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Honors and the Creative Arts in Nursing: Music Therapy to Decrease Anxiety in Critical Care Patients

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In nursing education, we strive for a delicate balance between the science and the art of nursing. While curricular objectives address standards of practice assuring competencies in pathophysiology, pharmacology, clinical fundamentals, medical nursing, surgical nursing, and other domains of health science, we also purport to produce a practitioner with sensitivity and compassion. The honors in nursing option, begun in 2000 at UAB, has allowed us to push the creative side of nursing to a higher level. Honors students have clearly taken this opportunity with enthusiasm. Our first nursing honors graduate, Ms. Cynthia Leach-Fuller, investigated an application of music therapy in nursing while she was a student in our program. The research she completed, a discussion of which follows, exemplifies the creative process in a scientific setting.

Ms. Leach-Fuller joined our inaugural class of honors students in nursing as an experienced registered nurse. She had begun the process of completing requirements for the BSN. From her initial interview, it was obvious that she possessed both great knowledge and creativity. She was seeking to reach the highest levels of accomplishment in the profession to which she was already committed. The honors program represented both the culmination of long-held dreams and a legitimately earned position.

In our initial interview, Ms. Leach-Fuller recounted the observation that would become the basis of her honors project. A teen patient in intensive care following a motor vehicle accident was semi-comatose, responding to stimuli not with words but with gestures and motion. He was clearly anxious, restless, and hard to manage without significant medication. Ms. Leach-Fuller had noticed that, when music was played, the patient seemed to relax, becoming more cooperative and at ease. She asked his mother to bring in tapes he enjoyed at home and found that with this "music therapy" he could be more calm, be more appropriately responsive, and heal more easily.

When Ms. Leach-Fuller joined the honors program, her questions were those of an academic novice who was unfamiliar with the methods of research, but they were also questions of a clinical expert who knew what questions to ask. Coming from a

community hospital, she had never heard of anyone else interested in music therapy. What she found at UAB was a rich literature in music therapy and numerous supportive resources. She located and completed her mentorship with a certified music therapist and initiated her honors project as an application of music therapy. Her intuitive, creative energies were channeled through her honors work into a developed working knowledge, manifold skills, and the application of a novel approach to nursing.

Background in Music Therapy

Music can affect moods, spark memories, and foster associations. Many people believe that these abilities make music uniquely helpful in relieving the effects of mental or physical disability or illness, and this belief has led to the use of music as a therapeutic intervention (Marwick, 2000). Music is now used as a non-invasive treatment modality to help patients relax and cope with the uncomfortable issues of illness. Ever since ancient times, though, music has been acknowledged as having therapeutic value.

The literature regarding music therapy shows that music therapy has been organized as a professional activity since the 1950's. The American Music Therapy Association sponsors educational training for licensure by the Certification Board for Music Therapists. Currently, there are 8000 certified music therapists in the United States and Canada. Music therapists are now utilized in a variety of settings including nursing homes, geriatric and psychiatric units, hospitals, and physical rehabilitation programs. Regardless how convincing anecdotal accounts and individual observations about music therapy may seem, this procedure will begin to enjoy widespread success only if it can be validated by systematic studies providing consistent proof of its effectiveness. The two most important current issues in music therapy have to do with reimbursement and research. Evidence-based research will provide the basis for future development.

Music has been shown to have more than entertainment value. If the appropriate selection is made, it can stop the cycle of ceaseless thinking and produce relaxation (Sammon, 1997). One study suggested that the use of intra-operative music decreased patient-controlled requirements for sedatives and analgesics (Koch, Kain, Ayoub & Rosenbaum, 1998). Music has also been shown to decrease infant pain. Babies listening to music during surgery displayed significantly less pain by the end of the procedure than babies who weren't listening to music during surgery. The group that did not listen to music displayed an increase in heart rate and pain intensity (Kech & Gerkensmeyer, 2000).

Methodology of the Honors Project

The purpose of the study conducted by this first honors graduate was to decrease levels of anxiety and help patients relax with music therapy. The sample consisted of critical care adults whose sensory acuity level was within normal limits. The study variables were pre- and post-therapy blood pressure, heart rate, respiratory rate, and emotional disposition as evidenced by muscle tension/relaxation, facial expressions,

and anxiety levels. One research question guided this study: will there be a decrease in level of anxiety in critical care patients receiving music therapy?

