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Music Therapy and the Symphony: A University-Community Collaborative Project in Palliative Care

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Abstract

This article outlines a unique collaborative project designed to increase palliative care patient access to music therapy services by tapping into multiple university-community resources—resources of an undergraduate university music therapy program, of a professional symphony orchestra, and of funding available for university-community partnerships. Music therapy interventions were provided to palliative care patients within single sessions by 2-person music therapy teams (each comprised of one student music therapist and one symphony orchestra musician). Student music therapists served as team leaders and symphony musicians served as co-facilitators. The project was evaluated over a 3-year period in terms of student music therapy intervention effectiveness on the pain relief, relaxation, positive mood, and quality of life of 371 adult palliative care patients. Results indicated that there was a significant difference at the $P < .0001$ level in the pretest/posttest measures on all 4 variables. Study limitations and directions for future research are identified.

Keywords

complementary therapies, mood, music therapy, palliative care, pain, quality of life, relaxation, symphony orchestra

Increasingly music therapy is being recognized for the benefits it can offer palliative care patients.[1-5] The milestone publication of Munro and Mount[6] served as impetus for the growth of a substantial body of palliative care music therapy theory, practice, and research.[7-10] This growth was initially anecdotal in nature with a few empirical exceptions,[9] notably studies by Magill Bailey[11] in 1983, Curtis[12] in 1986, and Whittall[13] in 1989. It has been marked since by a number of palliative care music therapy dedicated conferences,[14,15] with the most recent of these an international conference held in Canada[16] in 2010. Additional growth in this area has been marked by a dedicated issue of the *Journal of Palliative Care*,[17] dedicated theory and practice texts,[18,19] and active, ongoing research. While still relatively new, the current body of research in this area is increasing and includes representation in both quantitative and qualitative approaches.[3,9]

As a result of this increased recognition of palliative care music therapy, both Canada and the United States are witnessing a convergence of factors in the field: an increased interest on the part of both health care professionals and patients; a burgeoning number of palliative care music therapy programs, with a subsequent increase in music therapists practicing in the field; an increased number of academic music therapy programs, many of these providing palliative care training; and an increased interest in the arts in health care on the part of musicians.[2,20-23] This convergence lies at the heart of a unique university-community collaborative project which is the topic of this article. The project combined the talent and interest of professional symphony orchestra musicians with those of advanced student music therapists working in palliative care as part of their university training. The context for the project will be outlined first, with a brief description of palliative care music therapy practice and research—outcomes, techniques, opportunities, and challenges. Details of the project will then be provided, followed by an evidence-based evaluation of its effectiveness in terms of pain relief, relaxation, positive mood, and quality of life.

The Context: Palliative Care Music Therapy Practice and Research

Palliative care music therapy can be described as "the professionally informed and creative use of music within a therapeutic relationship with people [with life-threatening conditions] who have been identified as needing psychosocial, physical, or spiritual help or who desire further self-awareness, enabling increased life quality."[9(p41)] The overarching appeal of music

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therapy lies in its contributions to the improvement of life quality through management of symptoms and other complex multidimensional needs of palliative care patients.[2] In a 2003 ex post facto study, Hilliard determined that those in music therapy received a greater number of direct sessions, sessions of greater length, and sessions addressing a greater diversity of needs than they did with nurses or social workers.[24] This diversity of needs met by palliative care music therapy encompasses the physical, emotional, cognitive, social, and spiritual. In general terms, music therapy meets patient desire for a more holistic care which empowers them through enhanced sense of control.[22] In more specific terms, music therapy is proving effective in enhancing such dimensions as pain relief, comfort, relaxation, mood, confidence, resilience, life quality, and well-being.[2,3,9,25]

An examination of the specific types of intervention in palliative care music therapy reveals the practice to be highly individualized. A great variety of music therapy techniques is combined in unique fashion to meet the individual needs of each patient. These techniques fall under the categories of receptive techniques, interactive techniques, or some combination of both. They include music listening (with live and recorded music), music making (vocal/instrumental performance and improvisation), music-supported counseling, music-facilitated communication, song writing and recording, lyric analysis, life review and legacy work, guided imagery, and music-centered stress and pain management.[3,8,15,26-28] While diverse, these techniques are used consistently, and they are used consistently in a highly individualized fashion.[2,4]

