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## Music Therapy Interventions for End-of-Life Care: An Integrative Literature Review

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MUSIC THERAPY INTERVENTIONS FOR END-OF-LIFE CARE:  
AN INTEGRATIVE LITERATURE REVIEW

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THESIS

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A thesis submitted in partial fulfillment of the  
requirements for the degree of Master of Music in Music Therapy in the  
College of Fine Arts  
at the University of Kentucky

By

Ranjani Sukumaran

Lexington, Kentucky

Co-Directors: Dr. Olivia Yinger, Assistant Professor of Music Therapy

and Dr. David Sogin, Professor of Music Education

Lexington, Kentucky

2016

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## ABSTRACT OF THESIS

### MUSIC THERAPY INTERVENTIONS FOR END-OF-LIFE CARE: AN INTEGRATIVE LITERATURE REVIEW

Music therapy plays an integral role in end-of-life care, positively impacting emotional, social, physical, cognitive and spiritual health. The purpose of this integrative review was to collect and compile studies ( $N= 55$ ) between 2000 and 2016 on the topic of music therapy interventions in end-of-life care, in order to provide both music therapy students and therapists access to the most recent and commonly used music therapy interventions and goals. Results of the integrative literature review indicate that the most common intervention for all age groups in end-of-life care is songwriting and composition, with the most common therapeutic goal being emotional expression and catharsis. Details of music therapy interventions, goals and song details are written in tables for readers to refer to as a guide. Further research is needed with each specific age group and setting, in order to provide refined results beyond what is revealed through this review. Additionally, evaluating therapeutic outcomes of the interventions and goals obtained through this integrative review is another step that can be taken for future research.

KEYWORDS: Music therapy, hospice, palliative care, end-of-life, integrative review

Ranjani Sukumaran

March 18, 2016

AN INTEGRATIVE LITERATURE REVIEW: MUSIC THERAPY INTERVENTIONS  
FOR END-OF-LIFE CARE

By

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March 18, 2016  
Date

To my family for believing in me,  
To my teachers who guide me and share their knowledge,  
To my friends for loving and supporting me unconditionally,  
To the patients who fuel my passion for music therapy,  
To the Music, a divine and healing modality  
To God, my inner guide and protector through everything.

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## CHAPTER ONE

### INTRODUCTION

Death and bereavement are experiences that every person goes through. When an individual is diagnosed with a terminal illness, inner reflections and questions such as: Why me? Who will look after the family? Will I be remembered? often come up (Clements-Cortes, 2010). Distress, pain and grief can become unbearable for both the hospice patient and family members during the final stages of life (Clements-Cortes, 2010). Therefore, it is helpful to provide a therapeutic and sacred space for emotional expression of one's worries and fears related to death and relationship reconciliation in the last stages of life rather than letting grief and distress go unresolved (Salmon, 2001). Music therapy can help to serve as a channel for releasing such unresolved feelings and finding peace and closure at the end-of-life (Salmon, 2001).

Although music therapy was recently developed as a professional practice in the 1950s, specifically with World War I and World War II veterans experiencing trauma, the origin of music as a healing property can be traced back to ancient cultures (AMTA, 2016a). Music is a powerful modality and when used in a patient-centered manner supported by clinical research, it can play an effective therapeutic role in a variety of healthcare fields, including end-of-life care.

According to the American Music Therapy Association (AMTA, 2016b), "music therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program" (para. 1). When working in end-of-life care, music therapists seek to reduce a patient's distress, pain and grief, as well as aid

in the well-being of the patient and family. Clinical interventions, such as singing patient-preferred songs, legacy work, or songwriting can help meet such goals (Clement-Cortes, 2010). Evidence-based research indicates that music therapy can positively impact a terminally ill patient's emotional, physical, spiritual, and cognitive health (Hilliard, 2005).

### **Definition of Terms**

*Music therapy* is defined as “the clinical and evidence-based use of music interventions by a credentialed professional within the context of a therapeutic relationship in order to restore, maintain, or improve a person’s functioning and quality of life” (Clark, Siden, & Straatman, 2014, p. 179).

*End-of-life care* is a broad and overarching term involving care for those with terminal illness (Clements-Cortes, 2010).

*Palliative care* involves support and care for patients, attempting to palliate or reduce severity of symptoms, with a possibility that the patient may recover (Hilliard, 2005).

*Hospice Care* “uses a holistic interdisciplinary approach, requires a referral from a physician that identifies a patient with a diagnosis of a terminal illness and a life expectancy of 6 months or less” (Anderson, 2011, p.1).

*Bereavement* “depicts the state of having lost a significant relationship through death” (O’Callaghan et al., 2013, p. 102).

## **Purpose**

The purpose or aim of this integrative literature review was to compile existing quantitative, qualitative, philosophical/theoretical and mixed method studies relevant to music therapy interventions in end-of-life care and provide it in a manner useful for practicing clinicians. In doing so, music therapists and students can be equipped with current music therapy clinical interventions and goals in the hospice field. Knowledge of common interventions and goals can help to ensure positive therapeutic outcomes for patients and families in end-of-life care. Additionally, by integrating relevant and current research on this topic, it is possible to identify any gaps in the literature and further lines of research.

## CHAPTER TWO

### LITERATURE REVIEW

#### **Role of Music Therapy in End-of Life-Care**

Music therapy was first introduced into hospice and end-of-life care in the mid-1980s. Since its introduction, music therapy in the hospice field has been growing in use and value, becoming more prevalent and in demand with the passing years (Anderson, 2011). A survey by Demmer (2004) showed that music therapy is one of the most popular complementary therapies in 300 hospices throughout United States. According to Pawuk and Schumacher (2010), it is reported that the number of hospice music therapists has increased from 87 in 2002 to 207 in 2008 in the United States. The 2014 AMTA workforce analysis indicated that there were 218 music therapists working with the elderly and in hospice/bereavement care, with 109 working in hospice/bereavement care (AMTA, 2014). Within Chicago itself, the number of hospices that have a music therapist on their treatment team increased from 3 to 10 over the course of 4 years from 2002 to 2006 (Pawuk & Schumacher, 2010). The cost effectiveness of music therapy in hospice care has also been highlighted (Romo & Gifford, 2007).

Research by Hilliard (2001a, 2001b, 2003, 2004, 2005, 2007) indicates that music therapy has significant positive impacts on patients in end-of-life care; with results showing improvements in patient mood, quality of life, comfort, reduced pain, and increased feelings of peace hope and spirituality. The tasks of dying, as described by Clements-Cortes (2010), include grieving, saying goodbye, constructing a meaningful context to one's life, and letting go. Finding a sense of completion with worldly affairs,



making sense of meaning about one's life, and achieving relationship completion are also significant landmarks for music therapists to address in end-of-life care. The presence of a Board Certified Music Therapist on an interdisciplinary hospice team can help to fulfill and meet the aforementioned milestones in the dying process (Pawuk & Schumacher, 2010).

In 2004, a survey was administered to end-of-life-care staff ( $n = 94$ ) in four hospices to identify the impact of music therapy on their morale and pain medication costs (Pawuk & Schumacher, 2010). Eighteen percent of the nurses reported decreases in pain medication as a result of music therapy. Additionally, 68% of the staff indicated that they refer patients for music therapy to address symptom management, emotional health, spiritual health, and interpersonal family need. Lastly, higher job satisfaction and morale was reported in relation to having a music therapist on the interdisciplinary team (Pawuk & Schumacher, 2010).

Thus, the role of music therapy in hospice care is growing in demand and has several positive impacts. It is the researcher's intent to compile and categorize current and detailed music therapy interventions from the literature in a manner that can contribute to the growth of this field.

### **Related Research**

Looking at the most recent integrative and systematic reviews related to music therapy and end-of-life care, one can find a handful of studies, including but not limited to an integrative review by Bowers and Wetsel in 2014, a review of quantitative studies by Archie, Bruera and Cohen in 2013, a systematic review by Anderson in 2011, a

Cochrane review by Whitehead in 2011, a systematic review of patient experiences by Leow in 2011, and a review of empirical studies by Hilliard (2005).

The two common threads between the aforementioned reviews and this integrative review are:

(a). the variables (music therapy and end-of-life care)

and-,

(b). an intent to collect and classify existing research related to a specific niche in music therapy and end-of-life care.

For instance, Hilliard's article solely focused on empirical studies (11 total studies collected) in music therapy and end-of-life care, in an effort to encourage an evidence-based approach to music therapy in hospice/palliative care, as well as to find out the impacts of music therapy. Leow's (2011) article collected all quantitative and qualitative studies with intent to understand patient experiences in response to music therapy in end-of-life care. His review focuses in on 9 articles from a 365 initial hit of articles, with the end result indicating that patients find psychosocial support, improved quality of life (QOL), and relief from physical symptoms when receiving music therapy in palliative/hospice care (Leow, 2011).

Archie, Bruera and Cohen's (2013) article took a different and specialized approach, with an aim to collect and review only quantitative studies specific to music interventions in palliative cancer care – and connect their findings to neurobiological literature. The Bowers and Wetsel (2014) article integrated all research related to a large database search (8 databases) of general keywords such as music, therapy, symptom management and hospice, producing a total of 17 articles that met the inclusion/exclusion

criteria. The aim of this study was to understand the utilization, impacts and treatment efficacy of music therapy. Although Whitehead (2011) also had a similar purpose to Bower's (2014) article in terms of focusing on symptom management and understanding music therapy's role as an adjunct care, Whitehead took a more rigorous research approach by completing a Cochrane review of 5 randomized controlled trials. Thus, there are similarities between the aforementioned reviews in terms of addressing the variables music therapy and end-of-life care; and yet each study took a very specific approach and addressed a slightly different niche within the field.

Perhaps the one review that could be considered a more encompassing and overarching study in comparison to the other 5 reviews is Anderson's (2011) systematic review of 6 types of articles (quantitative, qualitative, clinical reports, philosophical and theoretical research, historical research and professional research) in music therapy and end-of-life care. Anderson used 4 keyword searches within 4 databases, thus producing a large and thorough systematic review of all relevant studies in the field, covering 33 years of research from 1977 to 2010. The purpose of Anderson's (2011) systematic review was to collect and code all related research in order to highlight themes and provide directions for future research. Anderson used more databases in literature search and did not include a hand search of music therapy journals that the researcher of this integrative review used. Additionally, Anderson's inclusion and exclusion criteria are more expansive compared to the criteria of this review. Whereas Anderson completed a systematic review that was overarching and addressed a variety of general topics, this researcher sought to complete an integrative review specific to music therapy interventions and goals. Lastly, Anderson's review addressed research only up until 2010,

whereas this review added 6 additional years of further research up to 2016 (covering literature from 2000-2016) .

Based on the related research thus far, it appears that there is a need for a more current integrative review that can be used as a reference tool for details on interventions and techniques. It is hoped by this researcher that this integrative review will be a small step in helping to fill a current gap and provide further depth beyond what has already been revealed in previous reviews; and in a manner both helpful and useful for music therapy students and practicing clinicians.

**Purpose**

To provide an integrative review of music therapy interventions in end of life care as a reference tool for practicing clinicians.

**Research Question**

What music therapy interventions and goals for patients in end-of-life care are described in the research literature?

## CHAPTER THREE

### METHODOLOGY

#### **Integrative Review**

An integrative review framework was chosen, with the intent to research and compile a variety of literature related to music therapy interventions and end-of-life care. An integrative review is more comprehensive and broad compared to a systematic review, allowing for a variety of literature to be collected and reviewed (Gooding & Yinger, 2014). The integrative review process was completed as follows:

1. An area of interest was identified.
2. A research question and purpose were developed.
3. Inclusion and exclusion criteria were established.
4. A literature search and collection were undertaken.
5. Data were extracted and coded.
6. Results were listed and interpreted.
7. Discussion and implications for clinical practice were suggested.

#### **Inclusion criteria**

Inclusion criteria consisted of the following: (a) studies on palliative care and music therapy, hospice care and music therapy, or end-of-life care and music therapy; (b) studies between 2000-2016; (c) studies including all age ranges; (d) studies written in English; (e) quantitative studies, qualitative studies, mixed method studies, or philosophical/theoretical studies; (f) peer-reviewed studies; (g) studies providing specific details about music therapy interventions for end of life populations.

## **Exclusion criteria**

Exclusion criteria consisted of the following: (a) any studies before 2000, (b) studies not written in English, (c) studies not involving a therapeutic relationship or music therapy, (d) books and book reviews, and (e) studies not related to or not specifying detailed music therapy interventions for end-of-life care.

## **Literature Search and Collection**

Two methods of literature search and collection were performed between January 2016 and March 2016:

1. Articles were obtained from a database search. A database search for the purpose of this integrative review involved entering three keyword searches into 2 databases and selecting articles based on title and abstract that met inclusion and exclusion criteria. The 3 keyword searches used in database search were as follows: music therapy and palliative, music therapy and hospice, and music therapy and end-of-life.
2. Obtaining articles from a hand search of music therapy journals. A hand search was defined as individually searching through each edition and/or volume published in each year for titles of articles that fit the inclusion and exclusion criteria.

Ninety-five relevant articles were obtained through the database search and hand search of music therapy journals. The full texts of these articles were then reviewed further, with 40 articles discarded and 55 total articles used for the purpose of this integrative review. See Figure 1: Flowchart of Literature Search Process.

