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Tracey J. Elliott
Cleveland State University

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The Appearance and Effects of Music Therapy in the Solid-Organ Transplant Unit

Patients admitted to the solid-organ transplant unit face a plethora of challenges physically, emotionally, and psychologically. Risk of infection, perception of pain, depression, surgery complications, and exhaustion are just a few hardships that a patient may face while hospitalized. Patient need areas then serve as goal areas for the hospital support staff. While intervention is provided to patients in a variety of forms, music therapy is an effective means of treatment due to its multi-faceted nature; a music therapist can address a variety of goal areas with any given patient. This paper will examine the music therapy process within the solid organ transplant unit, common goal areas – such as pain, mood, and anxiety – and intervention methods and techniques for effective treatment.

Music Therapy Process

Once a patient has been referred for music therapy, a music therapist's assessment of the patient begins immediately. Communication with the referral source provides important information regarding a patient's emotional and physical well-being before the music therapist enters the room. A patient's age, availability, and medical history are all factors that influence a session. If all patient factors are taken into consideration before entering the room, the implementation of music intervention will be most effective (Colwell & Hanson-Abromeit, 2010). Once patient information is collected, and before entering the room, sanitation is the music therapist's primary concern. Patients in the solid organ transplant unit are at a high risk of nosocomial infection. According to the World Health Organization's *Prevention of hospital-acquired infections* (2002), nosocomial infections add to the emotional stress of a patient and can lead to disabling conditions that may affect quality of life. A music therapist engaging in preventative measures such as sanitizing hands and instruments before entering a patient's room can be an effective means of disease prevention (Legendre & Pascual, 2008).

A music therapist on the solid organ transplant unit must also determine a goal area to address within a session. The collection of pre-session data, rated on a Likert scale, offers important insight on a patient's perceived physical and emotional state (Colwell & Hanson-Abromeit, 2010). Research has established an emerging collection of goal areas based on the common needs of patients admitted to the solid organ transplant unit. According to Butt, Kuntz, and Weinland (2015), patients are prone to exhibit symptoms of depression and anxiety after a transplant, which leads to a decrease in quality of life during the recovery period. From this, one can conclude that addressing mood and anxiety in solid-organ transplant patients would improve the likelihood of a healthy recovery. Madson and Silverman (2010), as well as Ghetti (2011), acknowledged that decreasing

perception of pain is a patient need area that has a persuasive impact on a patient's quality of life and length of recovery time. Due to evidence that music therapy can decrease pain and anxiety and can improve mood, the following sections will explore the role of music therapy intervention in addressing these goal areas in solid-organ transplant patients.

Pain

A patient's perception of pain plays a significant role during their hospitalization and is a common goal area for a music therapist to address (Madson & Silverman, 2010). Perception of pain can affect both a patient's emotional and physical well-being. Due to its prevalence in the solid-organ transplant unit, reducing perception of pain has been approached by music therapists in a variety of ways. In 2011, Ghetti conducted a study to determine the effects of active music engagement and emotional-approach for coping with pain for patients receiving post-operation liver and kidney transplants. Each patient was asked to rate his or her pain on a scale of 0 to 10 both pre- and post-session and was assigned to one of three groups: 1) the group that would only receive active music engagement (AME); 2) the group that would receive both emotional-approach coping and active music engagement (AME/EAC); or 3) the control group. For the AME group, patients were encouraged to select a song from a list provided by the therapist. Once the song was selected, patients were offered a variety of instruments and were encouraged to actively participate in the music facilitated by the music therapist. Participation could include physical movements, singing, or playing. Participants in the AME/EAC group not only received the same active music engagement intervention, but were also encouraged to share their music preferences and to discuss their thoughts on the selected songs and how it related to their current circumstances. Results of this study indicated that the AME group reported statistically significant decreases in pain (3.78 to 2.17) while the AME/EAC and control group did not. The results of this study may indicate that active music engagement serves as an effective means of reducing perceived pain but that actively discussing a patient's hospitalization may reduce this positive effect. The reason behind this ineffectiveness may revolve around the concept that, because the patient's attention is drawn to their situation, the attention is then directed toward the circumstances which put them in the hospital originally. Ghetti's results may imply that lyric analysis and facilitated discussion may not be an effective means of reducing perceived pain. However, in a study by Tyler Hogan (2015), a similarly designed coping-infused dialogue, provided alongside active music engagement, resulted in a significant decrease in patient perceived pain. The results of these two studies indicated that coping-centered dialogue may or may not be effective in decreasing patient perceived pain when provided with music therapy intervention.

