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The Healing Power of Music

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### **The Healing Power of Music**

The value of holistic and individualized care in honoring a patient's story and promoting their quality of life is of the highest importance when providing nursing care. Nursing is more than just a profession, it is an art that is consistently changing and adapting, requiring critical and creative thinking to deliver high quality, safe care that is evidenced-based. Nurses must continuously seek innovative ways to enrich lives and enhance the healing process through interventions strongly supported by research. The purpose of this paper is to explore music as an alternative form of medicine and how it can be utilized as a therapeutic intervention in nursing care, as research shows benefits for patients in various populations and improved outcomes among them.

Research reveals there are no common terminologies for the therapeutic use of music in the context of nursing, but it is important to define it and distinguish it. To respect disciplinary boundaries, it is not characterized as music therapy, but is better known as the use of music as therapy in nursing. The function of music therapy lies within music therapists, who are "qualified professionals to develop music therapy process with domain-specific therapeutic skills, and using the music and their elements" (Rohr & Titonelli, 2016, p. 3839). When applied in nursing and its scope of practice, it has been referred to as music medicine, music listening, or music care, and is commonly used with other interventions. It is a process that often looks like identifying a goal in partnership with the patient, choosing pre-recorded music to achieve that goal, and measuring the effectiveness of the musical intervention (Waterworth & Rickson, 2017).

### **Background**

Utilizing music in healthcare is not new, and it is important to consider its presence in history when applying it in modern context. To heal in Old English means "to make sound, to

become healthy again” and the word sound is a “synonym for health and wholeness” (McCaffrey & Locsin, 2002, p. 73). The Chinese have the character for music included in the character for medicine (Harvard Heart Letter, 2009). The ancient Greeks worshipped Apollo as the god of music and medicine, recognizing the power of music in healing (McCaffrey & Locsin, 2002). Music has been used throughout cultures and generations for sacred rituals and as an outlet for emotions or suffering (McCaffrey & Locsin, 2002). Native Americans and Africans sang and chanted as a central part of their healing rituals (Harvard Heart Letter, 2009). Florence Nightingale, the pioneer of nursing, used music as a nursing intervention while caring for wounded soldiers in the Crimean War for pain management and emotional healing (McCaffrey & Locsin, 2002). She considered it a nurse’s responsibility to control the environment and create the best space possible for the patient’s healing (McCaffrey & Locsin, 2002). These are just a few examples of music being woven into healing over generations.

The connection between music and medicine was slowly lost in Western medicine as “the art of medicine gave way to the science of medicine” (Harvard Heart Letter, 2009, p. 4). However, complementary methods of treatment, including music and the arts, are gradually gaining back interest from patients and providers and showing a growing body of evidence and presence in healthcare today. The use of complementary and alternative medicine in health care was recommended by the World Health Organization in 2008, as more and more medical schools in the United States are beginning to offer complementary and alternative medicine courses (Li et al., 2013). Music in nursing aligns with the principles of the National Humanization Policy of the Unified Health System (Rohr & Titonelli, 2016). It is also recommended by the Agency for Healthcare Research and Quality and the National Institute on Drug Abuse as a complementary and multimodal therapy for pain management (Pathania et al., 2019). Nurses have a significant

role in symptom management, as patient outcomes are deeply connected with the quality of nursing care (Ciğerci et al., 2019). Music has space and potential in the field of nursing to transform outcomes and satisfaction for both patients and nurses.