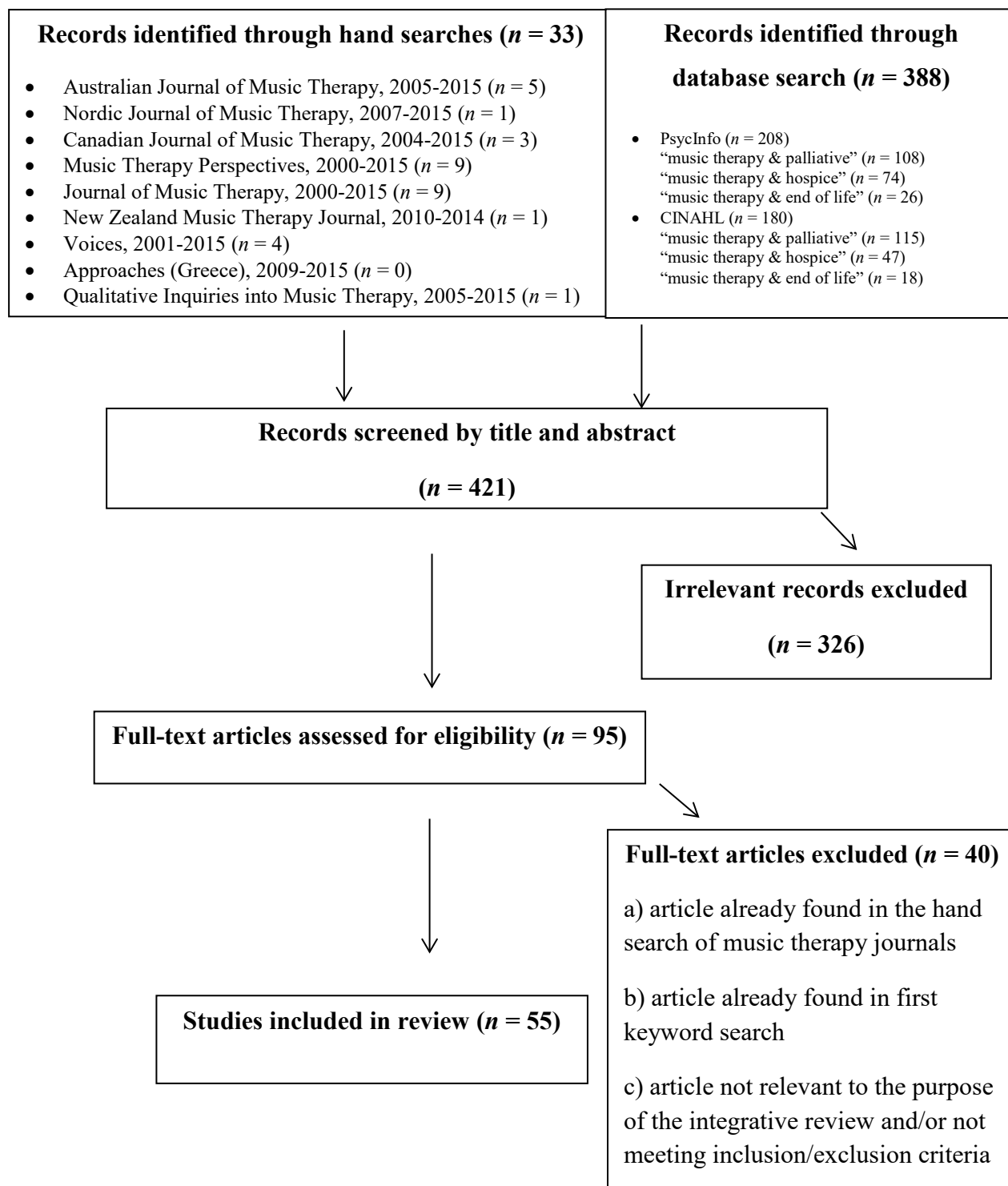


Figure 1: Flowchart of Literature Search Process

## CHAPTER FOUR

### RESULTS

Once the 55 articles meeting inclusion and exclusion criteria were selected, general data such as country, setting, and participants addressed in each study were extracted and coded into Tables 1 through 4 by research type (Qualitative, Quantitative, Theoretical/Philosophical, and Mixed Methods). Next, music therapy interventions, goals and song details were extracted and coded in Tables 5 through 8 by age group of patients (children, adolescents, adults, varied ages).



Table 1

*Extraction of General Data: Qualitative Studies*

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Aasgaard (2001) Denmark	(S): Hospital (P): Children	To explore how music therapy can build an ecology of love for patients in the pediatric oncology setting.	Four case studies describe how music therapy can be used for more than just palliation in the cancer ward; it can also foster a loving environment and positive interactions between patient, relatives, staff and other patients.
Baxter (2010) Australia	(S): Home (P): Varied ages	To discuss the use of music therapy products created by palliative care patients, such as recordings or drawings, during and after therapeutic alliance.	Includes 4 sections on: (1) how music therapy products are used and therapeutic outcomes (2) legal issues, (3) suggestions for therapists to initiate discussion with patients about the future of the product, and (4) communication to support patient decisions about product.
Cadrin (2006) Canada	(S): Health Region (Regina Qu'Appelle Health Region) (P): Adult	To understand and discuss legacy work in palliative care and music therapy	Three case studies from 3 perspectives (patient, family and therapist) discuss the concept and impact of legacy work, and when and how to facilitate it.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Cadrin (2009) Canada	(S): Home (P): Adult	To discuss the Bonny Method in addressing psychosocial, spiritual and existential issues in end-of-life care.	Case study emphasizing Bonny Method of Guided Imagery in music with a 47 year old palliative cancer patient in her final 8 months of life over the course of 12 music therapy sessions.
Clark (2014) Canada	(S): Hospice (P): Children	To examine 5 years of program redevelopment at a children's hospice center, with focus on theoretical approaches, interventions, interdisciplinary team and research.	Review of theoretical approaches, receptive and active music therapy interventions, analytical and integrative techniques, interdisciplinary team approaches, and research used with pediatric palliative care. Suggests the need for more quantitative studies in this field, and for music therapy research to be conducted as part of hospice program planning.
Clements-Cortes (2010) Canada	(S): Mixed: hospice, hospital, home (P): Varied Ages	To demonstrate and discuss how music therapists can access the power of music to assist and enhance relationship completion at end-of-life.	An analysis and discussion of the levels of practice in palliative care music therapy, beginning with a supportive level, to an intrapersonal, to interpersonal to transpersonal to transformative level. Techniques and interventions are discussed, with brief case studies from other authors cited as examples.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Clements-Cortes (2011) Canada	(S): Senior living center (P): Adult	To conduct further research beyond what was already discovered in Clements-Cortes (2010) by discussing music therapy sessions with 4 hospice patients facilitate relationship completion.	Case study of 4 dying persons and the impact of music therapy in facilitating relationship completion. Results of working with these patients emphasize the value of life reviews, song dedications, and musical gifts in facilitating relationship completion.
Dalton (2006) United States	(S): Bereavement center (P): Adolescent	To describe the development and implementation of the grief-songwriting process bereaved adolescents.	Three steps were taken in this article: First, a thematic analysis of previously written songs by bereaved adolescents in individual music therapy sessions. Second, existing grief models were compared with the song themes to determine 5 identified grief process areas: understanding, feeling, remembering, integrating and growing. Third, the seven session Grief song-writing process (GSWP) was implemented with bereaved adolescents, focusing on the 5 aforementioned grief process areas.
Daveson (2000) Australia	(S): Hospital (P): Children	To discuss music therapy in palliative care for hospitalized children.	This article summarizes literature on music therapy and palliative care, addresses emotional development of children in a hospital setting, family-centered music therapy, music therapy goals, and music therapy techniques used in a pediatric palliative hospital setting.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Daveson (2001) Australia	(S): Hospital (P): Children	To categorize and describe music therapy interventions and goals for each of the 4 phases of hospitalization.	Discusses cancer, the difference between ALL (acute lymphoid leukemia) and AML (acute myeloid leukemia), and provides a case study with specific interventions and goals for each of the 4 phases: Diagnosis, Intensive Treatment, Transplant and Palliative Care.
Duda (2013) United States	(S): Hospital (P): Children	To describe the importance and benefits of integrating music therapy interventions into pediatric palliative care programs.	Contains a literature review and 4 case studies that highlight the value of legacy work, relationship bonding, building positive memories, and providing support using music therapy interventions. Opportunities for educating healthcare providers briefly discussed.
Hartley (2001) UK	(S): Hospice (P): Adult	To share, explore and investigate the concept of 'being in music' using short examples of improvised musical experiences in sessions.	Addresses the concepts of attention, accompaniment, transformation, longing and love in his personal reflections and journey as a music therapist working with the terminally ill. By providing case studies and excerpts of recordings, readers gain a better understanding into the unique music therapy experiences.

Table1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Hartwig (2010) Tanzania	(S): Home (P): Adult	To look at the application of music therapy in developing countries, specifically patients with HIV/AIDs and cancer in Tanzania.	Reviews the history and principles of music therapy in palliative care, and includes a qualitative questionnaire/interview to understand emerging applications of music therapy in Tanzania.
Heath & Lings (2012) UK	(S): Mixed: hospice and hospital (P): Varied Ages	To discuss creative songwriting approaches and the clinician's experience of the therapeutic relationship in end-of-life care.	Discusses authors' clinical experiences using case study vignettes, exploring the emotions, challenges and insights of the songwriting process with terminally ill and bereaved family members.
Hilliard (2001a) USA	(S): Hospice (P): Adult	To discuss music therapy interventions and goals to meet multidimensional needs of hospice patients/families.	Four case studies are presented, describing music therapy interventions in palliative care for patients and families in coping with grief and loss, pain and anxiety, disorientation, dementia and hopelessness.
Hilliard (2003) USA	(S): Home (P): Children	To review current literature on pediatric palliative care in music therapy and provide 4 case studies by the author.	Each of the 4 case studies highlights assessment, diagnosis, patient needs, goals, interventions, techniques and positive impacts of music therapy in pediatric palliative care. Article concludes with the importance of integrating music therapy as a complementary approach to the interdisciplinary team.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary
Hogan (2003) Australia	(S): Hospice (P): Adults	To define role of music therapy in addressing needs of terminally ill patients through 4 stages of dying.	Discusses the 4 stages of death: stage 1 being vulnerability, stage 2 being one of reflection and periods of stabilization, and stage 3 and 4 as end stages. Three case studies are provided as illustrations.
Kidwell (2014) USA	(S): Hospice (P): Adults	To describe the range of spiritual experiences in end-of-life care and music therapy, with case studies and reflections.	Kidwell discusses experiences and interventions with 3 patients, followed by personal reflections and interpretations. Patient background varies from southern Baptist to transcendental Buddhism.
Krout (2003) USA	(S): Hospice (P): Adults	To specifically describe how music therapy can facilitate release for patients and family in acute care of hospice center.	Five case descriptions are illustrated to express how music therapy can be used uniting family and patients to come together and then let go near time of death. Interventions, techniques and elements are discussed.
Krout (2005) USA	(S): Hospice (P): Varied Ages	To discuss music therapist composed songs for one time bereavement support groups.	An overview of the grieving process, followed by description of how 4 songs written by music therapist working with a team can be used to facilitate participant connections and structure or enable group rituals and goals.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Magee (2007) England	(S): Senior living facility (P): Adult	To compare benefits of providing personally relevant pre-composed songs versus improvisation for patients with acquired chronic illness.	Provides patient texts as illustrations of responses to each intervention, determines overarching themes and goals achieved through each intervention, and concludes that based on functioning level of patient, both intervention strategies are beneficial.
Magill (2001) USA	(S): Hospital (P): Adult	To discuss the ways in which music therapy can be used to address pain and suffering in advanced cancer care.	Summarizes the concepts of suffering and pain in end-of-life care. It provides case examples in which patients explore feelings of pain, followed by release, reflection and renewal through specific music therapy techniques.
Magill (2009)a Canada	(S): Home (P): Varied Ages	To examine the role of music therapy in palliative care as perceived by bereaved caregivers of advanced cancer patients.	Reports positive perceptions of music therapy from 7 bereaved caregivers, with case studies and a review of themes associated with narratives. Results indicate preloss music therapy benefits bereaved caregivers.
Magill (2009)b Canada	(S): Home (P): Adult	To examine the influence the of music therapy on caregiver empowerment.	Two case vignettes illustrate the impact of music therapy in empowering caregivers to offer love, joy, comfort, relief from distress and peace to their loved ones.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
McFerran (2010) Australia	(S): School (P): Adolescent	To explore the effects of group music therapy on bereaved and grieving teenagers.	Songwriting can assist teenagers to engage with grief in an open, relatable, productive sustained and honest way. Author provides detailed music therapy interventions, theories and themes, and texts of songs written by each group.
Moxley-Haegert (2015) Canada	(S): Hospital (P): Children	To provide an overview of narrative legacy practices used with children and families in palliative care hospital	Author discusses the variety of legacy work both in clinical psychology and music therapy and offers texts of poems, songs, films, arts, and letters in the article, as well as small case descriptions.
O'Callaghan (2008) Australia	(S): Hospice (P): Adult	To understand and apply lullabies and lament therapeutic qualities in hospice music therapy.	Defines lullaby and lament interventions, and draws on the author's personal clinical experiences and case studies to give evidence of its positive impacts in palliative care, such as promoting awareness, adaptation and grief expression.
O'Callaghan (2013) Australia	(S): mixed (P): Varied Ages	To examine preloss music therapy with 8 caregivers of patients who passed away.	Bereaved caregivers found comfort and a connection to the deceased loved one using music. Thus preloss music therapy helped to tap into and preserve sound continuing bonds between the bereaved and deceased.
Potvin (2015) USA	(S): Hospital (P): Adult	To explore ritual drama in music therapy that can aid in a patient's transformation during imminent death	Summarizes ritual drama in therapy, ritual drama and music, and ritual drama at end-of-life. It explores how ritual drama in music therapy can provide cultural and spiritual structure, ease of transition; and discusses emergent themes from this approach with a specific patient.



Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Register (2008) USA	(S): Hospice (P): children	To describe the use of Orff-based cognitive behavioral music therapy interventions to assist children through grieving process.	Provide summary of coping with grief; describe cognitive behavioral music therapy philosophy; provide 4 Orff-based music therapy sessions, with goals, interventions, sample songs, and rationales; and conclude with a short paragraph on positive responses of bereaved children to Orff-based music therapy.
Rigney (2011) Ireland	(S): hospice (P): children	To outline the therapist's perspective of the music therapy journey with a terminally ill child.	Includes narrative descriptions of 6 clinical sessions with personal reflection from therapist's journal to encourage self-review and clarification of thoughts following each session. Author emphasizes using reflexive tools for coping with clients whose futures are uncertain.
Roberts (2006) Australia	(S): home (P): Varied ages	To describe a home based music therapy program for bereaved adolescents and children, specifically with use of songwriting.	Describes 4 styles of songwriting using case vignettes as illustrations. Article demonstrates how music therapy can encourage clients to sing their story through the process of songwriting and express their grief.
Roberts (2013) Australia	(S): Home (P): children	To analyze lyrics written by bereaved children during individual music therapy and determine its efficacy.	Results indicate that children found emotional expression through songwriting. Several categories of lyrics were identified through analysis of 49 songs from 14 children, such as loss, relationships and wishes.

Table 1, continued

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Rykov (2001)	(S): Hospice	To describe considerations and insights unique to Jewish clients in hospice care.	Outlines historical, cultural, and religious significance of Jewish music, Holocaust survivor issues, and incorporation of Hasidic prayer, song and dance through music therapy interventions.
Canada Sato (2011) USA	(P): Adults (S): Hospice  (P): Adult	To describe a Musical Life Review Model (MLR Model) in hospice care.	Provides case studies illustrating the benefits of life review in emotional expression, identity integration, and reconnection with patient's heritage, etc. Author concludes with discussion of therapeutic considerations and outcomes.
Sheridan (2004)	(S): Hospice	To explore benefits and risks of providing pediatric hospice patients opportunity for choice and control in music therapy sessions.	Pros and cons of offering opportunities for choice and control in music therapy sessions are discussed and outlined through 3 clinical vignettes. Pros include improved self-esteem, improve sense of control, increased trust in relationship. Some worries related to too many opportunities for choice and control include possibility for rejection, chaos and question of value. Finding a balance is key to enhancing child's QOL.
Australia	(P): Children		
Wigram (2011)  USA	(S): Home  (P): Adults	To describe the use of a culturally centered Mexican song form ('corrido') in songwriting with a group of Mexican migrant farmworkers.	Provides a clinical example of culturally centered music therapy in bereavement. Results show stronger connection and intimacy in the group through creating a song, and authors encourage culturally centered songwriting as an effective approach to meet needs of clients experiencing grief.

Table 2

*Extraction of General Data: Quantitative Studies*

First author's last name, year, and country	Setting (S), and Participants (P)	Aim of study	Summary of article
Domingo (2015) Spain	(S): Hospital  (P): Adult	To measure the effects of MT with standard care versus standard care alone on 68 advanced cancer patients in palliative care unit. Dependent variables: Symptoms (physical and emotional symptoms, pain, asthenia); Hospital Anxiety and Depression; and Well-being.	Four music therapy sessions were administered in the experimental group, and results indicate statistically significant improvements in: - symptoms -hospital anxiety (measured by Hospital Anxiety and Depression scale) -well-being (measured by Pfeiffer index) Therefore, music therapy as opposed to standard care alone is beneficial in reducing symptomology, anxiety, depression and improving well-being of advanced cancer patients in a hospital setting.
Gallagher (2006) USA	(S): Hospital  (P): Varied Ages	To objectively assess clinical effects of music therapy on patients with advanced disease in palliative care. Dependent variables: patient symptoms and family responses	Results of the study with 200 patients indicated that music therapy helped to improve anxiety, body movement, facial expression, mood, pain, shortness of breath, and verbalizations. Music therapy also improved family facial expressions, mood and verbalizations.

Table 2, continued

First author's last name, year, and country	Setting (S), and Participants (P)	Aim of study	Summary of article
Gallagher (2001) USA	(S): Hospital  (P): Varied Ages	To provide objective measurement of music therapy impacts and effectiveness on cancer patients in palliative care hospital setting by creating a pilot music therapy program. Dependent variables: patient responses (behavioral, physical and verbal) to interventions evaluated by therapist, patient and family verbal responses, and staff verbal responses (completed through questionnaire).	The pilot music therapy program proves to be beneficial to patients and family in hospital, as evidenced by reduced stress levels, increased opportunity for self-expression, positive verbal responses from patients and families and positive staff surveys. Gallagher's results indicate that a music therapy program is integral in palliative hospital setting.
Groen (2007) USA	(S): Mixed  (P): Varied Ages	To describe music therapy assessment and treatment with hospice patients.	Through a survey method, the article comes to find that music therapists in hospice setting generally incorporate formal pain assessment into practice using a variety of pain assessment tools, mainly NRS and FACES scales. Additionally, the paper discusses the most common music therapy techniques utilized by music therapists with hospice patients.
Gutgsell (2013) USA	(S): Hospital  (P): Adult	To determine the efficacy of a single music therapy session in reducing pain in palliative care patients.	A single music therapy session in combination with standard care in a hospital setting proves more beneficial than standard care alone; with significantly lower scores in pain levels reported for the music therapy group.

Table 2, continued

First author's last name, year, and country	Setting (S), and Participants (P)	Aim of study	Summary of article
Hilliard (2001b) USA	(S): Mixed (P): Children	To measure the effects of music therapy based bereavement groups on mood and behavior of grieving children	Study shows improvements in mood and behavior, with a conclusion that participation in music therapy bereavement groups can help reduce grief symptoms for children in a home setting; yet no statistically significant improvements for children in school setting. Further research needed.
Hilliard (2004) USA	(S): Nursing home (P): Adults	To analyze the impacts of music therapy versus social work for patients receiving hospice care in nursing homes. Dependent variables: length of life and time of death	Using an ex-post facto design with deceased patients' medical records, author obtained results showing significant differences in the length of life for those receiving music therapy versus those receiving social work.
Hilliard (2007) USA	(S): School (P): children	To measure the effects of Orff-based music therapy versus social work versus control group on behaviors and grief symptoms of bereaved children at school.	Study shows that that music therapy group experienced significant improvement in behaviors and grief symptoms, whereas in social work group only behaviors improved. Control group showed no improvement in behaviors or grief symptoms.
Nakayama (2009) Japan	(S): Hospice (P): Adult	To determine the effectiveness of music therapy in a hospice setting. Dependent variables: salivary cortisol level (stress levels) and mood inventory (mood change)	Ten hospice patients received weekly 40 minute live music therapy group sessions, and showed an improvement in stress levels, mood, and excitement and reduced anxiety and depression levels.

Table 2, continued

First author's last name, year, and country	Setting (S), and Participants (P)	Aim of study	Summary of article
Włodarczyk (2007) USA	(S): Hospice (P): Adults	To determine the effect of music therapy on spirituality of persons in hospice as measured by self-report. Dependent variable: spiritual well-being scores as determined by 18 item questionnaire	Study uses an ABAB format with 10 hospice participants who listen to 30 minutes of music therapy followed by self-report (A), and then a control of 30 minutes no music followed by self-report(B). Data collected from 4 sessions indicate statistically significant increase in spiritual well-being on days patients received music therapy.

Table 3

*Extraction of General Data: Theoretical/Philosophical Studies*

First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Potvin (2014) USA	(S): Mixed: hospice, hospital, home, religious setting  (P): Varied Ages	To define and discuss the construct and force of spirituality, and the role of music therapy in connecting to a patient's spiritual dimension.	A variety of populations are addressed with music therapy and spirituality; with three specific themes addressed: music and spirituality as experience, music and prayer, and music therapy with ministry; and as it relates to hospice care.
Salmon (2001) Canada	(S): Hospital  (P): Adults	To understand how music therapy elicits and supports death experiences, and a deeper awareness into the realm of spirit and psyche, in palliative care.	Author discusses the concept of music therapy as a containing or sacred space in which patient can find psycho-spiritual exploration and awareness. Ultimate goal is to use music as a catalyst within a sacred space that supports the patient's journey and transformation from suffering into meaning.

Table 4

*Extraction of General Data: Mixed Method Studies*

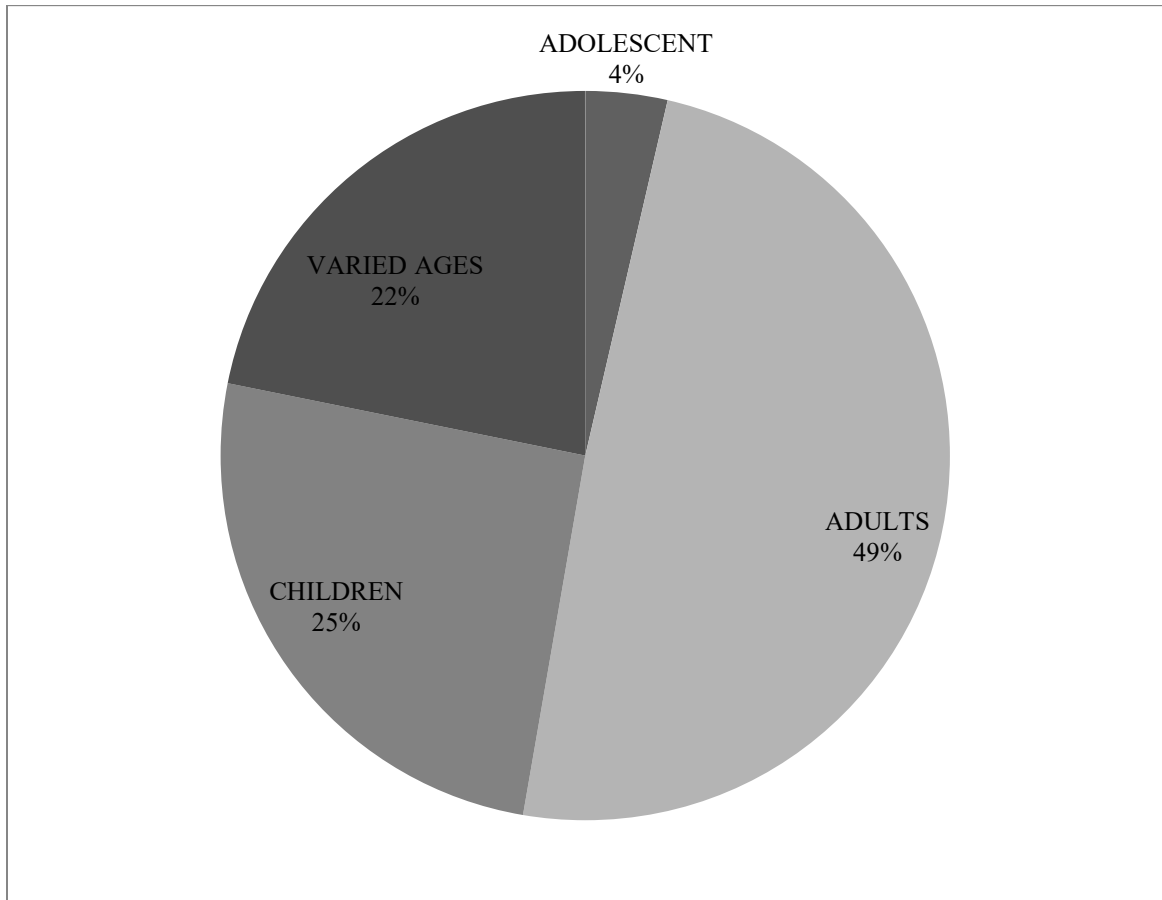
First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Forrest (2001) England	(S): Hospital  (P): Adult	To discuss the issues that patients face in exploring their familial, social, cultural and ethnic identity at end of life.	Provides an explanation of ethnicity and identity issues in palliative care, how the individual and group identity is constructed, and the use of music to construct, express and sustain a patient's identity at end of life. A case study is provided as an example.
Forrest (2014) Australia	(S): Home  (P): Children	To discuss the cultural considerations of working with children and families in home based pediatric palliative care.	Developing cultural awareness as a therapist towards oneself and of the family's culture can help the clinician to work in a unifying, culturally sensitive and responsive manner attuned to the enrichment of the child and family in Pediatric Palliative care.



