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# The Effects of Music on Pain and Anxiety During Screening Mammography

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One in four women who are diagnosed with breast cancer die annually, and the single most important way to prevent this is early detection; therefore, women older than 40 years should have an annual screening mammography. Many barriers have been reported that prevent compliance with this recommendation, including lack of insurance, fear, anxiety, pain, worry, and mistrust of the medical community. Nurses are in a position to use creative interventions, such as music therapy, to help minimize barriers. Although this study did not show that music therapy during screening mammograms decreased the amount of pain that the participants experienced, it did suggest that music therapy has the potential to decrease the amount of anxiety. Assisting patients in decreasing anxiety reduces barriers for screening mammography. The literature does suggest that music is a distraction for many populations of patients; however, when patients are faced with the possible diagnosis of breast cancer, it may be difficult to find an intervention to distract a woman's mind, which was supported by the findings of this study.

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Since the 1970s, music has been used to enhance patients' experiences. Practitioners, patients, and family members have used music to improve physiologic, psychological, and spiritual well-being at various points throughout the delivery of health care (Gallagher, 2011). Music also has been used to help decrease pain and anxiety. Trait anxiety and state anxiety have been found to affect pain levels, with state anxiety leading to higher pain self-reports, lower pain tolerance, and reduced thresholds for pain (Tang & Gibson, 2005). Such a relationship provides incentive for nurses and other healthcare providers to seek methods to reduce both pain and anxiety prior to procedures likely to produce nociceptive pain (Sanikop, Agrawal, & Patil, 2011; Strahl et al., 2000; Tang & Gibson, 2005).

Nurses have opportunities to teach patients and share information about screening mammograms. When patients express concerns about anxiety and pain during a mammo-

gram, nurses should take the time to confirm that they may experience a certain amount of pain during the procedure. By validating these fears, nurses may help to improve the overall experience during a patient's mammogram. However, nurses should consider teaching patients how to use pain management alternatives, such as relaxation, deep breathing, and music therapy, during procedures that are known to cause pain and anxiety.

Either in person or through patient literature, the relationship between pain and anxiety should be discussed, and patients should be encouraged to ask for assistance before, during, and after the procedure. Limited scientific investigation has focused on the use of music to decrease pain and anxiety in women undergoing screening mammography. The purpose of this article is to describe a study that investigated the impact of music therapy on pain and anxiety during routine screening mammography.