Documentation of palliative care music therapy techniques has expanded with the increasing number of music therapists working in the field; in 2007, there were a total of 160 board-certified palliative care music therapists working within the United States.[2] At the same time, in a direct-interest survey of cancer patients themselves, an overwhelming majority (85%) indicated an interest in music therapy.[4] The situation is much the same in Canada. A 2007 survey of the status of complementary therapies in Canadian palliative care revealed an interest in music therapy on the part of both patients and administrators.[22] Despite this, patient access to music therapy in palliative care is still limited.

Concomitant with the increased interest and practice in palliative care music therapy has been an increased interest in related research—quantitative and qualitative. In a 2005 review of empirical data in the field, Hilliard identified 11 quantitative studies.[3] These studies examined treatment outcomes of music therapy as measured across such parameters as pain, comfort, relaxation, energy levels, mood, spirituality, and quality of life. Among these studies, 3 involved randomized control trials,[12,29,30] while 8 did not.[20,24,31-34] While none involved symphony musicians, 5 involved pretest/posttest evaluation as with the present project.[13,31-34] As well, Krout's study examined effectiveness of music therapy within single sessions, similar to that used in the present project.[20]

In a subsequent comprehensive 2009 review, O'Callaghan[9] identified 61 quantitative, qualitative, and mixed methods research studies documenting the effectiveness of music therapy in palliative care during the period of 1983 to 2009. While none of these studies involved symphony musicians, 3 made use of some type of faces/affective measurement instrument as used in the present project.[35-37]

Within these 2 important palliative care music therapy literature reviews, Hilliard on one hand advocates for further empirical studies that would provide more meaningful information through larger sample sizes and greater control in such terms as age, gender, diagnosis, and music therapy intervention type.[3] On the other hand, O'Callaghan[9] identifies the merit of qualitative research and some inherent problems with empirical research in palliative care music therapy—the inability to use a double-blind design, as well as the challenges of the individualized nature of music therapy interventions and the patient-therapist relationship. For O'Callaghan, qualitative research's contribution lies in its alignment with palliative care patient-centered aims and its provision of meaningful information through examination of patients' interpretation of their own experiences. Both types of research "have comparable merit in being able to offer conceptually generalizable findings.[9(p54)] Ultimately, O'Callaghan concludes that both approaches are needed, depending on the intended audience. Further research—both quantitative and qualitative—may better enhance the understanding of the nature and efficacy of music therapy for palliative care professionals, administrators, and patients alike.

The Project

The project was a unique collaboration which arose out of a convergence of interests on the part of a university music therapy training program, a professional symphony orchestra, and a regional hospital. The overarching purpose was to enhance the lives of palliative care patients through establishing university-community connections which would be mutually beneficial. While unique, this project was followed shortly afterward in Australia by 2 similar projects involving symphony musicians. Both of these projects, however, were in pediatric settings, with one involving the symphony musicians as solo performers and the other involving them as music therapy co-facilitators.[38,39]

The Partnership

As one of three partners, the university had a mandate to provide education and training for its undergraduate music therapy students; this included clinical placements in the community under faculty supervision. The university's mandate also included increasing community access to music therapy services in providing high-caliber student music therapy services and in working with local organizations to establish positions for professional music therapists. On its part, the symphony orchestra was a professional symphony orchestra with a reputation for excellence in performance and community outreach. The orchestra approached the university because of an interest in becoming involved in arts in health care work in general and in palliative care in particular. In preliminary meetings with symphony members, it became clear that there was an interest

in work that involved more than simple hospital performances. While Shoemark[38] noted that there has been some hesitation among music therapists to engage with the Arts in Healthcare movement in which symphony orchestras are typically found, the current project was designed with the belief that collaboration with a symphony orchestra could provide unique opportunities. These included increased patient access to music therapy and an increased understanding on the part of symphony musicians and palliative care staff—an understanding of music therapy and of its differentiation from music entertainment or recreational music. As the third project partner, the regional hospital had excellent palliative care services, had limited but positive previous experience with student music therapists, and was interested in augmenting music therapy services for its patients.

