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Perspectives on Music Therapy in Adult Cancer Care: A Hermeneutic Study

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Purpose/Objectives: To explore perspectives on music therapy as a nursing intervention in adult cancer care and to expand and integrate knowledge and understanding about music therapy as an adjunctive intervention in adult cancer nursing care.

Data Sources: Published nursing articles.

Data Synthesis: Medical and nursing journals have reported on research related to music and its effect as a nursing intervention. However, this research often lacks a musical context (i.e., knowledge and understanding from a musical perspective).

Conclusions: Music therapy is not a consistent concept. Perspectives on the meanings of music therapy vary according to knowledge and scientific orientation. The perspective may influence the character and methodology of the music therapy intervention as well as the understanding of its results.

Implications for Nursing: To fully develop music therapy as an adjunct intervention in adult cancer care, interdisciplinary cooperation between nurses and music therapists should be supported on clinical and educational levels.

Music therapy is a field of knowledge and proficiency studied at the university level and practiced by music therapists in a variety of medical and healthcare settings through educational and social programs. Music therapy training is comprised of music theory and music skill, psychology and related subjects, supervision and personal psychotherapy, and, of course, music therapy. Although relatively limited in number, music therapists as a professional group keep up a lively international dialogue and exchange on training and research programs (Voices: A World Forum for Music Therapy, n.d.), and international music therapy research is carried out in a number of countries (Aldridge, 1996, 2002; Standley, 1995; Wheeler, 2005). Music therapy as a field of knowledge belongs to the scientific paradigm of art and human or social sciences.

Background

A cancer diagnosis brings unpredictability to patients' lives and causes great physical and mental strain, even after treatment is concluded (Cohen, Cullen, & Martin, 1982). A cancer experience has radical consequences and is an existential challenge to the patient and family as well as to the caring staff (Arman & Rehnsfeldt, 2003; Holland & Lewis, 2000; Lindholm, Rehnsfeldt, Arman, & Hamrin, 2002). The call for suffering relief and improved quality of life (QOL) has prompted medical and psychosocial advances in care and rehabilitation (Holland, 2003; Twycross & Wilcock, 2002). The development of modern cancer care has brought openness to new trends of integration and holistic thinking (Ben-Arye, Frenkel, & Margalit, 2004). Integration of scientific knowledge and a holistic view of the patient with cancer may be regarded as a new medical paradigm (Block, Block, & Gyllenhaal, 2004; Geffen, 2004), because, as a result of modern medical and technical advances, many patients are well informed and prepared to take an active part in their healing and recovery process, including the exploration of new treatment strategies (Dong & Cassileth, 2005; Markman, 2001). A growing number of patients with cancer turn to complementary and alternative medicine therapies as part of their treatment plan (Lawenda, 2006; Yates et al., 2005).

The experience of cancer is individual and private. It may affect mood, identity, and sense of well-being during the whole course of the illness (Cohen, 1982; Vachon, 2007). A music experience also is individual and private, closely related to mood, identity, and well-being. The idea that patients with cancer may benefit from musical expression and musical experiences has been supported by music therapy research (Aldridge, 2002; Bonde, 2005; Burns, 2001; Hanser, 2005). Music

Quick Facts: Sweden

Geography and population: Sweden is a Western European country with an area of 450,000 km², third largest in the region. The population in 2008 was 9.3 million.

Government: Sweden is ruled by a constitutional monarchy and a parliamentary democracy.

Healthcare system priorities and programs: Sweden's entire population has equal access to healthcare services. The Swedish healthcare system is government funded and heavily decentralized. Compared with other countries at a similar development level, the system performs well with good medical success in relation to investments and cost restrictions. The life expectancy of the Swedish population continues to rise. In 2008, the life expectancy was 79 years for men and 83 years for women; both attributed to falling mortality risks for heart attacks and strokes. A little more than 5% of the population is 80 years or older, which means that Sweden has, proportionally, Europe's largest older adult population. Chronic diseases that require monitoring and treatment—and usually a lifetime of medication—place high demands on the system. One positive development is that almost 85% of the population is nonsmoking. However, the increasing number of overweight and obese children and teenagers is an issue that the healthcare system is examining more closely.