Patients were invited to participate in the study as part of their scheduled music therapy sessions, which were provided daily by a certified music therapist. This intervention had been in place in the university medical center for several years. The intervention may be initiated by the patient's or a family member's request or upon recommendation by the nurse or physician. For the patient who is a candidate for the therapy, the music therapist offers a selection of music from gospel to rock and that can include taped selections or live vocal or instrumental works. Approval of the study for use of human subjects was granted by the Institutional Review Board of the university. Individuals who agreed to participate were asked their own level of anxiety before and after the music session. Their vital signs including blood pressure, heart rate and respiratory rate were taken every five minutes.

Results

Five patients met the criteria for participation in the study. Four of the subjects were female, and one was male, and ages ranged from 45 to 73. Music selections included gospel, folk, and classical.

Anxiety was present by self-report in 3 of 5 subjects prior to the session. Based on a 1-5 scale of "not anxious" to "highly anxious," the pre-session mean score was 3.3. At the end of the session, 4 of 5 reported that they were "not anxious" and the mean anxiety score decreased to 2.6. Because the sample size was so small, these findings were not statistically significant.

Heart rate dropped during the session from a mean value of 94.2 pre- to 91.4 mid- to 91.2 post-session. Change in blood pressure was less consistent: systolic pressure dropped mid-session but increased by the end for an overall slight decrease. Diastolic pressure peaked mid session, post-session being overall lower than pre-session. Findings within individuals varied from this pattern, and the music may have stimulated some neurologically mediated circulatory mechanisms. Dispositions were rated on a scale of happy-to-sad and of comfortable-to-restless.

Discussion

Overall results of this study demonstrated a reduction of anxiety levels and vital signs during and after music therapy. There was one participant whose vital signs increased, although this subject reported a lessened level of anxiety and a happy disposition. In another case, a participant's caregiver reported lowered levels of her own anxiety, which she attributed to her having been present during the patient's session. Therefore, there seem to be benefits for caregivers as well as for their patients.

Results from this study support the opinion that music therapy can reduce levels of anxiety in critically ill patients. As there is yet little published data on the *physiological* effects of music therapy, continued research should be directed toward further investigation into this area. The systematic investigation of nurses into methods of healing previously considered to be intuitive but to lack support from the

scientific community may reveal new procedures that are essential to the holistic care of persons during both illness and health. The use of the creative arts may hold great potential for new developments in the practice of nursing.

Honors and the Creative Arts in Leadership Development in Nursing

Music therapy is growing in popularity with recent articles detailing the benefits of this intervention in areas of pediatric nursing (Berlin, 1998), childbirth (Olson, 1998), and oncology/cancer nursing (Lane, 1992). Through honors educational opportunities, students may develop the creative art of nursing care as they discover, explore, and integrate innovative modalities as an essential component of practice.

Nursing has been described as a *fine art*, whether explicitly or implicitly, by scholars ranging from Florence Nightingale to those of the present day (Donahue, 1985). In his report "Scholarship Revisited," Earnest L. Boyer (1990) defines four processes integral to the scholarship of undergraduate education: discovery, integration, application, and teaching. Through discovery of existing resources in music therapy and their integration and application into the science of nursing practice, our first nursing honors graduate, Ms. Leach-Fuller, effectively demonstrated Boyer's definition of scholarship. Additionally, because nursing is an interpersonal discipline, student development in the *affective* domain (not just in the domain of *understanding*) is or ought to be a goal of professional nursing education. B. S. Bloom's taxonomy of educational objectives gives a framework for exploring four levels of affective development (Krathwohl et al., 1964). In the first level (*attending to another person's needs*), Ms. Leach-Fuller recognized the effect of music therapy on her patient's well-being and implemented procedures to utilize this therapy as part of his care. She evidenced the second level of affective development (*valuing*) by treating music therapy as an important practice component and by pushing her ideas about it to even higher levels of understanding and application in the honors course. As an intensive care nurse, Ms. Leach-Fuller plans to use this modality whenever possible to benefit her patients; it is thus part of her *organization of practice*, the third level (in Bloom's terminology) of affective development. Finally, Ms. Leach-Fuller was able, through mentorship, project development, and dissemination, to reach the fourth level of affective development: *characterization by the value*. For her, the art of nursing can and should be practiced concurrently with the science in a manner benefiting both the profession and the patient.