Under the leadership of the university music therapy faculty, the project was designed to combine the resources of the symphony orchestra (in terms of musicians), the resources of the university music therapy program (in terms of music therapy expertise and student music therapists), and resources of funding available for university-community partnerships to provide bedside music therapy services to palliative care patients. The collaboration offered benefits to all involved. The student music therapists had an invaluable opportunity to make music with professional-caliber musicians. The symphony musicians had an opportunity to experience the transformative powers of music in a nonperformance setting. The palliative care patients had increased access to music therapy services.

Project Preparation

The project started with preliminary preparation plans and grant writing in 2003 and a pilot project in 2004, which was designed to assess project feasibility and sustainability.[40] The preliminary preparations involved extensive consultation with the hospital, orientation for the palliative care health care workers, and music therapy team building. Each music therapy team comprised one undergraduate student music therapist and one symphony musician. The project preparations culminated in the development of a one-day orientation and training session for the music therapy team members. Music therapy team orientation and training was in depth and detailed (with both theoretical and applied learning opportunities) since the project was designed such that each symphony musician was paired with a student music therapist, with the student serving as team leader and the symphony musician as an active participant in the music therapy process. In this way, the project differed from Shoemark's project with neonates in which the symphony musicians provided solo performances in the hospital hallways with no patient interaction.[38] While similar in some ways to Kildea's 2007 pediatric project which used groups of symphony musicians as co-facilitators in group therapy,[39] the current project in adult palliative care involved individual music therapy with one patient, one student music therapist (as team leader), and one symphony musician (as co-facilitator). Since the student music therapists served as team leaders, in addition to their one-day orientation, they also participated in weekly clinical supervision meetings with the clinical coordinator; this clinical supervision was provided both on-site and off-site. The author and principal investigator, a board-certified and accredited music therapist, served as clinical coordinator, selecting, training, and supervising music therapy team members. The student music therapists were selected on the basis of advanced university standing, maturity, and skills; these members included pianists, guitarists, vocalists, and clarinetists. All members of the symphony orchestra were invited to participate in the project; those members who accepted the invitation due to interest in working in a palliative care setting included violinists, violists, and cellists.

Project Participants and Setting

The participants in this project included 371 adult patients seen over a 3-year period from September 2005 through May 2008. They were inpatients at one of two palliative care units in a 687-bed regional hospital of a mid-sized Canadian city (approximate population of 200 000). Of the 371 participants, 132 were males and 239 were females, ranging in age from 18 to 101 years. Participants were admitted to the palliative care units with a variety of terminal diseases and conditions, of which some type of cancer was predominant. Participants were included in the project on the basis of informed consent and physical, cognitive, and language skills sufficient to complete the necessary forms.

Ethical Considerations

The project met the requirements set out in the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans; this policy governs any research in Canada, involving human participants.[41] Prior to its implementation, the project was approved by the Research Ethics Board (REB) of both the university and the hospital. As part of the REB requirements, all participants met with the charge nurse upon admission, were provided a letter of information, and completed an informed consent form.

Student Music Therapy Intervention

Student music therapy intervention was provided at the patient bedside in the palliative care unit by a 2-person music therapy team. Each participant was seen for a single music therapy session, the duration of which varied according to participant need, ranging from approximately 15 to 60 minutes. The student music therapy intervention consisted of a variety of receptive and interactive music therapy experiences designed to address 4 areas: pain relief, relaxation, positive mood, and quality of life. These music therapy experiences included music listening, music-centered relaxation and imagery, music making (vocal and instrumental performance and improvisation), songwriting and recording, and music combined with multimedia for life review (eg, art work and Powerpoint presentation creation). In each session, individual music therapy

experiences were selected, combined, and offered to the participant by the music therapy team in consultation with the participant based on individual preference and need. This individualization of music therapy interventions, although adding to the complexity of research, was deemed important to the project in light of previous findings in the literature.[9]

Project Evaluation

While the project was first and foremost established as a clinical project, it was also designed from the start to be evidence based—as much as possible within university and hospital constraints; these constraints will be outlined further in the Limitations section that follows later. In a similar project in pediatrics, Kildea underscored the importance of evidence-based evaluation for the future: "to ensure ongoing funding of this type of project and to promote a higher profile for the concept, it is necessary to make it attractive to hospitals who [sic] require evidence-based work and orchestras who [sic] are considering approaching the hospital environment."[39] Additionally, while increasing numbers of music therapy students are working in palliative care as part of their academic training, little research exists yet assessing the effectiveness of their interventions. Inclusion of evidenced-based evaluation in this collaborative project could begin to fill these gaps.