A study conducted by Madson and Silverman (2010) aimed to determine the effect of music therapy on a variety of solid-organ transplant patient need areas, including patient perception of pain. Fifty-eight participants received 15 to 35 minutes of music therapy intervention that included the playing of patient-preferred music and encouraging verbal interaction and participation of the patient. Posttest scores revealed that patients reported a statistically significant decrease of $p < .01$ in perceived pain, indicating that the playing of patient-preferred music is an effective means of reducing pain. Results of a study by Boldt (1996) revealed that the more music therapy sessions a patient received, the higher the likelihood of a reported decrease in pain. The findings of these studies indicate that music therapy is an effective means of reducing a solid-organ transplant patient's perception of pain and that continued visitations with a patient may result in more frequently reported decreases in pain. Additionally, coping-centered dialogue may or may not be effective in decreasing patient perceived pain when provided with music therapy intervention.

Mood

A patient's emotional well-being drastically impacts their overall hospital satisfaction and recovery duration. The stress that exists during the transplantation process may lead to noncompliance with the hospital staff and may increase the risk of infection (Armstrong, Corbett, Neuberger, Parker, & Webb, 2013). As such, music therapy can facilitate the improvement of mood, which can lead to an increase in quality of life; not only for the patient, but for family, friends, and the hospital support staff. In Madson and Silverman's (2010) study, the frequency of patients who demonstrated flat and bright facial affect was recorded both pre- and post-session. The number of patients who demonstrated flat affect decreased from 28 to 16 post-session, and the number of patients who demonstrated bright affect increased from 22 to 40 post-session. These results indicated that the presentation of live, patient-preferred music had a positive impact on mood. It is important to note that these results may be attributed to an interpersonal relationship with the music therapist, not the music therapy intervention. However, the results of Hogan's (2015) study also indicated improvements in mood, with an increase in positive affect, collected from the means of affect-related questionnaire answers, from 28.25 to 33.98 post-session and a decrease in negative affect from 30.92 to 25.52 post-session. Ghetti's (2011) results indicated that both the AME and the AME/EAC groups reported increases in positive affect (35.89 to 37.11 and 33.91 to 38.91, respectively) and decreases in negative affect (19.22 to 14.56 and 16.18 to 12.73, respectively). The results of these studies indicate that music therapy intervention is an effective means of improving solid-organ transplant patients' mood and, in regards to Ghetti's results, may be more effective in doing so than in the reduction

of perceived pain.

Anxiety

Anxiety, while not as frequently reported in music therapy research in relation to the solid organ transplant unit, is closely related to the overall well-being of a patient. Anxiety can manifest in a variety of forms such as agitation, physical discomfort, or an inability to sleep. Regardless of its form, anxiety detrimentally impacts a patient's recovery and therefore is an important goal area for a music therapist to address. Frequently, addressing anxiety with music intervention manifests through facilitated relaxation techniques. In a study by Boldt (1996), the implementation of music paired with guided imagery and progressive muscle relaxation resulted in an increase in reported levels of relaxation and a decrease in reported levels of physical discomfort. Madson and Silverman (2010), utilizing patient-preferred music, documented that patient self-reports indicated both an increase in relaxation and a decrease in anxiety. Daveson (2001) wrote that compositional, receptive/listening, improvisatory, and recreative methods of music therapy intervention are an effective way to reduce patient reported anxiety. Daveson's list of methods implies that outlets for self-expression, such as song-writing or patient improvisation on an instrument, may be compelling for a music therapist to facilitate. While not many studies report anxiety as it is affected by music therapy intervention, those that do indicate that music can decrease levels of anxiety and increase levels of relaxation in solid-organ transplant patients. One can infer that if a patient indicates an improvement in mood or a decrease in perceived pain, that his own anxieties, even if not consciously addressed, have also decreased.

Patients admitted to the solid-organ transplant unit face a plethora of challenges. However, if a patient is referred for music therapy, intervention by a certified therapist can make a significant impact on the perception of pain, improvement of mood, and reduction of anxiety. A music therapist engages in preventative measures of sanitation to reduce risk of infection, assess patient need areas, and treat determined goal areas. All of the aforementioned studies indicate that music therapy is an effective means of treatment in the common need areas of solid-organ transplant patients and should therefore be utilized in order to improve patient quality of life while hospitalized.

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