Education: Schooling in Sweden is mandatory for all children aged 7–16 years. More than 35% of people aged 25–64 years have a college education.

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therapy research is rarely reported in cancer care literature. Medical and nursing journals have reported on research related to music and its effect as a nursing intervention (Cepeda, Carr, Lau, & Alvarez, 2006; Danhauer et al., 2007); however, this research often lacks a musical context (i.e., knowledge and understanding of a musical perspective).

Reflecting an interest in implementing music therapy as a nursing intervention in cancer care, nursing articles on the subject reveal a different perspective on music therapy from that of professional music therapy. This discrepancy is intriguing and of obvious interest to music therapists. The main objective of this article is to describe and explore perspectives on music therapy and its potential as a nursing intervention in adult cancer care. A second objective is to expand and integrate knowledge and understandings about music therapy as an adjunctive intervention in cancer care.

Methods

A structured review concerning information, views, and understanding of music therapy as a nursing intervention in adult cancer care was performed. Issues addressed included understanding of music therapy, present preconceptions, sources of information, and expectations of music therapy.

Data Collection

To explore how music therapy is referred to within a cancer nursing context, data on music therapy as a nursing intervention from international nursing journals were collected. Data for the review were comprised of articles published from 1985–2006 with the National Library of Medicine's (2007) Medical Subject Headings (MeSH) and CINAHL® headings of *music*, *music therapy*, *cancer*, *oncology*, and *palliative care*. A search was conducted in PubMed, AMED, CINAHL, PsycINFO, and MEDLINE® with MetaLib (Karolinska e-library) electronic databases. Additional searches were conducted to identify related articles in nursing journals.

Data Selection

Inclusion criteria were original articles in nursing journals, discussions of music as a nursing care intervention (i.e., music therapy), and interventions aimed at adult patients with cancer. Article exclusion criteria were publications in music therapy journals and those pertaining to geriatric care and palliative care.

Data Analysis

Selected articles were analyzed in accordance with hermeneutic methodology, a qualitative approach. The intention of the study was to identify perspectives on music therapy as a nursing intervention in adult cancer care (i.e., to explore how music therapy is described in adult cancer nursing care).

Results

Music Therapy as a Nursing Intervention

Twelve articles investigating music therapy as a nursing intervention were analyzed (see Table 1). Music therapy as a nursing intervention is introduced primarily for symptom relief such as anxiety, pain, and side effects of chemotherapy (i.e., nausea and vomiting) (Beck, 1991; Frank, 1985; Kwekkeboom, 2003; Smith, Casey, Johnson, Gwede, & Riggin, 2001; Updike, 1990; Zimmerman, Pozehl, Duncan, & Schmitz, 1989). Research studies and randomized controlled trials have been conducted to investigate the effectiveness of a music therapy intervention. Studies measured physical parameters as well as psychological parameters (Beck; Ezzone, Baker, Roselet, & Terepka, 1998; Frank; Haun, Mainous, & Looney, 2001; Kwekkeboom; Sabo & Michael, 1996; Smith et al.; Updike; von Allmen, Wasem, & Fischer, 2004; Zimmerman et al.). Interest has been paid to optimal scheduling and duration of listening