The evaluative component of the project was designed to determine the effectiveness of music therapy interventions provided by the 2-person music therapy teams (each comprised of one student music therapist and one symphony musician) on the pain relief, relaxation, positive mood, and quality of life of adult palliative care patients.

Measurement Tool

A participant self-report form was used to measure all 4 variables. This form, based on the widely used FACES scale, was selected at the hospital's request because it was currently in use then on the palliative care units and because it had been identified by 90% of palliative care nursing professionals as easy to use and appropriate for administration by nonnursing professionals.[1,2] The measurement tool was comprised of 5 faces with associated scores from 0 to 4 and word descriptors for each variable, ranging from no pain relief (0) to complete pain relief (4), no relaxation to complete relaxation, no positive mood to complete positive mood, and no quality of life to complete quality of life. Participants were directed by the student music therapists to complete the measurement tool at the start and upon completion of each music therapy session. Student music therapists were the only ones available to administer the pre- and posttests due to staffing workload issues.

Null Hypotheses

A total of 4 null hypotheses were established for the purposes of the project evaluation. These null hypotheses indicated that there would be no significant pretest/posttest differences (at $P < .05$, using a 2-tailed paired t test) in each of 4 variables—pain relief, relaxation, positive mood, and quality of life.

Results

With the project's pretest posttest design, participants served as their own control. Results of 2-tailed paired t tests, as shown in the table which follows, indicated that there was a significant difference at the $P < .0001$ level in the pretest posttest measures on all 4 variables—pain relief, relaxation, positive mood, and quality of life. As a result, all 4 research null hypotheses were rejected, leading to the conclusion that the student music therapy intervention led by the 2-person music therapy teams was effective in increasing pain relief, relaxation, positive mood, and quality of life of palliative care patients. It should be noted that there was some variation in the total number across the 4 variables. This was a result of nonresponse on the part of some participants for some of the variables. Reasons for nonresponse included failure to complete measurement on a particular variable because the participant identified it as nonpertinent; and confusion on the part of some about the meaning of "quality of life." These patients indicated that for them quality of life and positive mood were synonymous and so they completed their self-report on only one of the two measures.

In examining the results of the statistical analyses, it can be seen that while all showed significant increases, that in mood was the greatest with a difference of 1.119; its mean posttest was also the highest at 3.157. Second in increase size was relaxation, with a difference of 0.996. Increases in pain relief and quality of life were smaller.

A statistical analysis of pretest and posttest differences along gender lines using unpaired t tests showed no significant difference between the male and female participants in any of the 4 measures ($P < .05$). It was not possible to analyze differences along dimensions of either age or diagnosis. This was a result of inconsistent access to this information on the part of the music therapy team. While it was standard procedure for teams to meet with the charge nurse prior to their music therapy intervention, it was not possible to gather all the necessary information concerning age and diagnoses for 100% of the project participants due to busy schedules on the part of the charge nurse on certain days.

Table 1. Analysis of Pre- and Posttest Measures of Pain Relief, Relaxation, Positive Mood, and Quality of Life Using 2-Tailed Paired t Tests

	Number of Participants	Pretest[a]	Posttest[a]	P Value
Pain relief	310	2.3 (0.95)	2.8 (0.91)	<.0001
Relaxation	347	2.1 (0.79)	3.1 (0.72)	<.0001
Positive mood	359	2.0 (0.79)	3.2 (0.72)	<.0001
Quality of life	304	2.1 (0.79)	2.98 (0.76)	<.0001

[a]Data presented as mean (SD).