### **Implications**

#### **General Benefits**

Music could become a fundamental part of nursing care aligning with evidence-based practice, based on the research that shows it to be an effective intervention and a powerful instrument to improve healing, health, and wellness. It offers coping mechanisms and stimulates creativity, affecting not only the mind, but the body and soul (Marques et al., 2020). Utilizing music as a therapeutic intervention empowers patients to heal from within, giving them a sense of control (McCaffrey & Locsin, 2002). In research and studies worldwide, music has been proven to have physical, mental and emotional, physiological, and spiritual effects, which connects it so strongly to holistic care. Its rhythmic, vibratory, and soothing effects have positively impacted vital signs, mood, motivation, the immune system, and the limbic system, while promoting relaxation and pain relief and decreasing anxiety, stress, and feelings of isolation (McCaffrey & Locsin, 2002). McCaffrey and Locsin (2002) found increased salivary immunoglobulin A levels and serum melatonin levels along with decreased muscle rigidity while observing people listening to music. Due to the wide variety of therapeutic benefits, music incorporated into a patient's plan of care is associated with decreased medication levels, adverse outcomes and complications (Rohr & Titonelli, 2016). Music as an intervention is not only beneficial for the patient, but also the nurse-patient relationship as it facilitates communication and expression of emotions, favors autonomy, and improves the quality of nursing care by increasing satisfaction levels and quality of life (Rohr & Titonelli, 2016). No evidence of

negative side effects have been reported from patients who have received music listening as an intervention in their care (Shaw, 2016).

### **Patient Populations**

There is growing evidence on the impact that music has in the care of a variety of patients. Music interventions can be applied to patients regardless of any age, with any clinical condition, and in any setting (Ciğerci et al., 2019). Whether the nurse is caring for a newborn or an elderly patient, or is providing that care in the hospital, an operating room, in an outpatient facility, or in a home, music can make a difference. The literature review highlighted some of the most common types of patients and conditions where music has been a successful as a therapeutic intervention, but its benefits are not limited and can overlap to reach any patient.

Sleep is essential as a basic human need, especially during times of illness when the body is fighting or recovering from a disease (Anggerainy et al., 2019). Inadequate sleep can lead to various physiological problems, including “impaired immune response, decline in wound healing, greater insulin resistance, increased perceptions of pain, and an increase in mortality” (Shaw, 2016, p. 181). This is detrimental for hospitalized patients who often experience sleep disruption from pain, noise, light, and interruptions from staff or other patients, and for hospitalized children experiencing an unfamiliar environment, being homesick, and altered routines (Anggerainy et al., 2019). In circumstances like this, music has successfully improved sleep in both children and adults. It can be used before bedtime, as a calming and relaxation technique to help the patient fall asleep while also promoting the quality of sleep (Anggerainy et al., 2019). It does this by acting as a distraction from pain, reducing anxiety with soothing properties, and aids in adaptation to the environment (Anggerainy et al., 2019). Particularly for children, music and lullabies are helpful in reducing restlessness and stimulating parasympathetic

nerves that can relax the muscles, while also stimulating hearing function which plays a role in nerve development (Anggerainy et al., 2019). For adults, utilizing music as a sleep aid can reduce the use of sedatives and their adverse effects on the patient (Shaw, 2016).

Complementary and nonpharmacological interventions like music listening assist in “restoring equilibrium of the individual with mental disorders” (Barcelos et al., 2018, p. 1054). In patients with mental disorders, music has a wide range of benefits. It can help improve cognitive functions, communication, and motor response, while helping to minimize symptoms that are caused by different pathologies (Barcelos et al., 2018). In addition, Barcelos et al. (2018) also found music and its therapeutic benefits for this specific population can help promote social engagement. This experience created by music helps not only to facilitate the care process but provide patients with mental disorders to get closer to restoration through more holistic treatment, stimulating and stabilizing the mind and emotions, and strengthening relationships.

Stress, anxiety, and pain perception can play a huge role in the recovery and outcome of patient undergoing surgical procedures. Ciğerci et al. (2019) music can positively impact and quicken this process towards recovery and discharge by reducing stress and anxiety, and improving compliance with treatment and participation in rehabilitation. There is a close relationship between the level of stress and anxiety a patient experiences preoperatively and their perception of pain and their need for analgesics and anesthetics during and after surgery (Ciğerci et al., 2019). As a nurse has the responsibility to identify and reduce causes of stress and anxiety, music can be utilized in care to accomplish this by reducing the level of cortisol in the body, stabilizing vital signs, and quickening the healing process (Ciğerci et al., 2019). McCaffrey and Locsin (2002) discovered that patients who received music listening therapy before and during surgery required less anesthesia and woke up with fewer side effects.

