The effectiveness of music interventions on reducing anxiety, sedative requirements, pain, and improving physiological outcomes and satisfaction among adult patients undergoing colonoscopy: A systematic review protocol

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Learner objective 1: The learner will be able to identify the rationale and significance of conducting a systematic review on effectiveness of music interventions on patients undergoing colonoscopy.

Learner objective 2: The learner will be able to review the methods for conducting a systematic review of evidence generated by quantitative research.

Background
Anxiety and pain are common problems in patients undergoing a colonoscopy procedure. High levels of anxiety may result in more difficult and painful procedures, incomplete procedures, greater medication uses, increased likelihood of sedative-related complications, and prevent the patients from undertaking the examination (Stirling et al., 2007). High anxiety levels may also lead to negative physiological outcomes including elevated blood cortisol levels, increased blood pressure, heart rates, and respiratory rates. Music is well recognized as an important and safe intervention to aid the healing processes for many years (Johnson et al., 2012). Music intervention has been used in different medical fields including cardiology and radiology because music has been found to promote relaxation, induce positive associations, and divert attention from negative experiences (Nilsson, 2008). Music has been hypothesized to act as an anxiolytic and analgesic to alleviate anxiety and pain for patients undergoing stressful and painful endoscopic procedures. Nevertheless, no conclusion has yet been reached about its effectiveness in patients undergoing colonoscopy.
Objective
This systematic review will summarize the evidence regarding the effectiveness of music interventions on patient outcomes including levels of anxiety, the needs of sedation, pain, physiological variables and satisfaction.

Methods
The review will include all studies with adult patients ≥ 18 years old who underwent colonoscopy procedures in endoscopy suites. Foreseen comparisons include: (1) comparison between music interventions vs. no music intervention; (2) Comparison between different formats and types of music interventions. All randomised controlled trials comparing the effectiveness of music interventions on patients undergoing colonoscopy will be considered for inclusion in this review. In the absence of randomised controlled trials, other research designs including quasi-experimental, non-randomised controlled trials, and before and after studies will be included. The search strategy is aimed to find all published and unpublished studies in English and Chinese in order to generate a comprehensive list of primary studies that can answer the question posed in this review. Two reviewers will independently assess all identified studies against the inclusion and exclusion criteria, appraise the methodological quality and perform the data extraction. Quantitative results of comparable studies will be pooled in statistical meta-analysis. If statistical pooling of results of the included studies is not appropriate or possible, the findings will be summarized in narrative form.

Conclusion
This systematic review protocol describes in detail the process of conducting a systematic review of evidence generated by quantitative research. The significance of this review is to identify the effects of music interventions on reducing anxiety and sedative medication requirements, improving physiological parameters, relieving pain and promoting satisfaction among adult patients undergoing colonoscopy. The findings will provide useful information for health care professionals to promote well-being of the patients undergoing colonoscopy.
References


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Keywords: Music; Colonoscopy; Anxiety