Table 4, continued

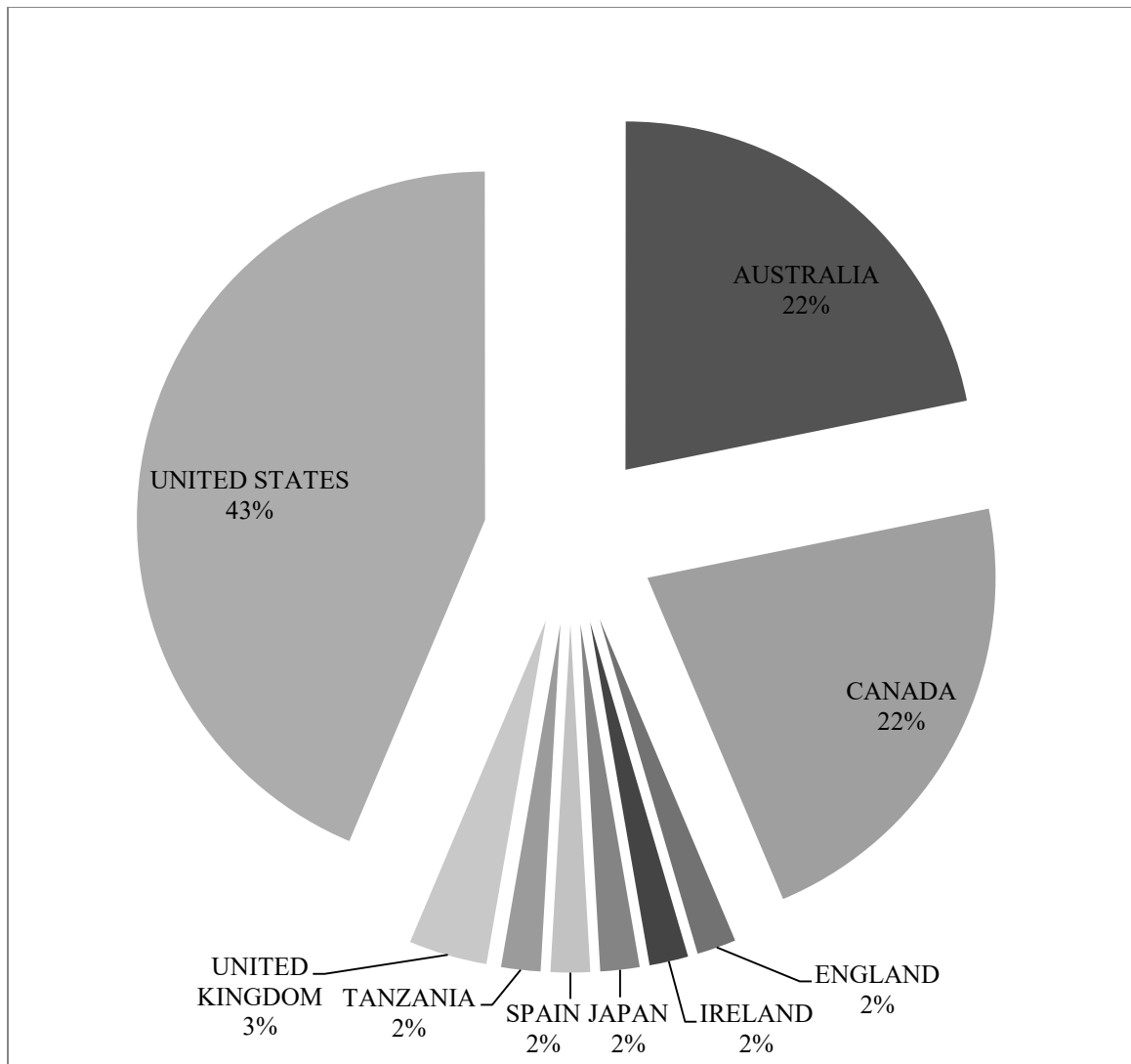
First author's last name, year, and country	Setting (S), Participants (P)	Aim of study	Summary of article
Krout (2004) USA	(S): Hospice (P): Adults	To propose a new model of music therapy in end-of-life care, called synergistic music therapy and illustrate its positive impacts.	Defines the interdisciplinary and transdisciplinary team approach, then proposes a new method called synerdisciplinary; which combines various music therapy backgrounds, orientations and techniques to better serve clients and families.
Mramor (2001) USA	(S): Homeless shelter (P): Adult	To understand and address music therapy with individuals who are impoverished, homeless, and with no caregivers at end of life.	Identifies 3 important phases to working with these individuals: engagement, relationship building, and actively dying. The paper reviews the documentation of 3 year therapy process with 50 residents, and provides case studies for each of the 3 phases.
O'Callaghan (2010) Australia	(S): Mixed (P): Varied Ages	To review and discuss practice-based research of music therapy on people with life threatening conditions.	Findings from various sources, including interviews, clinical journals, transcripts, and patient song lyrics indicate that music therapy is valuable; and that further research should be collected in the manner carried out by these authors.

Extracted data from Tables 1 through 4 were then compiled further into 3 pie charts, as seen in Figures 2 through 4.



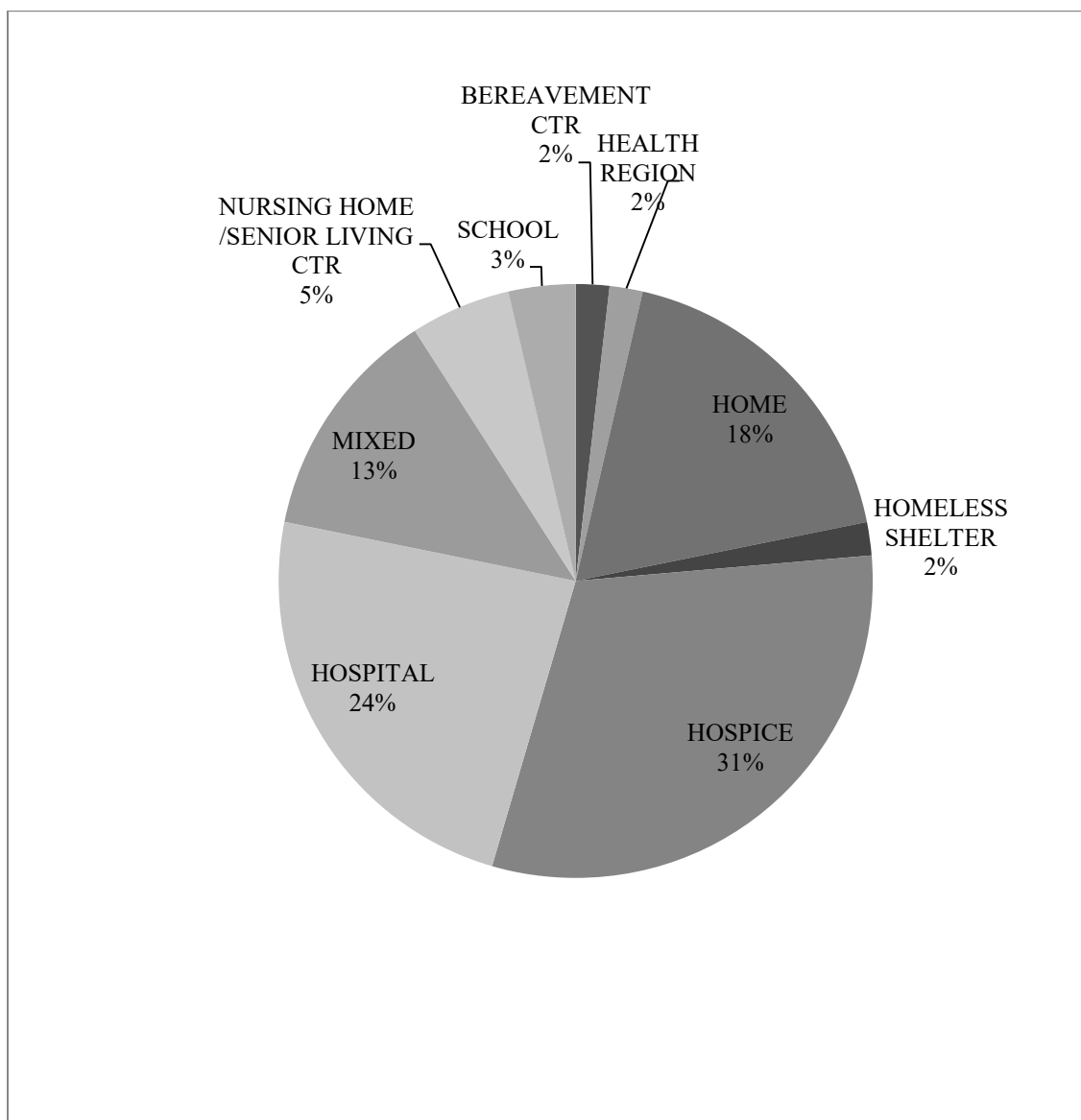
*Figure 2. Age Group*

As shown in Figure 2, studies used in this integrative review most often involved adult patients (49%), followed by children (25%), individuals of varied ages (22%), and adolescents (4%).



*Figure 3. Country*

As seen in Figure 3, studies used in this integrative review most often took place in the United States of America (43%), followed by Australia (22%), Canada (22%), and the United Kingdom (3%). Other countries included Ireland, Japan, Spain, Tanzania, and England (2%).



*Figure 4. Setting*

As shown in Figure 4, studies in this review most often took place at a hospice center (31%), hospital (24%), or home setting (18%). Other settings included mixed setting (13%), senior living center/nursing home (5%), homeless shelter (2%), health region (2%) and bereavement center (2%).

Table 5

*Music Therapy Interventions, Goals, and Song details for Children*

Author's last name, date	MT Interventions	MT Goals	Songs, style of music and other relevant details
Aasgard (2001)	<ul style="list-style-type: none"> <li>- using pre-composed patient texts in song composition</li> <li>-performance of song composition for patient with family, staff and friends</li> <li>-instrumental improvisation on lyre</li> <li>-vocal improvisation</li> <li>-singing familiar songs with play</li> <li>-mother improvising on lyre for patient</li> </ul>	<ul style="list-style-type: none"> <li>- to foster an environment of love for patient</li> <li>-discover patient's healthy side</li> <li>-explore patient's playfulness and creativity</li> <li>-emotional expression</li> <li>-normalization</li> <li>-provide an opportunity for active socialization</li> <li>-building positive interactions</li> <li>-create meaningful moments within family</li> </ul>	<ul style="list-style-type: none"> <li>-original song compositions: <i>Love</i> (in a heavy rock style)</li> <li><i>Friends</i></li> <li><i>I'm Bored</i></li> <li>-familiar Swedish songs: <i>Hocus Pocus</i></li> <li><i>Children of the Rainbow</i></li> </ul>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Clark (2014)	<p><u>Receptive interventions:</u>                      -live music listening                      -multimodal stimulation                      -vibroacoustic music therapy                      -multisensory environment with live music</p> <p><u>Active interventions:</u>                      -instrument playing                      -group jam                      -sound beam                      -ipad music apps                      -singing                      -karaoke</p> <p><u>Analytical interventions:</u>                      -lyric analysis                      -legacy work                      -songwriting                      -composition                      -recording/mixing with Garageband</p> <p>-music videos, designing CD covers, photo shoots to share with social media are part of creative process</p>	<p><u>Physiological:</u>                      -Pain symptom and management                      -Sensory stimulation</p> <p><u>Social:</u>                      -social interaction                      -normalization                      -choice/control</p> <p><u>Emotional/behavioral:</u>                      -mood                      -behavior                      -coping skills</p> <p><u>Sense of self:</u>                      -identity                      -self expression                      -self esteem                      -spirituality</p> <p><u>Receptive:</u>                      -able to benefit from sensory stimulation</p> <p><u>Active:</u>                      -able to purposefully and understand cause and effect</p> <p><u>Analytical:</u>                      -able to use analysis in thinking or reasoning</p>	<p>-songwriting sessions facilitated through a strengths based framework</p> <p>-style of music not specified</p>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Daveson (2000)	<ul style="list-style-type: none"> <li>-song parody</li> <li>-songwriting</li> <li>-singing</li> <li>-instrumental play</li> <li>-improvisation</li> <li>-listening to music</li> <li>-music assisted relaxation entrainment (using music matched to patient's physiological state)</li> <li>-verbal processing (exploration, discussion and acknowledgement) of the patient's positive attributes and abilities</li> <li>-family centered interventions (incorporate interplay and needs of not only the patient but also that of the family)</li> <li>-songwriting with help and assistance from family in completing last verse/last line of song</li> <li>-patient performance of song composition</li> </ul>	<ul style="list-style-type: none"> <li>- provide support for family during time of transition</li> <li>-help patient work through fears and anxieties related to death and mourning</li> <li>-provide unconscious, non-threatening means of self-expression through musical material related to loss, death, grief, pain and separation.</li> <li>-provide support and validation</li> <li>- self-worth</li> <li>-normalization</li> <li>-opportunities for choice and control</li> <li>-creativity</li> <li>-resolve conflicts</li> <li>-decrease anxiety and pain</li> <li>-coping strategies</li> <li>-QOL and providing aesthetically pleasing environment</li> </ul>	<p><u>Requested songs:</u></p> <ul style="list-style-type: none"> <li>"Come to me my darling"</li> <li>"How do I live without you"</li> <li>"I say a little prayer for you"</li> <li>"Chattahoochee"</li> <li>"Mercury Blues"</li> <li>"Boys from the Bush"</li> <li>"High Country"</li> </ul>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Daveson (2001)	<ul style="list-style-type: none"> <li>-recreative methods</li> <li>-receptive/listening interventions</li> <li>-improvisation</li> <li>-compositional interventions</li> <li>-family interaction in music experiences</li> <li>-father playing guitar for patient</li> <li>-parent playing/singing traditional songs for child</li> <li>-music assisted relaxation</li> <li>-music and imagery</li> <li>-lyric analysis</li> <li>-music-assisted play</li> <li>-music-assisted discussion</li> <li>-song parody</li> <li>-music and movement</li> <li>-instrumental play</li> </ul>	<ul style="list-style-type: none"> <li>-assist with reduction of anxiety</li> <li>-provide opportunities for choice and control</li> <li>-establish a safe and familiar environment</li> <li>-opportunity for self-expression</li> <li>-improve &amp; enhance family/peer relationships</li> <li>-tension release and relaxation</li> <li>-development of trust</li> <li>-self-esteem/dignity</li> <li>- pain reduction/management</li> <li>-celebration of healthy aspects of life; restoring non-patient role</li> <li>-learn and reinforce new coping strategies</li> <li>-decrease feelings of isolation and incidence of withdrawal</li> <li>-stimulation</li> <li>-fun and enjoyment</li> <li>-connect with outside world</li> <li>-validation of feelings</li> <li>-identification of strengths</li> </ul>	<ul style="list-style-type: none"> <li>-use of popular dance music, traditional cultural music and action songs</li> <li>-traditional songs from homeland</li> <li><u>Requested songs:</u></li> <li>-There was an old lady who swallowed a fly</li> <li>-Old McDonald</li> </ul>