Discussion

Evaluation of this project demonstrated its therapeutic effectiveness. Music therapy intervention provided by a 2-member music therapy team under the supervision of a credentialed music therapist and comprised of a student music therapist and a symphony orchestra musician significantly increased palliative care patients' pain relief, relaxation, mood, and quality of life. In this manner, efforts were successful in designing an approach to increase palliative care patient access to music therapy services of a unique university–symphony project by tapping into multiple resources. Efforts were also successful in evaluating the effectiveness of student music therapists in this particular project. This will be important in the future as university music therapy programs continue to place students in community placements as part of their academic training.

Overall, the project was of mutual benefit to all of the partners involved: the patients as documented in terms of pain relief, relaxation; mood, and life quality, as well as increased access to music therapy services; the student music therapists in terms of their unique opportunity to make music with professional musicians; and the symphony musicians in terms of their involvement in such a unique project, quite different from their typical performance experiences. In an informal survey of both student and symphony team members, respondents indicated they agreed or strongly agreed that their participation was a positive experience for them.

In addition to the data collected in evaluating this project, further anecdotal information obtained highlights the importance of music therapy in palliative care, not only for the patient but also for the family. While not captured in the data collection portion of the project, on 3 separate occasions the music therapy team was requested by family members to perform quiet music as the patient was dying. On 2 other occasions, the music therapy team was asked, because of the strong relationship established in prior music therapy sessions, to perform at the patient's funeral. In the words of one family member, ''Having live guitar playing at my father's funeral was his only and last request.'' In light of this, future research might be expanded to include further evaluation of the effectiveness of music therapy in palliative care with family members.

Other directions for future research could include comparative analysis of the effectiveness of music therapy teams under the supervision of credentialed music therapists and comprised of undergraduate versus graduate students, as well as of student versus professional music therapists—both with and without symphony musicians. An understanding of the impact of student music therapists and their work as they undergo training in preparation for health careers would be beneficial to the profession. Further comparative examination of the relative effectiveness of single-session music therapy versus multi-session intervention is also recommended.

Limitations

While efforts were made to acquire a data-based evaluation of the music therapy team effectiveness, it should be noted that the project was established first and foremost as a clinical project. As a result, there were some limitations in the design and implementation which were unavoidable. The nature of these limitations and the circumstances which necessitated them will be outlined here. A true understanding of any project results can only be accomplished in carefully keeping these limitations in mind.

The project design could not accommodate randomized control trials. Given the nature of the university–hospital relationship, each patient was to be included if they indicated a desire to participate in music therapy. Additionally, the nature of the student music therapy intervention provided was highly individualized—both in terms of duration of the single session and in terms of the music therapy techniques used. Limitations in the ability to generalize is inherent with any nonstandardized treatment such as used in this project in particular, and in music therapy and similar interventions in palliative care. While making research more challenging, it provides a richer, more accurate picture of music therapy.[9]

Further limitations arose out of necessary circumstances surrounding measurement and evaluation. The modified FACES patient self-report was administered by the student music therapist at the request of hospital administration because of concerns about staff workloads. Potential exists for bias in the findings as a result of this lack of blinding. Furthermore, the data-based evaluation of the project results was completed of necessity by the project clinical coordinator/researcher. This evaluation was delayed, however until after the completion of the 3-year project in order to separate as much as possible the analysis from the clinical supervision and coordination of the project.

While this project was able to move one step beyond those of Shoemark[38] and Kildea[39] in providing some data-based effectiveness evaluation of symphony–music therapy collaborations and in doing so with a large sample size ($N = 371$), the limitations necessitated by the project's clinical–educational nature must be given serious consideration in any interpretation of the results. Future research is recommended which may be able to address these limitations where possible.

Conclusion

Results of this study are in keeping with those that precede it, which gave a strong indication of the multidimensional benefits music therapy can contribute in palliative care.[3,9,20] As interest in palliative care music therapy continues hand in hand with university music therapy training, the challenge remains to expand the body of research—both quantitative and qualitative—for a greater understanding of the specifics of music therapy interventions provided in palliative care by student and professional music therapists alike. This, in combination with a greater understanding of the potential offered through creative collaborations with symphony orchestras, holds much promise for palliative care.

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Bio

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