It is well recognized in nursing education that the profession is demanding not only cognitively but also emotionally. Nurses use emotional intelligence, defined as personal competence (self management) and social competence (capacity for relating to others), to provide care to patients and family members (Bellack, 1999). Bellack argues further that nursing curricula, while teaching cognitive and psychomotor competence, fail to allow for development of these personal and social competencies so essential to practice. Inundated by the memorization and learning of baseline concepts essential to nursing care, the undergraduate student can lose the basics of showing active interest and concern for others, recognizing and responding to client

needs, and listening effectively. These skills, she notes, are both desirable and valued in a relationship-intense and service-based profession such as nursing. Bellack goes on to advocate non-traditional and novel learning experiences as a necessary element to building a student's emotional intelligence. Among those novel learning experiences are mentorships and innovative projects such as those made possible through honors education.

E. R. Bruderle (1994) discusses the importance of using the creative arts to develop nurse leaders. She first recognizes that leadership is an inherent quality in those who aspire to the profession. Creativity and openness to new ideas is a characteristic of leaders, and mentoring is one approach to developing such characteristics. Bruderle sees the humanities as fostering the ability to integrate feelings, ideas, and experience with one's personal (and professional) experiences. She argues that leadership is better learned than taught and that leaders must cultivate self-awareness, imagination, creativity, and sensitivity to the uniqueness of individuals.

Did our honors student become a better leader, enhance her creativity, and learn to apply humanistic content to the practice of nursing through the integration of honors and the creative arts? Her chosen innovation was an integrative therapy, a modality that functions as an integrative whole, interacting with multiple processes and systems. However, it is also a modality whose effects have not been measured or evaluated systematically. In her three-month internship with the music therapist, Ms. Leach-Fuller experienced a breadth and range of music therapy applications for a variety of client conditions and ages. Her knowledge of and sensitivity to the beneficial effects of this intervention were strengthened. In choosing to evaluate this methodology, she sought to find ways to describe the benefits of the seemingly immeasurable effects she was observing. Her initial observations were strengthened through systematic study. The project met criteria outlined by the National Institutes of Health for evaluating research in non-traditional therapies in that her primary question was (a) asked by a researcher knowledgeable in the experience and practice of the modality, (b) answerable, explicit, and practical, and (c) important in the alleviation of suffering (Smith, 1998). The application of scientific methodology through the honors project then provided the bridge between the art and the science of nursing. By developing her personal competencies in the modality and recognizing not one but numerous effective applications to human responses in illness, Ms. Leach-Fuller clearly developed her abilities as a leader in the practice of acute care nursing.

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References

Bellack, J.P. (1999). Emotional intelligence: A missing ingredient? *Journal of Nursing Education,* 38(1), 3-4.

Berlin, K. (1998). Pediatric Update: Music Therapy with children during invasive procedures, our emergency department's experience. *Journal of Emergency Nursing,* 24(6), 607-608.

Bruderle, E.R. (1994). The arts and humanities: A creative approach to developing nurse leaders. *Holistic Nursing Practice,* 9 (1), 68-74.

Boyer, E. L.(1990). *Scholarship Reconsidered: Priorities of the Professoriate.* Princeton, N.J.: The Carnegie Foundation for the Advancement of Teaching.

Donahue, M. P.(1985). *Nursing: The Finest Art, An Illustrated History.* St. Louis: C.V. Mosby Company.

Kech, J., & Gerkersmeyer, J., (2000). Music shown to decrease infant pain. *Excellence in Clinical Practice,* 7, 2.

Kock, M., Kain, Z., Ayoub, C., & Rosenbaum, S. (1998). The sedative & analgesic sparing effect of music. *Anesthesiology,* 89(2), 300-336.

Krathwohl, D.R., Bloom, B.S., & Masia, B.B. (1964). *Taxonomy of Educational Objectives, Handbook II: Affective Domain.* New York: David McKay Company, Inc.

Lane, D. (1992). Music therapy: A gift beyond measure. *Oncology Nursing Forum,* 19 (6), 863-867

Marwick, C., (2000). Music therapists chime in with data on medical results. *JAMA: The Journal of the American Medical Association,* 283(6), 731-733.

Olson, S.L. (1998). Bedside musical care: Application in pregnancy, childbirth and neonatal care. *JOGNN: Journal of Obstetric, Gynecological Neonatal Nursing,* 27 (5) 569-575.

Sammon, J., (1997). March music: A piece of my mind. *JAMA:The Journal of the American Medical Association,* 278, 816.

Smith, M. (1998). Researching integrative therapies: Guidelines and application. *Journal of Emergency Nursing*, 24 (6), 609-613.