Table 5, continued

Author's last name, date	Interventions & Techniques	Goals	Songs, style of music & other relevant details
Duda (2013)	<ul style="list-style-type: none"> <li>-songwriting</li> <li>-guided imagery sessions facilitated with live or recorded music</li> <li>-music assisted relaxation</li> <li>-improvisation using voice or musical instruments</li> <li>-legacy building</li> <li>-writing personalized song with family members to encourage exploration and expression of feelings, memories, and legacy making.</li> <li>-legacy building with sibling, parents, family and friends</li> <li>-fill-in-the-blank for patient directed songwriting</li> </ul>	<ul style="list-style-type: none"> <li>-teach pain management techniques</li> <li>-promote success</li> <li>-reduce loneliness</li> <li>-opportunity for choice and control</li> <li>-build lines of consistent and open communication with healthcare team</li> <li>-encourage positive coping</li> <li>-enhance QOL</li> <li>-encourage hope</li> <li>-provide reframing and different perspectives to foster hope</li> <li>-provide support</li> <li>-build positive memories</li> <li>-encourage family bonding</li> <li>-legacy building</li> </ul>	<p>-lullaby style of song 'Jesus Loves me' to encourage mother-infant bonding prior to infant's death</p> <p>-“You are my sunshine” with adjusted lyrics (piggyback songwriting) lullaby style and 8 additional verses contributed from family. Song sung to infant prior to passing away. Recording left as memory for family.</p> <p><u>Fill in the blank tool for patient directed songwriting:</u>            I am _____            I want _____            Never call me _____            I secretly want _____            I feel _____            I need _____            I can't _____            I can _____</p>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Forrest (2014)	<p>-song and lyric writing for pediatric palliative</p> <p>-singing and playing patient preferred songs</p> <p>-record songs on CD</p> <p>-consider the cultural song of family, therapist's cultural song, and come together to create a new personalized song: "You sing your song, I sing my song, but together we create our song" (Forrest, 2006).</p>	<p>- ameliorate cultural isolation, cross-cultural conflicts for immigrant patient and families</p> <p>-acknowledge traditions and rituals</p> <p>-family engagement</p> <p>-developing trust and rapport</p> <p>-express and communicate feelings</p> <p>-celebrate patient's life</p> <p>-facilitate support between family and encourage expression of grief</p> <p>-reduce anxiety and distress</p> <p>-create moments between patient and family that are playful, present, and highlighted in fun, joy, reflection and relaxation</p>	<p>-use of culturally specific music. Can learn culturally specific songs from patient directly as first source.</p> <p>-cultural diversity occurs at macro and micro level</p>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hilliard (2001)	<u>Cognitive behavioral</u> -icebreakers and cohesion building activities -deep breathing -drumming exercise -identifying an emotion and playing it on drum -singing -songwriting -rap writing -rhythmic improvisation -structured drumming -lyric analysis -music listening -verbal discussion -song parody	-establish trust and rapport  -to lift mood and reduce grief symptoms  -coping skills  -behavior modification  -identification and expression of emotions  -intellectual understanding of grief  -reframing and reshaping cognitive distortions	<u>Songs used:</u> “The Confidentiality Rap” “Shake, rattle and roll” “While I’m sleepin” “Where will I go?” “Seasons” “Til we meet again” “Today” “I cried” “I can see clearly now”  -song parody to “Kumbayah”

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hilliard (2003)	<ul style="list-style-type: none"> <li>-playing and singing patient-preferred songs</li> <li>-requesting family to sing along</li> <li>-songwriting</li> <li>-father play guitar and sing to patient (daughter)</li> <li>-gentle humming with gentle touch in soft circular motions (multisensory approach)</li> <li>-teaching parents what interventions/techniques (i.e. singing and/or stroking) they can provide to soothe/comfort child</li> <li>-teaching an instrument (trumpet)</li> <li>-verbal processing</li> <li>-writing a rap dedicated to a loved one</li> </ul>	<ul style="list-style-type: none"> <li>-addressing psychological needs</li> <li>-addressing family issues</li> <li>-validate life</li> <li>-increase self-esteem</li> <li>-create a safe space for emotional expression and communication</li> <li>-complement chaplain's spiritual goals</li> <li>-increase QOL</li> <li>-building trustworthy relationship to express and process long held suppressed emotions</li> </ul>	<ul style="list-style-type: none"> <li>-Jimmy Buffet songs</li> <li>-contemporary Christian music</li> <li>-Brahm's "lullaby"</li> <li>-"You are my sunshine"</li> <li>-Barney's "I love you"</li> <li>-popular children's songs</li> <li>-use of various rhythm instruments and xylophone</li> <li>-hymns</li> </ul>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hilliard (2007)	<p><u>Orff-based music therapy:</u></p> <ul style="list-style-type: none"> <li>-musical exploration</li> <li>-musical imitation</li> <li>-improvisation</li> <li>-songwriting</li> <li>-use of various rhythm instruments and 4 voice xylophone ensemble</li> <li>-prewritten grief themed chants and songs</li> <li>-songs written to accompany bereavement stories shared by group</li> <li>-verbal processing</li> </ul>	<ul style="list-style-type: none"> <li>-develop rapport</li> <li>- normalization of death as a natural part of life</li> <li>-identify sorrow and develop coping skills</li> <li>-identify anger and learn safe ways of expression</li> <li>-retain memories of the deceased</li> <li>-reduce perception of physical symptoms</li> </ul>	-not specified

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Moxley-Haegert (2015)	<p><u>Legacy work:</u>                      -pt writes a poem and says it while MT plays accompanying music. The poem is recorded.                      -pt writes poem. MT puts music to it and sings/plays on guitar                      -verbal counseling                      -dream analysis</p>	<p>-insight                      -foster love                      -leave behind positive memories                      -emotional expression                      -build self-esteem</p>	<p>-specific style of music not mentioned  <u>-Patient compositions:</u>                      "Growing the love story"                      "Laurence's song"                      lyrics written in French</p>
Register (2008)	<p><u>-Orff based music therapy:</u>                      -verbal chanting                      -body percussion/rhythmic interaction                      -storytelling with vocal improvisation                      -ensemble work</p>	<p>-emotional healing                      -building positive social relationships                      -cognitive reframing                      -decreasing behavioral problems                      -reduce somatic concerns</p>	<p><u>Music-therapist compositions:</u>                      -"Everything chances"                      -"Death and change"                      -"The memory song"                      -"Feelings"</p>

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Rigney (2011)	-improvisation on glockenspiel -labeling/titling each improvisation and recording it for patient -give patient requested item (tin whistle) to patient as a gift to play in her spare time -group improvisation with 2 xylophones, glockenspiel and jingle stick -legacy work	-lift mood -positive social interactions with family -QOL -self-esteem	-“Circle of friends” -“You’ll never walk alone”
Roberts (2013)	<u>Songwriting:</u> Step 1: introducing songwriting Step 2: brainstorming ideas for the song Step 3: Determining the song structure Step 4: Lyric composition Step 5: Musical accompaniment composition Step 6: Finalizing all musical features and recording the song Step 7: make a CD cover and song folder cover	-process loss and express grief -coping -build trust and rapport -emotional catharsis	-none specified

Table 5, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Sheridan (2004)	<ul style="list-style-type: none"> <li>-instrumental improvisation</li> <li>-storytelling</li> <li>-group ensemble/improvisation</li> <li>-call and response</li> <li>-drum and piano improvisation</li> <li>-MT responds to patient improvisation by echoing, repeating, extending, and completing musical ideas</li> <li>-lyric substitution</li> <li>-performance of song for staff</li> </ul>	<ul style="list-style-type: none"> <li>-establish trust</li> <li>-increase opportunity for choice and control</li> <li>-improve QOL</li> <li>-emotional expression</li> <li>-positive group interaction</li> <li>-improve self-esteem</li> </ul>	"Five little ducks"



Table 6

*Music Therapy Interventions, Goals, and Song Details for Adolescents*

Author's last name, date	MT Interventions & Techniques	MT Goals	Song, style of music & other relevant details
Dalton (2006)	<p><u>Initial group session for bereaved adolescents:</u> musical improvisation, followed by singing and playing therapist pre-composed songs*; followed by verbal discussion</p> <p><u>Remaining group sessions use GSWP: Grief Song-writing process:</u> Step 1: -introduce theme of song to be created -present chorus lyrics -verbal discussion</p> <p>Step 2: -group members create and record original drum track -each member adds a percussion part</p> <p>Step 3: -group chooses a chord progression for song</p> <p>Step 4: -Group chooses musical style of song</p>	<p>-To understand the cause of death</p> <p>-To understand the grief process</p> <p>-To understand and clarify sequence of events that led to loved ones' death</p> <p>-To allow oneself to feel and process a variety of different emotions about the death</p> <p>- To remember times spent together, relationship issues and personal qualities of loved ones</p>	<p><u>*Therapist pre-composed songs:</u> "All kinds of feelings" "That's what grief is"</p> <p><u>*5 grief process area:</u> -understanding -feeling -remembering -integrating -growing</p> <p><u>Example of song lyrics written in each grief process stage:</u> <i>Understanding:</i> "I don't know exactly how he died." <i>Feeling:</i> "I took a walk in the pouring rain, trying to find a way to ease my pain."</p>

Table 6, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Song, style of music & other relevant details
Dalton (2006)	<p>Step 5: -Therapist improvises melody and lyrics for chorus (based on one of the 5 grief process areas*) &amp; everyone sings it</p> <p>Step 6: -each member writes individual verse related to chorus theme</p> <p>Step 7: -group members share verse lyrics (sing, rap or spoken) and engage in discussion and verbal processing -clients can edit lyrics based on insights gained from group processing</p> <p>Step 8: -solo instruments selected by group members and each plays instrumental solo after singing/speaking their verse</p> <p>Step 9: -group sings and plays entire song and records it.</p> <p>Step 10: -after break period, group listens to song and discusses feelings and thoughts. Copies of song distributed.</p>	<p>-Integration of coping strategies into new life without loved one and how to continue with life activities while grieving</p> <p>-To find new insights about oneself and life</p>	<p><i>Remembering:</i> "I remember the first time you took me to school."</p> <p><i>Integrating:</i> "She feels like an angel now, she protects me at night."</p> <p><i>Growing:</i> "You taught me a lot about how to live in this world."</p> <p><u>Original songs composed by bereaved adolescents:</u></p> <p>"This is how it happened" "So many feelings" "I remember" "Slowly moving away" "My life is changing"</p>

Table 6, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
McFerran (2010)	<ul style="list-style-type: none"> <li>-patient preferred songs</li> <li>-song writing</li> <li>-lyric analysis</li> <li>-lyric substitution</li> <li>-thematic improvisation</li> <li>-song sharing</li> <li>-fun creative expression on drums</li> <li>-singing</li> </ul>	<ul style="list-style-type: none"> <li>-to provide fun and creative expression of grief</li> <li>-emotional expression</li> <li>-building trust and rapport within group</li> <li>-identity formation</li> </ul>	<p><u>-patient preferred songs</u> (detailed list provided on p.40-42 of article)</p> <p>-R&amp;B, rock, pop, alternative metal, alternative rock, dance, pop punk, hip-hop, indie, acoustic</p> <p><u>-Original songs composed by group (song parody):</u>            "The thing about grief"            "Grief is hard"</p> <p><u>Other highlighted songs:</u>            "I will remember you"            "Express yourself"            "I'll be there for you"            "Girls just wanna have fun"</p>