Table 1. Articles Investigating Music Therapy as a Nursing Intervention

Author	Article Title	Journal Name
Beck, 1991	The therapeutic use of music for cancer-related pain	*Oncology Nursing Forum*
Bozuk et al., 2006	Does music exposure during chemotherapy improve quality of life in early breast cancer patients?	*Medical Science Monitor*
Ezzone et al., 1998	Music as an adjunct to antiemetic therapy	*Oncology Nursing Forum*
Frank, 1985	The effects of music therapy and guided visual imagery on chemotherapy-induced nausea and vomiting	*Oncology Nursing Forum*
Haun et al., 2001	Effect of music on anxiety of women awaiting breast biopsy	*Behavioral Medicine*
Kwekkeboom, 2003	Music versus distraction for procedural pain and anxiety in patients with cancer	*Oncology Nursing Forum*
Sabo & Michael, 1996	The influence on personal message with music on anxiety and side effects associated with chemotherapy	*Cancer Nursing*
Siedliecki & Good, 2006	Effect of music on power, pain, depression, and disability	*Journal of Advanced Nursing*
Smith et al., 2001	Music as a therapeutic intervention for anxiety in patients receiving radiation therapy	*Oncology Nursing Forum*
Updike, 1990	Music therapy results for ICU [intensive care unit] patients	*Dimensions of Critical Care Nursing*
von Allmen et al., 2004	Importance of timing of music therapy in chemotherapy of cancer patients	*Praxis*
Zimmerman et al., 1989	Effects of music in patients who had chronic pain	*Western Journal of Nursing Research*

as to possible differences in effect between music styles (Beck; Bozuk et al., 2006; Ezzone et al.; Frank; Haun et al.; Kwekkeboom; Sabo & Michael; Siedliecki & Good, 2006; Smith et al.; Updike; Zimmerman et al.). Research has been performed and presented according to measurable objectives using quantitative designs (Allmen et al.; Beck; Bozuk et al.; Ezzone et al.; Frank; Haun et al.; Kwekkeboom; Sabo & Michael; Siedliecki & Good; Smith et al.; Updike; Zimmerman et al.). Results indicate that listening to music may reduce anxiety (Haun et al.; Sabo & Michael; Updike) and the degree and length of chemotherapy-induced nausea and vomiting (Frank; von Allmen et al.). Similar results have been shown concerning the experience of pain (Beck; Siedliecki & Good; Zimmerman et al.). Despite positive indications for listening to music as a nursing intervention, results are not consistent (Kwekkeboom; Smith et al.). Studies often have small sample sizes and demonstrate limited evidence. Design differences make overall analysis and evaluation difficult. In most cases, additional investigation is recommended (Beck; Bozuk et al.; Frank; Haun et al.; Kwekkeboom; Sabo & Michael; Smith et al.; Updike; Zimmerman et al.). The music therapy nursing intervention predominantly refers to listening using a portable cassette or CD player and headset (Beck; Bozuk et al.; Ezzone et al.; Frank; Haun et al.; Kwekkeboom; Sabo & Michael; Siedliecki & Good; Zimmerman et al.). Music therapy is attractive as a nursing intervention because it is regarded as readily available, noninvasive, low cost, and easy to distribute (Beck; Sabo & Michael; Siedliecki & Good; Smith et al.; Updike; Zimmerman et al.).

Understandings

Music therapy is presented in varying ways. According to a behaviorist standpoint, music therapy is the "application of music by a therapist to seek specific changes in an individual's behavior" (Frank, 1985, p. 48). Another definition is "a behavioral science in which music is used to affect an individual's physical, emotional, and behavioral well-being, which leads to healing" (Ezzone et al., 1998, p. 1551). The Nursing Interventions Classification System (McCloskey Dochterman & Bulechek, 2004) defines music therapy as "using music to help achieve a specific change in behavior, feeling, or physiology" (p. 434). Haun et al. (2001) stated that "music has gained support in today's literature as an intervention for decreasing anxiety levels in a variety of clinical situations" (p. 127), and that the music therapy intervention "could significantly reduce the anxiety level of these women, resulting in a more comfortable and less stressful experience for the patient" (p. 131). A music-related and more holistic approach is reflected in the 1978 definition by Munro and Mount, which states that "music therapy is the controlled use of music, its elements, and their influences on the human being to aid in the physiologic, psychological, and emotional

integration of the individual during the treatment of an illness or disability" (p. 1029).

