

## • Research Article

# Using music to reduce anxiety among older adults in the emergency department: a randomized pilot study

Laura Belland<sup>1</sup>, Laura Rivera-Reyes<sup>2</sup>, Ula Hwang<sup>2,3</sup>

1. Center for Family Medicine, NewYork-Presbyterian/Columbia University Medical Center, New York, NY 10032, USA
2. Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, NY 10029, USA
3. Geriatric Research, Education and Clinical Center, James J. Peters VAMC, New York, NY 10029, USA

### ABSTRACT

**BACKGROUND:** An emergency department (ED) visit may be distressing and anxiety-provoking for older adults (age > 65 years). No studies have specifically evaluated the effect of music listening on anxiety in older adults in the ED.

**OBJECTIVE:** The objective of this pilot study was to evaluate the effect of music listening on anxiety levels in older ED patients.

**DESIGN, SETTING, PARTICIPANTS AND INTERVENTIONS:** This was a randomized pilot study in the geriatric ED of an urban academic tertiary medical center. This was a sample of English-speaking adults (age > 65 years) who were not deaf ( $n = 35$ ). Subjects consented to participate and were randomized to receive up to 60 min of music listening with routine care, while the control group received routine care with no music. Subjects in the music treatment group received headphones and an electronic tablet with pre-downloaded music, and were allowed to choose from 5 selections.

**MAIN OUTCOME MEASURES:** The primary outcome was change in anxiety levels, measured by the state-trait anxiety inventory (STAI), at enrollment and 1 h later.

**RESULTS:** A total of 35 participants were enrolled: 74% were female, 40% were white, and 40% were black; of these, 32 subjects completed the study protocol. When comparing control ( $n = 18$ ) against intervention subjects ( $n = 17$ ), there were no significant differences in enrollment STAI scores ( $43.00 \pm 15.00$  vs.  $40.30 \pm 12.80$ ,  $P = 0.57$ ). STAI scores 1 hour after enrollment (after the music intervention) were significantly reduced in the intervention subjects compared to the control subjects (with reduction of  $10.00 \pm 12.29$  vs.  $1.88 \pm 7.97$ ,  $P = 0.03$ ).

**CONCLUSION:** These pilot results suggest that music listening may be an effective tool for reducing anxiety among older adults in the ED.

**Keywords:** music; anxiety; emergency department; randomized controlled trial

**Citation:** Belland L, Rivera-Reyes L, Hwang U. Using music to reduce anxiety among older adults in the emergency department: a randomized pilot study. *J Integr Med*. 2017; 15(6): 450–455.

## 1 Introduction

A visit to the emergency department (ED) is anxiety provoking for patients by nature. Contributing factors may include the acuity of the visit,<sup>[1]</sup> a noisy environment,<sup>[2]</sup> an unfamiliar staff,<sup>[3]</sup> fear of painful tests or studies<sup>[3]</sup> and waiting in anticipation of a serious diagnosis or bad news.<sup>[4]</sup> Studies suggest that nearly 75% of adult ED patients experience mild to severe anxiety in relation to their ED visit.<sup>[5]</sup> In fact, anxiety or worry can be the second most common source, behind pain, of self-perceived acute “suffering” among patients visiting the ED.<sup>[4]</sup>

A visit to the ED may be particularly distressing for older adults (age > 65 years), who are more likely than younger adults to have a greater ED length of stay before discharge,<sup>[6]</sup> receive more diagnostic tests and venipuncture for intravenous access<sup>[6]</sup> and have less effective pain care.<sup>[7-9]</sup>

Anxiety can have deleterious effects on a patient in the clinical setting. Patients may report excessive pain complaints and manifest the typical signs and symptoms of anxiety (e.g., anorexia, dry mouth, nausea and chest pain), which complicate diagnosis.<sup>[10]</sup> Previous studies have found that patients awaiting procedures or surgery who have pre-procedural anxiety have lowered pain thresholds,<sup>[11]</sup> increased analgesic use,<sup>[5]</sup> greater need for sedation<sup>[12]</sup> and longer post-procedural recovery.<sup>[13]</sup> Patients may refuse evaluation or treatment because of anxiety surrounding the procedure or possible outcome.<sup>[10]</sup> Lastly, patient anxiety can impose barriers to communication with ED staff,<sup>[14]</sup> hindering successful delivery of important medical information.