Table 7

*Music Therapy Interventions, Goals and Song Details for Adults*

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Cadrin (2006)	<p><u>Legacy work:</u> Ex. Compiling song lyrics in a journal accompanied by meaningful stories and insights &amp; transcripts of TBMGIM* sessions</p> <p>Ex. Free association to write legacy song</p> <p>Ex. Legacy booklet of songs related to death and separation; with accompanying tape left for husband</p> <p>Ex. Recording of improvisation and presenting it as a legacy gift</p> <p>Ex. Songwriting and family legacy video with therapeutic questions for family (“What role has music played in each family member’s life?”)</p>	<p>-to leave a legacy for future generations</p> <p>- to clarify and communicate life stories, values, beliefs, and meaning</p> <p>-facilitate a positive coping system during dying experience</p> <p>-to create a product that can serve as a linking or transitional object for the bereaved family</p> <p>-reduce suffering, provide soothing and energizing qualities</p> <p>-inquire insight into feelings related to dying process</p>	<p>-TBMGIM* (The Bonny Method of Guided Imagery and Music) involves specific sequence of Western classical music to unfold deeper levels of consciousness and inner processes. Patient listens to this sequence of music in an altered/relaxed state of mind and body, which elicits imagery that the patient verbalizes to therapist. Therapist records it and offers verbal support and guidance.</p> <p>-Original compositions: “I believe in music” “Old Dusty Farm” “Sweet sweet smile” “Hasta Manana”</p> <p>-Song parody: “The Four F’s of Life”</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Cadrin (2006)	Ex. Verbal discussion and song recording of important life events	<ul style="list-style-type: none"> <li>-reminiscence</li> <li>-enhance sense of meaning and purpose at end of life</li> <li>-make amends for past events</li> </ul>	<ul style="list-style-type: none"> <li>-Popular songs: "Teach your children well" "Grandpa"</li> </ul>
Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Cadrin (2009)	<ul style="list-style-type: none"> <li>-using imagery that reflects the patient's dying process (i.e. having patient focus on image of open heart) while listening to selected classical music (TBMGIM)</li> <li>-verbal processing of imagery and experiences during music listening</li> <li>-using poetry written by patient and verbal processing</li> </ul>	<ul style="list-style-type: none"> <li>-to open the heart and find authentic core being</li> <li>-To address psychosocial, spiritual and existential issues in end-of-life</li> <li>-Explore deeper issues and emotions related to illness, life and relationships</li> <li>-Reconciliation of relationships</li> <li>-Building insight</li> <li>-Improving sense of control</li> </ul>	<p><u>Some Songs used for TBMGIM:</u>            Debussy (Dance Sacred and Profane)            Debussy (Prelude to the afternoon of a Faun)            Holst (Venus)            Ravel (Daphnis and Chloe)            Debussy (Sirenes)            Brahms (Piano concerto no. 2 Bb)</p> <p><u>Patient written poems:</u>            "Words, words words"            No title—"My God, in Him I will trust" is last line            "Moment by Moment"            "Yesterday"            Finish with Psalm 23</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Clements-Cortes (2011)	<u>Receptive interventions:</u>	-explore love and companionship	Global themes/goals emerging from the 4 case studies:
	Music listening		
	Song choice		
	Lyric analysis	-explore loss (strength/hope, denial, fear/pain)	-Love
	Entrainment		
	Music and imagery		-Loss
		-how to say goodbye	-Gratitude
	<u>Creative interventions:</u>		
	Songwriting	-identity	-Growth/transformation
	Instrumental improvisation		
	Toning	-forgiveness (healing/resolution)	-Courage/strength
	Song dedications		
	Music/song legacy		-Goodbye
		-freedom	
	<u>Recreative interventions:</u>		
	Instrument playing	-reduce emotional unrest (sadness, desire, anxiety)	
	Singing pre-composed songs		
	Conducting music	-relationship completion	
	<u>Combined interventions:</u>		
	Music and movement	-understand emotions and relationship with God	
	Music and other arts experiences		
	Musical life review		
	Musical autobiography	-safe space for grieving	

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Dimaio (2010)	<p><u>Music Therapy Entrainment:</u>            Involves 3 principles:            -Iso principle            -Resonance Vibration            -Entrainment Principle</p> <p>*MTE consists of 5 stages:            1. assessment (“where is the pain?” “how long has it been occurring?”)            2. goal formation (formulate goals for pain management)            3. create auditory images (first, form auditory image of pain- “what would your pain sound like?” Next, form auditory image that would be capable of healing pain)            4. Externalization of pain and therapeutic resonance            5. Iso-continued application and evaluation</p> <p>-create a healing music CD for patient to listen to in subsequent days</p>	<p>-finding validation and ability to express and release pain</p> <p>-finding empowerment over pain and peacefulness at end-of-life</p> <p>-self-worth, self-esteem, self-dignity            -introducing new positive skills</p> <p>-learning a new language through music and communication of pain and dying process</p> <p>-QOL</p> <p>-building deeper, trustworthy and authentic connections in relationships, through therapist, and with family</p>	<p>-song cycle: “Annie’s song,” “I will always love you,” “In my life.”</p> <p>-mainly improvised music on instrument (guitar or harp) using various chord progressions for music therapy entrainment</p> <p>-vocal entrainment can be effective as well, sometimes requiring therapist and patient vocalize the painful sound/moan and be in the pain for 25 minutes before transitioning to a healing sound</p> <p>-MTE can be used as a one-time intervention or throughout several interventions</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Domingo (2015)	<ul style="list-style-type: none"> <li>-music assisted relaxation and visualization</li> <li>-singing and vocal expression</li> <li>-playing instruments</li> <li>-musical improvisation</li> <li>-music sedation</li> <li>-music entrainment</li> <li>-musical life review</li> <li>-songwriting</li> </ul>	<ul style="list-style-type: none"> <li>-pain management</li> <li>-relieve suffering</li> <li>-increase participation, attention-concentration and motivation</li> <li>-reducing anxiety/depression</li> <li>-improving wellbeing and overall QOL</li> <li>-promote communication</li> <li>-provide final 'life closure'</li> <li>-aid in final transition</li> <li>-spiritual exploration</li> </ul>	<p>Instruments used were: Guitar, ocean drum, violin, harp and tambura. On occasion, voice, saxophone and clarinet.</p>



Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Forrest (2001)	<ul style="list-style-type: none"> <li>-Music facilitated life review</li> <li>-singing and playing patient preferred music</li> <li>-counseling for patient and family</li> <li>-lyric analysis of relevant Russian songs that patient connects to</li> <li>-singing culturally centered music together with patient and family</li> </ul>	<ul style="list-style-type: none"> <li>-addressing cultural identity and integration</li> <li>-addressing cross-cultural conflict and immigrant struggles/adaptation</li> <li>-to provide support and comfort</li> <li>-reduce distress</li> <li>-reconciliation and closure with past trauma</li> <li>-catharsis</li> </ul>	<ul style="list-style-type: none"> <li>-Western classical piano</li> <li>-Culturally centered music related to patient's upbringing/childhood: Russian folk music and classical music: soft, reflective ballads, lullabies, laments and love songs</li> <li>-religious songs</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Gutgsell (2013)	<p>-single 20 minute music therapy session incorporating therapist-guided autogenic relaxation and live music:</p> <ol style="list-style-type: none"> <li>1. begin with verbal instructions</li> <li>2. therapist asks patient to pay attention to breathing for 1 minute</li> <li>3. begin autogenic exercise (focus on scalp muscles and allow them to release, and moving down to each muscle group similarly)</li> <li>4. Invite patient to imagine a safe place of his/her choice. What does it smell, sound, look, feel taste at safe place?</li> <li>5. therapist provides soothing instrumental improvisation on ocean drum/harp while patient explores his safe place</li> <li>6. At end of improvisation, request patients to re-enter hospital and know they can access safe place anytime. Pass out CD of intervention if needed.</li> </ol>	-lower pain levels	<p>-choice to use ocean drum in group relaxation exercise</p> <p>-improvisations listed in step 5 of autogenic relaxation included soft volume, slow tempo, in mode of G mixolydian with duple meter; followed by 4 pre-composed pieces in key of C major:</p> <p>-“Andante” by Waddington            -“Passing by,” “Reverie,” and            “Barcarolle,” by Grandjany in triple meter.</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hartley (2001)	<p>-piano improvisation with patient</p> <p>-spontaneous piano accompaniment with vocalization to a patient's singing/verbalization</p> <p>-play/sing patient preferred song together, with a copy of recording created at end to play at patient's funeral.</p>	<p>-providing one-pointed attention to patient</p> <p>-finding one's voice through music</p> <p>-finding safety in the music and abandoning one's inhibitions to let go and "fall into the music"</p> <p>-finding musical moments to transcend one's illness and feel alive</p> <p>-saying goodbye to family and friends through personalized lyrics</p> <p>-allowing oneself to go beyond expected physical or musical limitations and give in to the experience</p> <p>-confront suffering and work towards potential of love and goodness available through music and within depths of each human being</p>	<p><u>Patient composition:</u> "Susan's final session"</p> <p><u>Patient requested song:</u> "My way" Frank Sinatra</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hartwig (2010)	<ul style="list-style-type: none"> <li>-sing traditional songs to patient</li> <li>-cover patient in cloth and sing emotional songs while drumming</li> <li>-lyric analysis (music with words or a message are valued more in Tanzania)</li> <li>-vocal music interventions preferred over instrumental music</li> </ul>	<ul style="list-style-type: none"> <li>-reduce anxiety</li> <li>-increase emotional wellbeing</li> <li>-improve spiritual wellbeing</li> <li>-decrease pain</li> <li>-bring joy, provide comfort</li> <li>-exorcise negative spirits</li> <li>-build hope</li> </ul>	<ul style="list-style-type: none"> <li>-variety of music used in Tanzania from moslem recreational music to European hymns to brass bands</li> <li>-instruments used: pembe (animal horn) and drums (ngoma)</li> <li>-traditional chaga music</li> <li>-songs from hymn book</li> <li>-spiritual songs</li> </ul> <p><u>Common hymn:</u> "Don't be afraid, I the Lord am with you"</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hilliard (2001a)	<p><u>Cognitive behavioral therapy interventions:</u></p> <ul style="list-style-type: none"> <li>-singing and playing patient-preferred music</li> <li>-adapting music to patient's needs (i.e. 12 string guitar for louder volume and resonance)</li> <li>-verbal processing</li> <li>-verbal and musical validation</li> <li>-music assisted relaxation</li> <li>-music and imagery</li> <li>-iso principle with continuous music</li> <li>-lyric analysis</li> <li>-using recorded music as distraction from pain when therapist is not there</li> <li>-music alternating with prayer</li> </ul>	<ul style="list-style-type: none"> <li>-coping with grief, loss, pain and anxiety, disorientation and dementia</li> <li>-finding meaning at end of life/validation to existential questions</li> <li>-building hope</li> <li>-to identify and express emotions</li> <li>-reminiscence</li> <li>-reduce feelings of loneliness and improve mood &amp; QOL</li> <li>-reducing distress and agitation</li> <li>-decrease pain perception</li> <li>-increase positive, peaceful soulful communication between patient and family in last moments</li> </ul>	<p><u>Patient requested songs:</u></p> <ul style="list-style-type: none"> <li>“Clementine”</li> <li>“In the good old summertime”</li> <li>“Swing low sweet chariot”</li> <li>“When they ring the golden bells”</li> <li>“Proud mary”</li> <li>“amazing grace”</li> <li>“piano man”</li> <li>“blowin in the wind”</li> </ul> <p>-popular 60s, 70s and 80s music; gospel music used</p> <p>-use of the Omnichord to facilitate initial rapport and engagement with patient with dementia. Other instruments used: maraca, cabasa and hand drum</p> <p>-leave instruments for family member to play with patient during family member's visits</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hilliard (2004)	<u>Cognitive behavioral:</u>  -singing with guitar/piano/omnichord accompaniment  -instrument playing  -song parody  -songwriting  -rhythmic improvisation  -vocal improvisation	-increasing length of life  -reduce agitation  -facilitate restful sleep  -provide comfort  -improve cognitive patterns  -cognitive reframing  -emotional expression -gain insight  -improve conflict resolution  -behavior modification	-not specified