Other holistic approaches include "a nursing intervention that supports the holistic care of the critically ill patient" (Updike, 1990, p. 39) and "a way of complementary intervention . . . to improve quality of life of cancer patients with terminal disease" (Bozuk et al., 2006, p. 201).

Effects

Music function is ascribed to presumed physical and psychological effects. Frank (1985) stated that, "Physiologically, there is scarcely an organ in the body that does not experience the effects of music" (p. 48), which explains physical reactions elicited by music as a result of arousal of the autonomic nervous system. Psychologically, music affects mood "because it contains certain suggestive and persuasive elements. The pitch, intensity, and timbre of music stimulate unconscious automatic responses at low brain levels" (Frank, p. 48). Music is ascribed as the "capacity . . . to precipitate imagery and intellect through its associational ability" (Frank, p. 48). Zimmermann et al. (1989) explained the gate control theory of pain and claimed that "music acts as a diversional stimulus that refocuses the attention given to pain on something more pleasant" (p. 299).

Updike (1990) described music as a nonverbal medium that "can move through the auditory cortex to the limbic system, thereby modulating emotional responses" (p. 41), and that "music is also speculated to activate the flow of biochemical and electrical memory material across the corpus callosum, enabling left and right hemispheres of the brain to work in unity rather than in opposition" (p. 41). Updike also stated that "music therapy effectively reduces anxiety, stress, and the experience of pain" (p. 41). Some researchers point out that, even historically, music has been recognized for its ability to affect physiologic and psychological responses and enhance healing processes (Beck, 1991; von Allmen et al., 2004).

Interventions

In all basic data articles, the music therapy interventions refer to music listening. Eleven are specific about listening via headphones, and one refers to "free-field" listening (i.e., in the room without earphones) (Bozuk et al., 2006). A few studies suggest specific music choices, including the Music Rx program, specifically developed by music therapist Helen Bonny for a study on patients in intensive care units (Updike, 1990), electric harp music (Sabo & Michael, 1996), or "antifrantic" music, designed particularly for relaxation (Zimmerman et al., 1989). Most articles were not specific regarding the music, referring to general selections of varying musical styles, most often instrumental or classical. Popular selections, including jazz, blues, pop, rock and roll, classical, folk music, country western, easy listening, new age, big band, Spanish, and religious hymns, also were included (Beck, 1991; Ezzone et al., 1998; Frank, 1985; Haun et al., 2001; Kwekkeboom, 2003; Smith et al., 2001; Zimmerman et al.). The music, whether specific pieces or selections, is described by subjective characteristics such as soothing, relaxing, and sedative (Beck; Smith et al.; Updike; Zimmerman et al.). Updike, replicating the Music Rx programs, based music selections on "avoidance of compositions that contained dynamics capable of triggering fearful or compulsive imagery" (p. 39). Siedliecki and Good (2006) used a music protocol by music therapist Susan Hanser, whereby subjects made individual music choices according to general characteristics to match certain needs. Some researchers suggested self-selected music to best match the music with the patient (Ezzone et al., 1998; von Allmen et al., 2004). In several cases, patients were encouraged to bring familiar or favorite music (Ezzone et al.; Kwekkeboom; von Allmen et al.; Zimmerman et al.). The potential of music therapy as an adjunct nursing intervention was supported by rational accomplishment, exemption from harmful side effects, and calculated low costs. Music therapy was characterized as relatively simple, requiring minimal time or energy for implementation, and able to be used with a minimum of inconvenience (Ezzone et al.; Smith et al.; Zimmerman et al.). Therefore, nurses may independently initiate this intervention and play an active role in its implementation in several studies (Ezzone et al.; Beck; Siedliecki & Good; Zimmerman et al.). Various studies stressed that music is safe and free from harmful side effects (Beck; Siedliecki & Good; Updike; Zimmerman et al.).

