pain, with four finding it to be more effective at lowering pain than no music intervention. Five studies showed no difference in level of pain between the music intervention group and the control group. Six studies investigated the effects of music on anxiety: one study found a significant reduction in patients undergoing colonoscopy and five found no statistically significant differences. Three randomised controlled trials investigated patient satisfaction as an outcome. None of the three found a statistically significant effect on this outcome.

Authors' conclusions
The limited evidence available suggested that music therapy may have a positive impact on patient care. Further research was required before strong implications can be reported.
The review had a broadly defined question in terms of patients, interventions and outcomes. Study designs did not appear to be prespecified. The authors searched several databases, but as no search terms were provided it was not possible to comment on the adequacy of the search. The authors stated that further studies had been conducted since the searches finished in 2004, but these studies did not appear to have been considered in the review. Any language or publication restrictions were not documented. Attempts to minimise bias and error in the review (for example, through the use of more than one reviewer in study selection, data extraction and quality assessment) were not described. Methods of assessing study quality were not fully documented. Study quality did not appear to have informed the results of the review. A narrative synthesis was appropriate given the diversity of the included studies. The authors’ cautious conclusions appeared to be supported by the evidence presented, but uncertainties surrounding the selection and data extraction process and quality of the included studies rendered the reliability of the findings unclear.

**Implications of the review for practice and research**

**Practice:** The authors stated that, although there was limited evidence to support practice, nurses and nurse leaders might wish to explore the finding that in several of the studies patients reported enjoying the music, wished to use it again and stated that they would recommend it to others.

**Research:** The authors stated that the role of music in reducing opiate use and encouraging post-operative ambulation could be investigated. They also recommended studies to investigate any differences in the benefits of music for procedures resulting in minor and more severe pain. The role of music in relieving anxiety and improving learning might also be of interest. The authors recommended designing an instrument to specifically measure patient satisfaction with music therapy. They advised that the use of live versus recorded music remained to be explored, as did the impact of individual music preferences. The authors stated that the benefits of cumulative exposure to music when compared to a single exposure needed to be evaluated and that more work was needed on the role of music in the medical-surgical unit.

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