Music listening as an anxiolytic has been studied across a variety of clinical settings. Four separate Cochrane systematic reviews have reported the beneficial effects of music listening on anxiety in mechanically ventilated patients,<sup>[15]</sup> in perioperative patients,<sup>[16]</sup> in patients with coronary heart disease<sup>[17]</sup> and in oncology patients.<sup>[18]</sup> Other studies have shown the anxiolytic effect of music listening in patients undergoing cystoscopy,<sup>[19]</sup> in pulmonary rehabilitation patients<sup>[20]</sup> and in pediatric ED patients undergoing laceration repair.<sup>[21]</sup> However, there is a relative paucity of published data on the use of music listening for adult patients in the ED. While some studies have demonstrated mixed findings on the impact of music on ED patients,<sup>[22-25]</sup> no studies, to our knowledge, have specifically evaluated the effect of music listening on anxiety in older adults in the ED.

Our aim was to perform a randomized pilot study comparing music listening plus standard care to standard care, with the goal of decreasing levels of anxiety among older adults as measured by the state-trait anxiety inventory (STAI).<sup>[26]</sup> The STAI is a validated

tool that measures state anxiety using a four-point forced choice Likert response scale (i.e., not at all, somewhat, moderately so, very much so). STAI scores range from 20 to 80, with 20 indicating mild to no anxiety while 80 indicates severe anxiety.

## 2 Methods

### 2.1 Study design and setting

This was a randomized pilot study that took place in the geriatric ED of The Mount Sinai Hospital, an urban academic tertiary care medical center, during the months of April–May, 2015. The geriatric ED is a space connected to the main adult ED that is dedicated to providing an environment more conducive to treating patients aged > 65 years (e.g., softer lighting, reduced noise, multiple private rooms). Only those who are triaged with an emergency severity index (ESI) of 2, 3, 4 or 5 (1 to 5, 1 = urgent, 5 = non-urgent) are evaluated in the geriatric ED, while those with an ESI of 1 are seen in the main ED. This study received institutional review board approval from the Icahn School of Medicine at Mount Sinai. This study was not registered as a clinical trial as it did not meet applicable clinical trial guidelines under the Federal Drug and Administration Act.

### 2.2 Selection of participants

Subjects were recruited from 8:00 a.m. to 8:00 p.m. Inclusion criteria included speaking English. Exclusion criteria included being deaf, contact isolation precautions (given the nature of the intervention) and prisoners. Patients unable to participate in the process of informed consent (e.g., due to delirium or severe dementia) were excluded. Also excluded were patients who had been given a disposition of discharge by their ED provider at the time of screening, since these patients were likely to leave the ED before completion of the study. Screening of eligible participants was done through chart review using an electronic ED tracking board accessed through the ED electronic health record, which lists patients alphabetically; all subjects deemed eligible through screening were then approached alphabetically. As this was a pilot study, power analysis/sample size calculation was not required. As many subjects were recruited as possible during the study period (2 months).

### 2.3 Intervention

Intervention group participants received an electronic tablet with headphones and were instructed to listen to music for up to one hour. Participants could choose from five different genres of music: classical, jazz, new age, Latin guitar, or Chinese traditional. These genres had been selected in an attempt to offer participants a wide variety of music. All of the available selections contained only instrumental music since lyrics may be “distracting” or “emotional.”<sup>[27]</sup> Tempos of the music ranged between 60

Download English Version:

<https://daneshyari.com/en/article/8693260>

Download Persian Version:

<https://daneshyari.com/article/8693260>

[Daneshyari.com](https://daneshyari.com)