Discussion

Methods

The current study was conducted on the basis of hermeneutic text interpretation (Kenny, Jahn-Langenberg, & Loewy, 2005; Patton, 2002), a natural choice with regard to the topic of this study to describe and explore perspectives on meanings of music therapy and its potential as an adjunct intervention in cancer nursing care. The search was performed by analyzing text material and describing a phenomenon within a certain context. Understanding of the text is possible only considering the whole context, and understanding of the context is facilitated by understanding the parts.

In this particular case, the phenomenon of music therapy may be seen as a part and oncology nursing as a contextual framework. In a wider perspective, music therapy may be seen as part of a contextual framework of music. Both parts and context are influenced by new ideas, thereby changing meanings and stimulating additional

progress. In accordance with hermeneutic philosophy, tacit knowledge and preconception have a natural influence on the explorative process. On one hand, personal experience of music therapy in adult cancer care may be beneficial to understand the particular clinical setting and conditions. On the other hand, strong personal prejudice could be disadvantageous because an orthodox approach could block the hermeneutic process. The authors have, therefore, aimed at curiosity and openness in relation to the analyzed material so that preconceptions do not hinder the hermeneutic process. This approach also is highly relevant in music therapy as a fundamental principle.

Results

Throughout history, people have used music as part of the healing and caring processes. This is still the case, and contemporary clinicians search to identify possible healing effects and factors (Schneck & Berger, 2006). In a review of studies on music therapy for the control of pain and anxiety in the intensive care unit, music was described as "a combination of rhythmic, harmonic, and melodic sounds that many people throughout history believed to have medical purposes" (Henry, 1995, p. 296). Postwar experiences of music, as beneficial in rehabilitation of traumatized soldiers, have inspired the development of modern music therapy. One particular reference recurring in nursing literature is Florence Nightingale's various comments about using the healing power of music in her care of the sick (Beck, 1991; McCaffrey & Locsin, 2002; Pope, 1995; Wilkins & Moore, 2004). Any intervention in oncology nursing care is based on an assumption of meaningful change for improvement of the patient's situation (e.g., alleviation of a defined symptom). From a nursing point of view, music therapy is the implementation of music listening as a means to achieve certain defined goals. The intervention is evaluated according to its effect that is measured or reported symptom relief.

Music therapy may be conceived in various ways (Petersen, 2005). A music therapy-oriented perspective is reflected in the following definition of music therapy by the World Federation of Music Therapy ([WFMT], 2006, p. 1).

> Music therapy is the use of music and/or its musical elements (sound, rhythm, melody, and harmony) by a qualified music therapist, with a client or group, in a process designed to facilitate and promote communication, relationships, learning, mobilization, expression, organization, and other relevant therapeutic objectives in order to meet physical, emotional, mental, social, and cognitive needs. Music therapy aims to develop potentials and/or restore functions of the individual so that he or she can achieve better intra- and/or interpersonal integration and, consequently, a better quality of life through prevention, rehabilitation, or treatment.