When caring for patients with cancer, the incorporation of nonpharmacological therapies played a vital role in addressing factors that pharmacological treatment cannot fully cover, including pain, anxiety, and depression (Esplen et al., 2020). Ciğerci et al. (2019) found that untreated pain leads to decreased, quality of life, longer hospital stays, and increased mortality rates. Pain can increase anxiety, which stimulates secretion of epinephrine and norepinephrine, then increasing blood pressure, heart rate, respiratory rate, and cardiac need for oxygen (Wurjatmiko, 2019). To combat these effects, music can inhibit transmission of the pain stimulus by activating the parasympathetic system and the “natural analgesia” in the body, known as endorphins, to alleviate the pain and anxiety and trigger relaxation (Wurjatmiko, 2019, p. 16). Music is able to improve mood and provide increased control and distraction by offering an escape from normal hospital routines and sounds (Keenan & Keithley, 2015). Music-oriented interventions have broad applicability in this patient population, helping cancer patients manage their symptoms and live a higher quality life.

Similarly to cancer patients, hemodialysis patients also experience a high level of stress, anxiety, and depression (Fernandes & D’silva, 2019). Music is a resource that can help patients cope with their conditions. Research from Fernandes and D’silva (2019) showed the characteristics of the music, including the rhythm, tonality, and intensity, stimulate an emotional reaction and can relieve manifestations of anxiety, stress, and depression. Many patients struggle with the difficulty that comes with the time they spend in dialysis, as it is a lifelong therapy, but music can help in soothing and consoling the patient and creating space for their mind and soul to wander from the pain or stress they might be experiencing (Fernandes & D’silva, 2019). Incorporating music as therapy in a study of hemodialysis patients was effective in reducing the level of depression, anxiety, and stress (Fernandes & D’silva, 2019).

In the ICU when patients are being weaned off mechanical ventilation, music has been shown to have promising benefits during this process. The distress from the weaning period can increase breathing workload and fatigue, lengthening the time it takes to successfully wean the patient, resulting in increased length of stays and higher costs (Park & Park, 2019). Sedatives and analgesics are used to manage these distressing experiences. However, clinicians want the patient to be as alert as possible by diminishing doses of sedatives in order to stimulate their spontaneous breathing and avoid the harmful side effects of respiratory depression and weakened respiratory muscles (Park & Park, 2019). Music not only reduces stress, anxiety, agitation, and the need for sedatives, but has also been found to increase patients' awareness of their surroundings, which has been proven to be associated with a more successful weaning experience (Park & Park, 2019).

The benefits of music have been shown to be particularly promising for diseases like cirrhotic liver and end stage liver disease, where there is a compromised metabolic pathway (Pathania et al., 2019). This is particularly relevant as "inpatient admissions for these diagnoses total 700,000 of all annual hospitalizations" (Pathania et al., 2019, p. 10). This population of patients is much more vulnerable to analgesia toxicity from altered drug metabolism as a result of their hepatic impairment (Pathania et al., 2019). Supplemental nonpharmacologic treatments are important for safer and more effective pain management and a decrease in dependence on medications (Pathania et al., 2019). When offered music interventions, these patients showed reduced pain intensity and improved patient satisfaction (Pathania et al., 2019). Based on these results and results of various other studies, music shows promising benefits for the opioid pandemic that impacts over 2 million Americans (Pathania et al., 2019). Utilizing music in the plan of care for liver disease patients uses a more holistic, patient-centered approach that

increases their quality of life and can offer healthcare providers alternative options for pain management.

Music is good for the heart, as it helps relieve stress, lower blood pressure, and facilitate recovery from cardiac procedures, heart attacks, or strokes (Harvard Heart Letter, 2009). Massachusetts General Hospital, University of Wisconsin-Milwaukee, Abbott Northwestern Hospital in Minneapolis, University of Maryland Medical Center in Baltimore, and a study from Hong Kong all identified better outcomes and more positive benefits for cardiovascular patients who received music as an intervention, as opposed to those patients who did not (Harvard Heart Letter, 2009). Benefits found were less anxiety, reduced pain, less distress, increased blood flow, lowered heart rates, sleep improvements, and lowered systolic blood pressure by 12 points and diastolic pressure by 5 points (Harvard Heart Letter, 2009). In addition to these benefits, music can be useful in blocking out alarms or distracting hospital sounds, act as a coping strategy, and convey a feeling of control (Harvard Heart Letter, 2009).

