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Easy to Do, Inexpensive; Music Calms Some ICU Patients

By Leslie Harris O'Hanlon



(Ryan McVay/Getty Images)

The adage stems from the 18th century: music has charms to sooth the savage breast. It's probably safe to say that someone in an intensive care unit, who needs a machine to help them breathe, is in need of soothing. Usually, doctors and nurses administer drugs, powerful sedatives to help calm patients. Now, a study shows that a different kind of intervention might help: music. The study, published Monday in the *Journal of the American Medical Association*, adds to a growing body of research on how listening to music has a host of health benefits.

Patients in the music group received 38 percent fewer doses of sedatives.

Researchers at Ohio State University looked at ICU patients on mechanical ventilators for respiratory failure. Those who listened to the music of their choice not only had greater reduction in anxiety but also used fewer sedation drugs and lower doses compared to patients who did not have access to music — they received usual ICU care. Mechanical ventilation, or ventilatory support, is when a patient is connected to a machine, called a ventilator, to help him or her breath.

Researchers call this “patient-directed music” because patients could select their own music and put headphones on whenever they wanted.

The “intervention empowered patients to use music to manage their own anxiety whenever they felt they needed the use of music to help them relax or when they desired some quiet time,” said lead author Professor Linda L. Chlan at Ohio State. “Music does not induce adverse side effects, which are sometimes evident with sedative agents administered to these patients.”

The clinical trial included 373 patients on ventilators. Researchers looked at 12 intensive care units in the Minneapolis-St. Paul area; the study went on for nearly five years. Patients were put into three groups: those who picked their own musical selections with the help of a music therapist, those who used noise-canceling headphones and those who received usual care.

Researchers measured anxiety daily by asking patients the question: “How are you feeling today?” The amount and frequency of sedative drugs were also measured. Patients in the music group listened to music for an average of 80 minutes per day.

Analysis showed that patients in the music group had an anxiety score that was 19.5 points lower than patients in the usual care group. Also, patients in the music group received fewer doses of sedatives — 38 percent fewer doses.

Researchers published comments that patients or family members made to nurses. For example:

- “Patient looks very peaceful and states she like the music.”
- “After putting headphones on, patient appears less anxious.”
- “Evening was quieter. Patient put headphones on which seemed to help a lot.”

Not surprisingly, people on ventilators in an ICU are often under a great deal of stress. Potent sedatives are usually given to these patients to help them feel less anxious, the study authors wrote. But those drugs can have harsh side effects, including weakness, delirium and a lowering a blood pressure. That lower blood pressure can prevent the heart, brain and other parts of the body from getting enough blood.

“Mechanically ventilated patients have little control over (drug) interventions to relieve anxiety,” Chlan wrote in an email. “Dosing and frequency of sedative and analgesic medications are controlled by intensive care unit (ICU) clinicians. ... Interventions are needed that reduce anxiety, actively involve patients, and minimize the use of sedative medications.”

This isn’t the first study to highlight how music can help alleviate stress. A large scale review of 400 research papers **published in Trends in Cognitive Sciences** found that music can improve the function of the body’s immune system and reduce levels of stress. Further, listening to music was more successful than prescription drugs in decreasing a person’s anxiety before undergoing surgery. In a 2012 paper **published in The Journal of Pain**, researchers from the University of Utah Pain Research Center found that listening to music could lessen pain by distracting people’s attention away from the pain. Also, according to the American Cancer Society, there is evidence that when used with conventional treatment, music therapy can help to reduce pain and relieve chemotherapy-induced nausea and vomiting in cancer patients. Music therapy, which can include making or listening to music or writing songs, may also relieve stress and provide an overall sense of well-being.

The current JAMA study had some limitations, said Dr. Elie Azoulay with the Sorbonne in Paris who wrote an accompanying editorial in JAMA. Azoulay says the effects of listening to music were only studied short term, and the use of sedatives was not standardized across all ICUs in the study. Azoulay added that conducting in-depth interviews with patients after they were discharged could help researchers better understand the impact music had on those patients’ anxiety levels.

Still, the ability of music to help patients in distress is an area worth exploring further, he said, especially since it’s low cost and easy to incorporate.

“Patient’s anxiety can be reduced and by a means that can be accessible for all ICUs all over the world,” he said.

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