In 1988, the first international conference on music therapy in cancer care and palliative care was held (Martin, 1989) and was seen as a starting point for international networking among music therapists working with this particular population. Experience of clinical music therapy in cancer care and in palliative care has been documented in many countries (e.g., United States, Australia, Great Britain, and Germany) (Aldridge, 1994a; Aldridge, 2003; Burns, Harbuz, Hucklebridge, & Bunt, 2001; Dileo & Loewy, 2005). Music therapists encounter patients with cancer in all phases of the disease, and the therapeutic aim varies according to individual needs. Music therapy in a psychosocial context is offered for psychotherapy, symptom alleviation, and recreational, social, spiritual, emotional, or physical purposes. Music therapy as a nursing intervention predominantly refers to listening to music using a headset. This may be convenient, both by avoiding causing disturbances to others and reducing disturbance to the listener (Chlan, 2000). Listening with headphones also seals off external noise, which may support the listener's attention. However, the listener becomes secluded and alone. The experience cannot be shared. The music most often consists of prerecorded selections of various music styles. Although used as an independent variable, the actual music chosen is unclear and rarely discussed (Biley, 2000). The music seems to originate from nursing literature or from personal experience. Patients may choose from preselected music (Beck, 1991; Chlan; Coughlan, 1994; Frank, 1985; Johnston & Rohaly-Davis, 1996; Kemper & Danhauer, 2005; Kwekkeboom, 2003; Updike; 1990; Zimmerman et al., 1989) or bring their own music (Covington & Crosby, 1997; Ezzone et al., 1998; von Allmen et al., 2004). One study looked for "the right music," or *die richtige Musik* in German (Kammrath, 1989, p. 282). Oncology nursing literature also contains suggestions of other methods than listening (Jonas, 1994; Young-Mason, 2002). Biley (2000) makes a distinction between music listening and music therapy as the latter being the "participation in the creation of music for therapeutic purposes" (p. 669). From a holistic view, music is regarded as a universal language (Cook, 1986; Covington & Crosby; Halstead & Roscoe, 2002; Herth, 1978; Johnston & Rohaly-Davis); therefore, music therapy is meaningful, not least in oncology or end-of-life care, to people of all cultural backgrounds. Specific music pieces are suggested to match QOL-related "therapeutic goals" (i.e., relaxation, meditation, and spirituality) (Cook; Covington & Crosby; Halstead & Roscoe; Johnston &

Music therapists encounter patients with cancer in all phases of the disease, and the therapeutic aim varies according to individual needs.

Rohaly-Davis; Kemper & Danhauer; Updike). Particular music choices may reflect the intent to assist healing on many levels (i.e., the listening patient perceiving the music with all senses), revealing an implicit idea about music's potential to meet the individual on an emotional and spiritual level and an understanding of individual differences in relation to music. Nurses are, therefore, encouraged to initiate music listening (Beck; Cook; Ezzone et al.; Herth; Johnston & Rohaly-Davis; Kwekkeboom; Milton, 1998; Siedliecki & Good, 2006) and take an active part in music making (Covington & Crosby; Jonas).

From a rational behavioral perspective, applied music therapy interventions may be evaluated using common measurement instruments such as pain or anxiety scales. Outcomes may indicate effectiveness of the intervention, providing an evidence base. However, the interpretation of results will reflect the perspective of the researcher (Bozuk et al., 2006). Music therapy may be considered from a natural science standpoint, reflected in the MeSH tree location. Music therapy is organized as therapeutics, complementary therapies, and sensory art therapies; therapeutics and rehabilitation; and behavioral disciplines and activities or psychotherapy. A music therapy perspective is one of openness and creativity, whereby music is a core factor, its versatility reflecting the many different dimensions of humans.

Music therapy is about sharing exploration, expression, and experiences. Clinical music therapy methods include breathing and voice work, all kinds of musical instrument playing, music listening and reflection, body and movement, relaxation and meditation, and mixing modalities (i.e., music, movement, art, writing, and drama). The music therapist may play and sing favorite songs with the patient at the bedside, encourage personal song writing, musically support a patient's authentic movement, or the patient may create music to a piece of art. No music is found exclusively in music therapy; rather all kinds of music may be included in a music therapy context. As stated in the WFMT definition, music therapy is the use of music or its musical elements, sound, rhythm, melody, and harmony. Music aesthetics and musical qualities, authenticity, experience, and expression are important factors in music therapy. Music therapy is practiced with individual patients as well as patient groups. Setting and performance vary according to present needs (Bruscia, 1998; Heal & Wigram, 1992; Wigram, Pedersen, & Bonde, 2002).