### **Implementation**

In order to maximize its benefits in diverse populations and settings, it is important to make sure music is utilized safely and efficiently when used as a nursing intervention. There is no universally decided method for applying music as an intervention in care, but there is existing research to build off of and future research is needed. The nursing process provides the framework for applying music in nursing while respecting the uniqueness of each patient and partnering with them to achieve the desired outcome (Waterworth & Rickson, 2017). Using music as therapy must be done in close partnership with the patient, which strengthens the bond between nurses and patients. This allows nurses to manipulate the environment with individualized music to create a more comforting space for their patients to heal. (McCaffrey &

Locsin, 2002). Music is a patient-centered approach involving a foundational knowledge of therapeutic properties of music and how to implement it, but unfortunately barriers do exist and many nurses lack the knowledge and training necessary (Esplen et al., 2020).

### **Methods of Intervention**

Music is a noninvasive, nonpharmacological, and well-tolerated therapeutic tool that is easily accessible and easy to apply. Each person responds differently to music, which can often be due to past associations or experiences that should be considered during the assessment phase (McCaffrey & Locsin, 2002). Throughout this process, effectiveness of the music intervention should always be evaluated by assessing different measures before, during, and after the intervention. Different screening tools and scales common among nurses could also be useful in assessing some of the measurable outcomes. There are strategies and methods used in past studies that could be useful in drawing from and adapting toward the patient, setting, and resources available.

Even with a lack of best practice guidelines, there are six important principles to consider when applying music with the nursing process. These principles include intent, authentic presence, wholeness, preference, entrainment, and situating the patient (McCaffrey & Locsin, 2002). Intent means that the music should align with the goal or outcome to be achieved that is set by the patient and nurse together (Waterworth & Rickson, 2017). Authentic presence promotes communication and the therapeutic relationship as the nurse is engaged with the patient and the moment, encouraging them to listen carefully and express their response (Waterworth & Rickson, 2017). The principle of wholeness refers to the nurse evaluating the entirety of how the music affects the patient, looking at physical, emotional, psychosocial, and spiritual impacts while considering current circumstances and past experiences (McCaffrey & Locsin, 2002).

Preference is a key part of the process, as the patient's choice for type of music and method of delivery best suited for them must be prioritized in order for it to be effective. It is imperative that each experience be individualized to meet the preferences of the patient (Waterworth & Rickson, 2017). The principle of entrainment claims it is best to begin the session with music that most closely represents the patient's mood or condition, then gradually change to music that more closely represents the mood or condition that is desired to be achieved (Waterworth & Rickson, 2017). The last principle is situating the patient, where it is important to assist the patient into a position, physically and mentally, to be ready to receive the music and create a positive attitude towards it and the benefits it offers (Waterworth & Rickson, 2017).

Music is highly personal, so the type of music chosen for the nursing intervention depends heavily on the goal of the intervention and the preferences of the patient. Identifying these preferences is an opportunity to develop and strengthen the therapeutic relationship and communication between the nurse and the patient to discover what type of music is meaningful to them. This could include asking the patient how they feel about different genres, different artists, songs with or without lyrics, and whatever the patient finds pleasant or unpleasant. Music with nature sounds could also be explored as Harvard Heart Letter (2009) discovered those sounds have been associated with making patients feel less restricted to a hospital room. If the goal is aimed towards relaxation or a calming effect, it is best to pick soft and soothing melodies, but if the patient is seeking a stimulant to boost energy or motivation, it might be helpful to include music that is more energizing or percussive (Harvard Heart Letter, 2009). For soothing and calming outcomes, recommended song qualities include a tempo of 60-80 beats per minute matching the average heart rate, played at a volume of 30-40 decibels, and without strong or dramatically changing rhythms or percussion should be used (Shaw, 2016).

The avenue to deliver music as an intervention depends on the resources available or affordable to the nurse or facility. Semi-fowler is the recommended position for the intervention and 30-minute increments is the recommended time for each session (Wurjatmiko, 2019). However, it should always be adapted and individualized to the patient to ensure intervention success as much as possible. Keenan and Keithley (2015) found pre-recorded music was used by nurses most commonly throughout the research, and online streaming systems or apps such as Pandora Radio were also common among studies, offering a wide variety of selections readily available. Another option involves a collaborative approach where nurse researchers create a repertoire of songs selected and organized, allowing patients to choose their preferences from that selection, which might be a project that requires more time and funding to implement (Rohr & Titonelli, 2016). Music could be delivered and listened to through mobile phones, portable music players, computers, tablets, or television systems with channels devoted to different genres of music through headphones or speakers are just some options available. Headphones were found especially useful to help filter out other noise distractions, providing the patient a more focused experience within the intervention (Pathania et al., 2019). For any device kept in patient rooms and used for other patients, infection control issues would need to be addressed (Shaw, 2016).

### **Costs and Barriers**

There is a high willingness and interest in music as a nursing intervention, but there is a lack of education and training for it. As a result, nurses may feel unequipped to utilize this complementary therapy. Esplen et al. (2020) found that 80% of nursing students voiced a desire to have complementary interventions included in their nursing school curriculum because they expressed a willingness to use alternative methods of therapy in their future practice. Even

though it is a generally low-risk and well-tolerated intervention, an ethical approach is required throughout the training and delivery process to ensure safety of the patients and prevent any negative reactions that could occur (Esplen et al, 2020). In order to make this happen, there would most likely be a cost for education and training implementation in facilities, however, this could be considered cost-effective when considering the treatment costs that might be saved and potential for decreased length of hospital stays (Waterworth & Rickson, 2017). Other perceived barriers that arose in research included, budget constraints, lack of knowledge, lack of tools, lack of expert personnel, lack of time or appropriate space, and lack of interest (Esplen et al, 2020). In a study of oncology nurses, more than half responded with motivation to learn how to implement music in their nursing care if specific conditions were present in their facility (Esplen et al, 2020). To implement a change in practice such as this, encouraging uptake should include “management support, appropriate tailoring, and opportunity for coaching and feedback” (Esplen et al., 2020, p. 386). Other helpful support for implementation might include in-services or continuing education programs that teach the therapeutic benefits of music and how to effectively integrate into the plan of care, providing nurses the opportunity to improve and advance their professional role (Esplen et al, 2020). In addition, administration protocols for the intervention, data collection procedures, and a script for informing patients about the intervention could be beneficial in the development of the intervention in a facility (Pathania et al., 2019). When implementing music as a therapeutic intervention, important aspects to measure and incorporate in the beginning of the process are attitude, awareness, knowledge of, perceived barriers, and motivation to learn (Esplen et al, 2020).

### **Conclusion**

Utilizing complementary and alternative treatments in nursing is important because it combines “nursing science and nursing art, two core dimensions of the profession” (Li et al., 2013, p. 549). Promoting humanization and holistic care, it is a powerful contributor to desired outcomes of treatments, enhancing well-being, supporting values, and meeting a patient’s physical, psychological, mental, and spiritual needs. Music as an intervention in nursing is gaining interest and popularity, but requires more expansive and rigorous investigations on outcomes, methods of delivery, and other factors, in order to use it safely and most efficiently (Keenan & Keithley, 2015). This research would help to create educational or training programs and provide resources necessary to empower and equip nurses in utilizing this promising intervention in their plans of care. Music listening can help “to hear the inner landscapes of our bodies, minds, and spirits” and “can lead us to a realization of health and wholeness” through the “harmonious expressions of humanity” (McCaffrey & Locsin, 2002, p. 76). Holistic care is a central practice of nursing, and a patient-centered, individualized approach to music medicine can unlock potential to transform care, improve patient outcomes with symptom management, increase patient satisfaction and quality of life, and strengthen bond and trust in the nurse-patient relationship.

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