The studies mentioned are detailed concerning research methodology and procedures. Results are carefully presented according to standard quantitative methods. Some studies have been randomized controlled trials with experimental and control groups. Investigations have monitored music listening modalities (i.e., listening through headset) with the following control conditions: no intervention (Ezzone et al., 1998; Haun et al., 2001; Sabo & Michael, 1996), distraction (book on tape) (Kwekkeboom, 2003), low-frequency, 60-cycle hum (Beck, 1991), or researcher-provided relaxing music or subject-preferred music compared with standard care (Siedliecki & Good, 2006). Attention was paid to implementation schedule, dosage (Chlan, 2000), and optimal duration for music listening (Beck, 1991; Ezzone et al.; Frank, 1985; Haun et al.; Updike, 1990; Zimmerman et al., 1989). Documentation included notions concerning the technical equipment (Beck; Ezzone et al.; Frank; Haun et al.; Kemper & Danhauer, 2005; Sabo & Michael; Smith et al., 2001; Updike); however, several authors did state that music therapy was easily administered by nurses (Beck; Ezzone et al.; Siedliecki & Good; Updike; Wilkins & Moore, 2004; Zimmerman et al.).

A music therapy perspective is one of openness and creativity, whereby music is a core factor, its versatility reflecting the many different dimensions of humans.

Basic data in this investigation presented studies on music therapy as a nursing intervention in adult cancer care. Results are measured in effect, that is, physiologic reactions possible to register and quantify (e.g., heart rate, blood pressure, finger temperature, pain, anxiety). In this way, music therapy was considered without a music or music therapeutic context. An observation of particular concern is the lack of music therapy sources among basic data references. Despite the fact that basic data deal with music therapy as an intervention in oncology nursing, fewer than 11% (38 of 353) of the references referred to a music therapy source that is an article from music therapy journal or authored by a registered music therapist; the great majority originated from nursing or medical journals. Some references seem old and might be regarded as outdated (Beck, 1991; Frank, 1985; Updike, 1990). Many nursing articles referred to historical sources and less often to updated music therapy data (Beck; Cook, 1986; Johnston & Rohaly-Davis, 1996; McCaffrey & Locsin, 2002; Sutherland, 2005; Young-Mason, 2002). Despite the interest in music therapy as a nursing intervention, neither music nor music therapy seemed to be acknowledged as separate subjects or fields of knowledge.

Several questions remain unanswered; however, a majority of researchers second the use of music as a nursing intervention. A number of different studies have been performed on music therapy as a nursing intervention in a variety of healthcare settings, which complicates the possibilities of an overall comparison. One conclusion is that studies generally have small samples and lack follow-up (Biley, 2000). Research indicated positive results concerning physiologic effects, stress, and state anxiety from exposure to music, but without statistical significance (Young-Mason, 2002). The results are brief

indications, stressing the need for additional investigation. The limited evidence of music's effectiveness is suggested to relate to lack of evidence rather than lack of effect (Evans, 2002). Despite a broad literature amount covering the application of music therapy, "a general absence of valid clinical research material from which substantive conclusions can be drawn" (Aldridge, 1994b, p. 215) exists.

Nurse Music Therapist

Most studies in the current data have been performed without consultation or cooperation from a music therapist. Hardly any nursing articles report on clinical or scientific cooperation between nurses and music therapists (Good et al., 2000). A few do suggest cooperation with a music therapist (Beck, 1991; Cook, 1986, Herth, 1978; von Allmen et al., 2004).

General nursing articles refer to a music therapist as a profession and music therapy as a work field, but state the scarcity of music therapists in hospitals (Chlan, 2000; Cook, 1986; Halstead & Roscoe, 2002; Herth, 1978; Kemper & Danhauer, 2005; McCaffrey & Locsin, 2002; Young-Mason, 2002; Zappa & Cassileth, 2003). Others introduce music or music therapy as a nursing intervention (Beck, 1991; Covington & Crosby, 1997; Evans, 2002; Ezzone et al., 1998; Halstead & Roscoe; Johnston & Rohaly-Davis, 1996; Milton, 1998; Siedliecki & Good, 2006; Updike, 1990; Zimmerman et al., 1989). One nurse, herself playing to patients, pointed out that her playing is different from that of a music therapist (Jonas, 1994). McCaffrey and Locsin (2002) stated that nurses' abilities to use music listening as an intervention "does not conflict with the need for other professionals who use music" (p. 71). The accessibility of music, its physical and psychological effects, and its harmlessness make music therapy attractive as an adjunct intervention in oncology nursing care.

Music therapy is described as a noninvasive, nonpharmacologic nursing intervention without harmful side effects that is inexpensive and easy to deliver (Evans, 2002). The effect of a music therapy intervention depends on accurate assessment, treatment goals, necessary resources, and the implementation of the music therapy intervention (Bruscia, 1998; Halstead & Roscoe, 2002). Identification and assessment of needs, therapeutic goals, and music therapy interventions may differ depending on professional skills, prior knowledge, or scientific orientation.

Conclusion

The prime aim of this study was not to discuss results or effectiveness of music therapy, but rather to explore perspectives that may influence the implementation of music therapy as a nursing intervention in adult cancer care. Nurses take an active interest in integrating music as an intervention in their clinical work, with an idea of music as a potential resource in nursing and therapy. Nurses, as well as music therapists, tend to turn to familiar sources in search of information. Music therapy is largely published in books and music therapy journals, rarely in nursing journals. Nursing is principally published in nursing journals, rarely in music therapy journals. Unawareness might prevent or hinder a dialogue between the professions.

Nursing and music therapy represent different areas of knowledge and science that is reflected in content and language. Reports on nursing studies carefully report on study methodology, while music remains a conception, often referring to a selection or a collection of musical pieces that are sometimes classified in genres (Beck, 1991; Frank, 1985; Updike, 1990; Zimmerman et al., 1989). An interest exists in determining the optimal dosage relating to the intervention duration (i.e., time length of music listening in headphones). In this way, music therapy is reduced to a technical matter. The results are measured in effect, that is, physiologic reactions that can be registered and quantified, such as heart beat, breathing, cortisol levels, and anxiety. According to music therapy theory and knowledge, the meanings of music and music therapy are far greater and broader. The difficulty of finding evidence for the use of music as a specific intervention for a certain condition is addressed in Cepeda et al. (2006) with the objective to evaluate the effect of music on acute, chronic, or cancer-related pain intensity, pain relief, and analgesic requirements. "Listening to music reduces pain intensity levels and opioid requirements, but the magnitude of these benefits is small and, therefore, its clinical importance is unclear" (Cepeda et al., p. 2). Cepeda et al. assessed only the effect of music on pain and opioid requirements. The authors suggested that the effect of music on other outcomes, such as anxiety, should be investigated as well. The combination of music and other nonpharmacologic therapies could have a synergistic effect to produce clinically important benefits on pain intensity or analgesic requirements and, therefore, deserves additional evaluation (Cepeda et al.).

This information highlights the question of whether traditional natural science research methods are appropriate when investigating something so multifaceted like music in relation to human needs. The issues of a patient with cancer are multifaceted, therefore necessitating a multiprofessional approach in cancer care. Still, reports on clinical or scientific cooperation between nurses and music therapists are scarce. The impression is that both professional groups perform clinical work and research studies with similar patient populations, but independently of one another. It seems that limited concordance exists between the professional groups. A possible explanation could be the basically different scientific and cultural perspectives. The authors believe that sharing information and broad understandings are of great importance for future development and

a prerequisite for multiprofessional cooperation. Integrated training courses and clinical cooperation between nursing staff and music therapists would be beneficial to optimize the implicit possibilities in music therapy as an intervention in adult cancer care.

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