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Hogan (2003)	<ul style="list-style-type: none"> <li>-support and validate patients' emotions via musical reflection and exploration</li> <li>-empathize with patient's internal and external suffering</li> <li>-songwriting</li> <li>-singing/playing patient-preferred songs</li> <li>-lyric substitution</li> <li>-song personalization</li> <li>-lyric analysis with verbal discussion and journal writing</li> <li>-musical life review</li> <li>-synchronize music with patient's respiratory rate and gradually bring it down or up as needed</li> <li>-play simple major chord progressions for security and warmth (I, IV, V, I) with narrow pitch and smooth narrow melodic movement</li> <li>-continuous music playing (sometimes repeating same song continuously) until slowing down tempo and volume and eventually humming melody</li> </ul>	<ul style="list-style-type: none"> <li>-easing emotional, physical, spiritual distress</li> <li>-achieving existential resolution, wholeness and peace</li> <li>-relief from pain and physical symptoms</li> <li>-positively alter patient's mental and physical states of well-being</li> <li>-improve coping mechanisms</li> <li>-stimulates multisensory recollections of memories</li> <li>-explore spirituality, contemplate funerals</li> <li>-creatively guide patient through a process of transformation</li> </ul>	<p><u>Patient requested songs:</u></p> <ul style="list-style-type: none"> <li>-Danny Boy</li> <li>-Home on the Range</li> <li>-I'll take you home again, Kathleen</li> <li>-Moonlight and Roses</li> <li>-Ebbtide</li> <li>-When I grow too old to dream</li> <li>-Always</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Kidwell (2014)	<ul style="list-style-type: none"> <li>-providing spiritual continuous music</li> <li>-passive listening to spiritual music and hymns</li> <li>-holding out notes of familiar songs (for patient) to minimize pauses and maintain a 'holding' space</li> <li>-gentle rubbing of hand back and forth with music</li> <li>-playing rhythm of song in sync with patient's breath to facilitate a connection when patient cannot actively participate</li> <li>-lyric analysis</li> <li>-life review</li> </ul>	<ul style="list-style-type: none"> <li>-addressing spiritual needs</li> <li>-addressing the whole person</li> <li>-find identity</li> <li>-provide meaning, hope and acceptance</li> <li>-reduce agitation</li> <li>-spiritual upliftment</li> </ul>	<ul style="list-style-type: none"> <li>"In the Garden"</li> <li>"Amazing Grace"</li> <li>"It is well with my soul"</li> <li>"How great thou art"</li> <li>"He's got the whole world in his hands"</li> <li>-gospel music</li> <li>"Where is love"</li> <li>"If I loved you"</li> <li>"Some enchanted evening"</li> <li>"Climb every mountain"</li> <li>"All of me"</li> <li>"Imagine"</li> <li>"What a wonderful world"</li> <li>"The dying swan"</li> </ul>



Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Krout (2003)	<ul style="list-style-type: none"> <li>-selecting and singing familiar and favorite songs</li> <li>-lyric discussion</li> <li>-validation</li> <li>-music assisted relaxation</li> <li>-lyric analysis</li> <li>-images and symbolism of music</li> <li>-playing chords on guitar to patient written spiritual song</li> </ul>	<ul style="list-style-type: none"> <li>-maintain physical comfort of patient</li> <li>-facilitate pain control</li> <li>-emotional comfort</li> <li>-assist in relaxation</li> <li>-reduce anxiety</li> <li>-reminiscence</li> <li>-normalization</li> <li>-providing spiritual strength</li> <li>-communicate and interact in a meaningful manner</li> </ul>	<ul style="list-style-type: none"> <li>“Michael row the boat ashore”</li> <li>“He’s got the whole world in his hands”</li> <li>“This little light of mine”</li> <li>“kumbaya”</li> <li>“wind beneath my wings”</li> <li>-spiritual songs from Roman catholic faith:</li> <li>“On eagle’s wings”</li> <li>“Be not afraid”</li> <li>“Prayer of St. Francis”</li> <li>“The rose”</li> <li>“Beulah Land”</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Krout (2004)	<ul style="list-style-type: none"> <li>-TBGIM</li> <li>-CBT methods</li> <li>-improvisation based methods</li> <li>-music therapy as milieu</li> <li>-medical music therapy</li> <li>-music based collage</li> <li>-musically supported counseling</li> <li>-life review</li> <li>-physioacoustic therapy</li> <li>-psychodynamic</li> <li>-psychospiritual music therapy</li> <li>-receptive approaches such as music listening</li> <li>-supportive eclectic music therapy for grief and loss</li> <li>-songwriting</li> </ul>	<ul style="list-style-type: none"> <li>-reduce distress</li> <li>-reduce pain</li> <li>-energize</li> <li>-whole person healing</li> <li>-psychosocial</li> <li>-spiritual</li> <li>-meaning</li> <li>-insight</li> </ul>	<ul style="list-style-type: none"> <li>-synderdisciplinary approach: combined hands-on team approach</li> <li>*In synderdisciplinary approach, music therapy offered in the following ways: <ul style="list-style-type: none"> <li>-with chaplain: bedside communion, baptism, spiritual work</li> <li>-with social worker: family session, counselling session</li> <li>-with nurse: during or before/after procedures, pain management</li> <li>-with home health aide: during care, relaxation tool</li> <li>-with massage therapist: during massage for effective relaxation</li> <li>-with art therapist: combine both modalities to complement each other</li> <li>-with bereavement coordinator: During memorial services for family, survivors and staff</li> </ul> </li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Magee (2007)	<ul style="list-style-type: none"> <li>-precomposed songs</li> <li>-improvisation</li> <li><u>Session format:</u></li> <li>-musical welcome</li> <li>-exploration of instruments</li> <li>-joint musical improvisation</li> <li>-singing song of personal meaning to patient</li> <li>-musical ending</li> </ul>	<ul style="list-style-type: none"> <li>-acknowledging and exploring intolerable feelings in face of loss and death</li> <li>-physical activity</li> <li>-shift individual's self-construct toward positive identity</li> <li>-improved sense of control</li> <li>-increased ability, success and skill</li> <li>-reduce feelings of isolation</li> <li>-emotional catharsis</li> <li>-build trust and safety in therapeutic relationship</li> </ul>	Not specified

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Magill (2001)	<ul style="list-style-type: none"> <li>-vocal techniques</li> <li>-listening</li> <li>-instrumental techniques</li> <li>-live and recorded music</li> <li>-visualization</li> <li>-vocalizing</li> <li>-relaxation techniques</li>   <li>-toning (“the singing of vowel sounds at different pitches...music therapist guides patient to direct attention and focus onto the sounds to release tension and enhance awareness”)</li>   <li>-chanting</li> <li>-precomposed songs</li> <li>-songwriting</li> <li>-melodic improvisation</li> <li>-imagery in music</li> <li>-music therapist’s song compositions</li> <li>-live instrumental music with passive or active participation</li> <li>-recorded instrumental music</li> <li>-mindful music listening</li> <li>-song legacy through personal recording</li> </ul>	<ul style="list-style-type: none"> <li>-address suffering</li> <li>-address anxiety</li> <li>-reduce pain</li> <li>-improve comfort</li> <li>-improve peace of mind</li> <li>-facilitate relaxation</li> <li>-communication</li> <li>-improve QOL</li>   <li>-reminscence</li> <li>-upliftment</li> <li>-entrainment</li>   <li>-autonomy and empowerment</li>   <li>-deepen self-awareness and self-identity</li> </ul>	<ul style="list-style-type: none"> <li>-songs of faith and hope</li>   <li>-hymns</li>   <li>-patient preferred songs</li>   <li>-instrumental music: Copeland’s <i>Appalachian Spring</i></li>   <li>-soft guitar instrumental music; improvisation for patient on keyboard and autoharp</li>   <li>-concertos</li>   <li>-<u>therapist composed song</u>: <i>Inner Peace</i>            “In this moment, there is beauty. In this moment, time is full. There is joy, there is peace, in this moment now.”</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Magill (2009)b	<ul style="list-style-type: none"> <li>-personalized lyric substitution</li> <li>-patient and family songbooks as autobiographical journals</li> <li>-lyric composition</li> <li>-song diaries and reflections</li> <li>-song tributes</li> <li>-melodic vocalization</li> <li>-circle of love technique: “the caregiver may encourage the patient to relax and attend to the soft sounds and/or join in making the sounds; vocalize gentle melodic sounds and place one hand on his or her own heart and the other hand somewhere on patient to convey a caring loving presence...”</li> <li>-create audio recordings</li> <li>-mindful music listening: “direct patient’s attention to specific musical sounds, rhythms, melodic phrasing, harmonies and instrumentation, while also maintaining a non-judgmental awareness of the sensations elicited by music...”</li> </ul>	<ul style="list-style-type: none"> <li>-reduce distress</li> <li>-offer love, joy, comfort</li> <li>-find meaning</li> <li>-aesthetic beauty</li> <li>-peace</li> <li>-improve sense of control</li> <li>-provide caregivers a means through which they can assist loved ones</li> <li>-increase dignity and overall sense of empowerment</li> <li>-ease caregiver insomnia, anguish and exhaustion</li> <li>-increase positive family interaction</li> </ul>	Patient-preferred song: “Wind beneath my wings”

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Mramor (2001)	<ul style="list-style-type: none"> <li>-live music provided by therapist</li> <li>-listening to recorded music provided by therapist</li> <li>-singing together</li> <li>-playing an instrument</li> <li>-songwriting</li> <li>-music for relaxation imagery</li> <li>-verbal discussion</li> <li>-playing a game</li> <li>-reading patient preferred book together</li> <li>-artwork</li> <li>-life review</li> </ul>	<ul style="list-style-type: none"> <li>-build trust and rapport</li> <li>-uplift mood</li> <li>-emotional expression</li> <li>-physical movement</li> <li>-acceptance</li> <li>-process inner fears, grief and relationships</li> <li>-self reflection</li> <li>-spiritual upliftment</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>-Motown hits of 1950s-70s</li> <li>-“Ain’t no mountain high enough”</li> <li>-gospel music</li> <li>-Life review songs (‘Lifesong’): <i>He will help you</i></li> <li>-90s pop</li> <li>-“Don’t let the sun go down on me”</li> <li>-“The long and winding road”</li> <li>-“All by myself”</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Nakayama (2009)	<ul style="list-style-type: none"> <li>-using patient preferred music</li> <li>-culturally centered and familiar music</li> </ul>	<ul style="list-style-type: none"> <li>-lower cortisol levels</li> <li>-reduce stress level</li> <li>-improve mood</li> <li>-reduce fatigue</li> <li>-reduce anxiety and depression</li> </ul>	<ul style="list-style-type: none"> <li>-musical instruments used: piano, flute, little instruments for easy participation (i.e., maracas, touch-bells, voice).</li> <li>-“Hotaru Koi” (Japanese)</li> <li>-“Moldau”</li> <li>-“Ue O Muito Aruko”</li> </ul>
O’Callaghan (2008)	<p><i>“Lullaby qualities:</i> Lulling, nurturance, care, support, love, hope, and acknowledgement of world harshness and goodness</p> <p><i>Lament qualities:</i> Expressions of questioning and loss, individually or within a supportive community and within rituals or in spontaneous creations</p> <p><i>Combined lullaby and lament qualities:</i> A connection with a wider universe, transformation, and moving forward”</p>	<ul style="list-style-type: none"> <li>-promote awareness</li> <li>-enculturation</li> <li>-adaptation</li> <li>-acceptance of life/loss transition</li> <li>-grief expression</li> <li>-provide conduit to mourn or lament, express loss through lullaby/lullament</li> <li>-enhance sleep</li> <li>-enhance QOL</li> <li>-identity</li> <li>-meaning</li> <li>-life review</li> </ul>	<ul style="list-style-type: none"> <li>Lullabic songs:</li> <li>-<i>Rock a bye baby</i></li> <li>-<i>Swing Low sweet chariot</i></li> <li>-<i>Sleep, My child</i> (lullaby from Holocaust)</li> <li>-Hymns</li> <li>-“The Prayer”</li> <li>-<u>Patient compositions:</u></li> <li>-“You are my strength”</li> <li>-Therapy”</li> <li>-“Life goes on”</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Potvin (2015)	-music therapy combined with ritual drama	<ul style="list-style-type: none"> <li>-provide cultural and spiritual structure</li> <li>-provide smooth transition to afterlife</li> <li>-pain alleviation</li> <li>-improve QOL</li> <li>-emotional wellness</li> <li>-increased acceptance and readiness to let go</li> </ul>	<ul style="list-style-type: none"> <li>“You are my sunshine”</li> <li>“Each coming night”</li> </ul>
Rykov (2001)	<ul style="list-style-type: none"> <li>-vocal music</li> <li>-chanting</li> <li>-song choice</li> <li>-singing</li> </ul>	<ul style="list-style-type: none"> <li>-emotional release</li> <li>-connect to healthy cultural identity</li> <li>-self expression</li> <li>-distract from physical symptoms</li> <li>-reduce anxiety</li> <li>-uplift mood</li> <li>-improve self-esteem</li> <li>-increase opportunities for choice and control</li> <li>-provide opportunities for closure</li> <li>-participate actively</li> </ul>	<ul style="list-style-type: none"> <li>-Jewish music</li> <li>-Hasidic manner of prayer</li> <li>-Steiger (musical mode in Ashkenazi tradition)</li> <li>-Hebrew camp songs of childhood days</li> <li>-Hebrew and Yiddish songs</li> </ul>



Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Salmon (2001)	<ul style="list-style-type: none"> <li>-singing patient preferred music</li> <li>-verbal discussion/counseling</li> <li>-reminiscence, life review</li> <li>-composition/songwriting</li> <li>-audio recording on cassette of patient composed song</li> </ul>	<ul style="list-style-type: none"> <li>-to elicit and support depth experiences</li> <li>-to provide a containing or sacred space for psychospiritual awareness*</li> <li>-facilitate transformation of patient suffering to meaning</li> <li>-enhance QOL</li> <li>-upliftment and taking patient to realm of spirit and psyche</li> </ul>	<ul style="list-style-type: none"> <li>-music by Joe Cocker</li> <li>-Patient composition: Un jour a la fois (One day at a time)</li> <li>*Psychospiritual awareness: <i>Working through</i>: acceptance, love, faith, beauty</li> <li><i>Experience</i>: hope, creativity, awareness, meaning</li> <li><i>Express</i>: relatedness, humor, nourishment, peace</li> </ul>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Sato (2011)	<p>-Life review (an evaluation of one's life)</p> <p><u>-MLR (Musical Life Review model):</u></p> <p><i>Stimuli</i> (music, art, poetry, pictures, literature)</p> <p><i>Theme</i> (major life events, family, hobbies, work, community, life roles, relationships, spirituality, heritage)</p> <p><i>Response</i> (verbal processing, creative expression, sharing of memories)</p> <p><i>Evaluation</i> (verbal processing, creative expression, sharing of memories)</p>	<p>-express feelings</p> <p>-lift mood</p> <p>-sustain hope</p> <p>-work through unresolved issues</p> <p>-reconnect with heritage</p> <p>-find identity</p> <p>-reminiscence</p> <p>-integration</p> <p>-increased understanding of life's meaning,</p> <p>-emotional intimacy between patients and their families</p> <p>- awareness of what to do with the time left, increased rapport between the therapist and the patient"</p>	<p>-“Back home again in Indiana”</p> <p>-“My old kentucky home”</p> <p>-“Danny Boy”</p> <p>-“Old man river”</p> <p>-“Show boat”</p> <p>-“Edelweiss”</p> <p>-“Hamabe no uta” (A song of the beach)</p> <p>-“Que sera sera”</p> <p>-catholic hymn: “On this day oh beautiful mother”</p> <p>-“I walk the line”</p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Wigram (2011)	<ul style="list-style-type: none"> <li>-culturally centered songwriting</li> <li>-use of Mexican song form in songwriting for group (<i>corrido</i>)</li> <li>-recording of final product to keep as memento for continued healing</li> <li>-lyric analysis</li> </ul>	<ul style="list-style-type: none"> <li>-provide support</li> <li>-group cohesion and trust</li> <li>-emotional expressions</li> <li>-expressing and releasing grief</li> <li>-coping with loss</li> <li>-acceptance</li> <li>-bonding through related experiences</li> </ul>	<p>-style of song: Mexican song form called <i>corrido</i>:</p> <p>“The Mexican corrido has been described simply as a topical ballad form characteristic of Mexican popular music used as a means to spread news...can tell of stories about heroes, heroines, revolution and love.”</p> <p><i>-El Corrido de los Perez</i>  <i>-Para ti....Nuestra Historia</i></p>

Table 7, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Wlodarczyk (2007)	<ul style="list-style-type: none"> <li>-play guitar and sing patient-preferred music</li> <li>-facilitate patient song choice via printed songbook</li> <li>-lead patient in music making</li> <li>-singing, improvisation</li> <li>-drum playing</li> <li>-songwriting</li> <li>-life review</li> <li>-sing-a-longs with family and friends</li> <li>-dedication of "gift songs" as a memento and positive memory</li> </ul>	<ul style="list-style-type: none"> <li>-improve spiritual well-being</li> <li>-facilitate interaction with patient and family</li> <li>-increase relaxation</li> <li>-increase communication and socialization</li> <li>-elevate mood</li> <li>-decrease isolation</li> <li>-redirect from pain</li> <li>-reduce perceptions of pain</li> <li>-address emotional issues</li> <li>-increase QOL</li> </ul>	-spiritual music

Table 8

*Music Therapy Interventions, Goals and Song Details for varied ages*

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Baxter (2010)	<ul style="list-style-type: none"> <li>- pastel drawings, paintings, collages of patient's current feelings following music listening &amp; relaxation</li> <li>-creating recordings (via tape, CD or video) for patient and bereaved family members to have a "family treasure"</li> <li>-song parodies</li> <li>-life review of patient's old performances, songs, positive memories and anecdotes on voice/guitar/keyboard</li> <li>-songwriting of life stories or estranged relationships to heal.</li> <li>-creating a recording of patient's favorite songs with accompanying songbook</li> </ul>	<ul style="list-style-type: none"> <li>-stimulation</li> <li>-improve mood and enjoyment</li> <li>-facilitate self-expression and storytelling</li> <li>-independence, insight and motivation</li> <li>-facilitate empowerment, self-worth and dignity</li> <li>-autonomy</li> <li>-enrich relationships</li> <li>-life validation</li>   <li>- provide comfort, help process pain, denial, helplessness and grief, and leave a lifelong positive memento of patient for bereaved family members</li> </ul>	<ul style="list-style-type: none"> <li>-no specific songs or musical styles discussed</li>   <li>-It is important to give the patient a decision about the future of their music therapy product and encourage patient ownership of product</li> </ul>

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Clements-Cortes (2010)	<p>-4 approaches: receptive, creative, recreative and combined</p> <p><u>*Interventions/techniques for each of 3 levels:</u></p> <p>L1: <i>Supportive</i>  Song choice  Song listening  Entrainment  Toning  Singing  Music and movement</p> <p>L2: <i>Communicative</i>  Life review  Musical autobiography  Song dedication  Music/song legacy  Improvisation  Music and art</p> <p>L3: <i>Transformative</i>  Songwriting  Lyric discussion  Musical improvisation  Song dedications  Music legacies  GIM</p>	<p>-assist and enhance relationship completion</p> <p>-3 levels of Goals:</p> <p>1. <i>supportive</i> (palliation, reduce pain perception, decrease agitation, provide support/comfort, increase relaxation)</p> <p>2. <i>communicative/expressive</i> (identify and express feelings, safe expression, facilitate awareness, to support and validate)</p> <p>3. <i>transformative</i> (facilitate growth and insight, life review, conflict resolution, forgiveness, spiritual and existential issues, peace).</p>	<p>-3 levels of relationship resolution: <u>intrapersonal</u> (relationship with oneself)  <u>Interpersonal</u> (social connection between 2 or more people)  <u>Transpersonal</u> (being drawn together by spirit; relationship of a transcendent nature)</p> <p>-5 sentiments expressed musically permit relationship completion:  "I love you"  "Thank you"  "Forgive me"  "I forgive you"  "Goodbye"</p>

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Gallagher (2001)	<ul style="list-style-type: none"> <li>-listening to live or recorded music passively</li> <li>-active singing, playing instruments, discussing music</li> <li>-sharing memories elicited by the music</li> <li>-discussion of lyrics and their significance</li> <li>-writing songs</li> </ul>	<ul style="list-style-type: none"> <li>-express feelings</li> <li>-reminiscence</li> <li>-improve family communication</li> <li>-decrease stress/provide distraction</li> <li>-decrease perception of pain</li> <li>-provide comfort/solace</li> <li>-decrease depression</li> <li>-decrease anxiety/agitation</li> <li>-provide opportunity to address bereavement with family</li> <li>-decrease depression</li> </ul>	<p><u>-styles of music:</u> big band, gospel, musicals, Christmas songs, classical music, various, popular (1980s and 1990s), country, polka, jazz, irish, rock (1950s), waltz, blues, folk, instrumental, march</p>
Gallagher (2006)	<ul style="list-style-type: none"> <li>-live music listening</li> <li>-singing alone and/or with therapist</li> <li>- musical life review</li> <li>-requesting songs from memory or list</li> <li>-instrument playing</li> <li>-verbal processing</li> <li>-lyric analysis</li> <li>-music assisted relaxation</li> <li>-songwriting</li> <li>-music entrainment</li> </ul>	<ul style="list-style-type: none"> <li>-to improve anxiety</li> <li>-improve body movement</li> <li>-improve facial expression</li> <li>-improve mood</li> <li>-reduce pain</li> <li>-improve shortness of breath</li> <li>-increase verbalization</li> </ul>	<p><u>-styles of music:</u> folk, improvisation, easy listening, latin, irish, relaxation, polka, 1970s and 80s, 1950s and 60s, Christmas, country, popular (80s-2000s), musicals, jazz, big band(40s/50s), classical, gospel</p>

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Groen (2007)	<ul style="list-style-type: none"> <li>-music listening for relaxation</li> <li>-distraction</li> <li>-deep breathing</li> <li>-progressive muscle relaxation</li> <li>-music assisted cognitive reframing</li> <li>-meditation</li> <li>-autogenics</li> <li>-GIM</li> </ul>	<ul style="list-style-type: none"> <li>-spiritual support</li> <li>-anxiety</li> <li>-pain</li> <li>-depression</li> <li>-isolation</li> <li>-confusion</li> <li>-grief</li> <li>-communication</li> <li>-coping</li> <li>-restlessness</li> <li>-memory loss</li> </ul>	Not specified
Heath & Lings (2012)	<ul style="list-style-type: none"> <li><u>creative songwriting</u></li> <li>-improvisation on piano or metallophone for melody</li> <li>-brainstorming to generate lyrics</li> <li>-acrostic technique to generate lyrics</li> <li>-create framed copy of lyrics for patient</li> </ul>	<ul style="list-style-type: none"> <li>- expressing complex feelings</li> <li>-existential crises</li> <li>-legacy work</li> <li>-celebration of achievements and current family events</li> <li>-saying goodbye</li> <li>-commemorating milestones in life</li> </ul>	<ul style="list-style-type: none"> <li><u>Original compositions with patient in songwriting:</u></li> <li>“Looking back”</li> <li>“Can I come away sane?”</li> <li>“Daily victories”</li> <li>“I can do it by myself”</li> <li>“Don’t give up”</li> <li>“Bright side”</li> <li>“So simple”</li> <li>“Liva’s lullaby”</li> <li><u>Popular song in bereavement:</u></li> <li>“Tears in heaven”</li> </ul>



Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Krout (2005)	<ul style="list-style-type: none"> <li>-one time bereavement support group</li> <li>-invocation (poem)</li> <li>-music therapist composed songs</li> <li>-printed song lyrics of music therapist composed songs* in booklet for each member of group</li> <li>-call and response technique</li> <li>-singing as an ensemble</li> <li>-Lyric analysis: Lyric containing metaphorical images are highlighted, to enhance visual imagery for participants during music</li> <li>-ritual projects: participants writing names of loved ones on stones and placing them in group to make a connected path</li> <li>-writing messages on a boat to float in a stream or body of water to loved one</li> </ul>	<ul style="list-style-type: none"> <li>-to create participant connections</li> <li>-group cohesion</li> <li>-reduce anxiety</li> <li>-build trust, establish rapport and welcoming atmosphere to group</li> </ul>	<p><u>*Music- therapist composed songs</u></p> <p>“We celebrate these lives”</p> <p>“Walking together (as this journey starts)”</p> <p>“These Leaves of Life”</p> <p>“Safe within this heart of mine”</p>

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
Magill (2009)a	<ul style="list-style-type: none"> <li>-use of pre-composed songs</li> <li>-lyric improvisation</li> <li>-song composition</li> <li>-imagery and music</li> <li>-music listening</li> </ul>	<ul style="list-style-type: none"> <li>-increase interrelatedness</li> <li>-facilitates sharing of difficult to express thoughts and feelings</li> <li>-reminiscence</li> <li>-increases sense of personal value</li> <li>-find meaning at end-of-life</li> <li>-build trust, acceptance, encouragement and creativity in end-of-life</li> <li>-reduce pain and anxiety</li> <li>-instill peace, security, comfort and pleasure</li> <li>-transcendence</li> <li>-liberation</li> <li>-inspire, touch and bring feelings of Love</li> </ul>	-not specified

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
O' Callaghan (2010)	<ul style="list-style-type: none"> <li>-music supported counseling</li> <li>-improvisation</li> <li>-imagery</li> <li>-relaxation</li> <li>-songwriting</li> <li>-song sharing</li> <li>-lyric analysis</li> </ul>	<ul style="list-style-type: none"> <li>-reminiscence</li> <li>-improve QOL</li> <li>-reducing isolation</li> <li>-life validation</li> <li>-increased self-awareness</li> <li>-improve pleasure</li> <li>-spiritual connection</li> <li>-alleviate physical symptoms (nausea, pain, fatigue, weakness)</li> <li>-self examination</li> <li>-normalization</li> </ul>	Not specified

Table 8, continued

Author's last name, date	MT Interventions & Techniques	MT Goals	Songs, style of music & other relevant details
O'Callaghan (2010)	-preloss music therapy: connect with deceased through memory and imagery engagement	<ul style="list-style-type: none"> <li>-improve mood</li> <li>-confront grief</li> <li>-continuing sound bonds</li> <li>-minimize sadness</li> <li>-provide empathy</li> <li>-reminiscence</li> </ul>	"Once upon a time"
Potvin (2014)	<ul style="list-style-type: none"> <li>-music and prayer</li> <li>-vocalizing</li> </ul>	<ul style="list-style-type: none"> <li>-spiritual health and upliftment</li> <li>-insight</li> </ul>	<ul style="list-style-type: none"> <li>"Amazing Grace"</li> <li>"Dalit Hymn"</li> <li>Culturally centered prayers</li> </ul>

Results from Tables 5 through 8 were then compiled into 8 bar graphs, as seen in Figures 5 through 12.

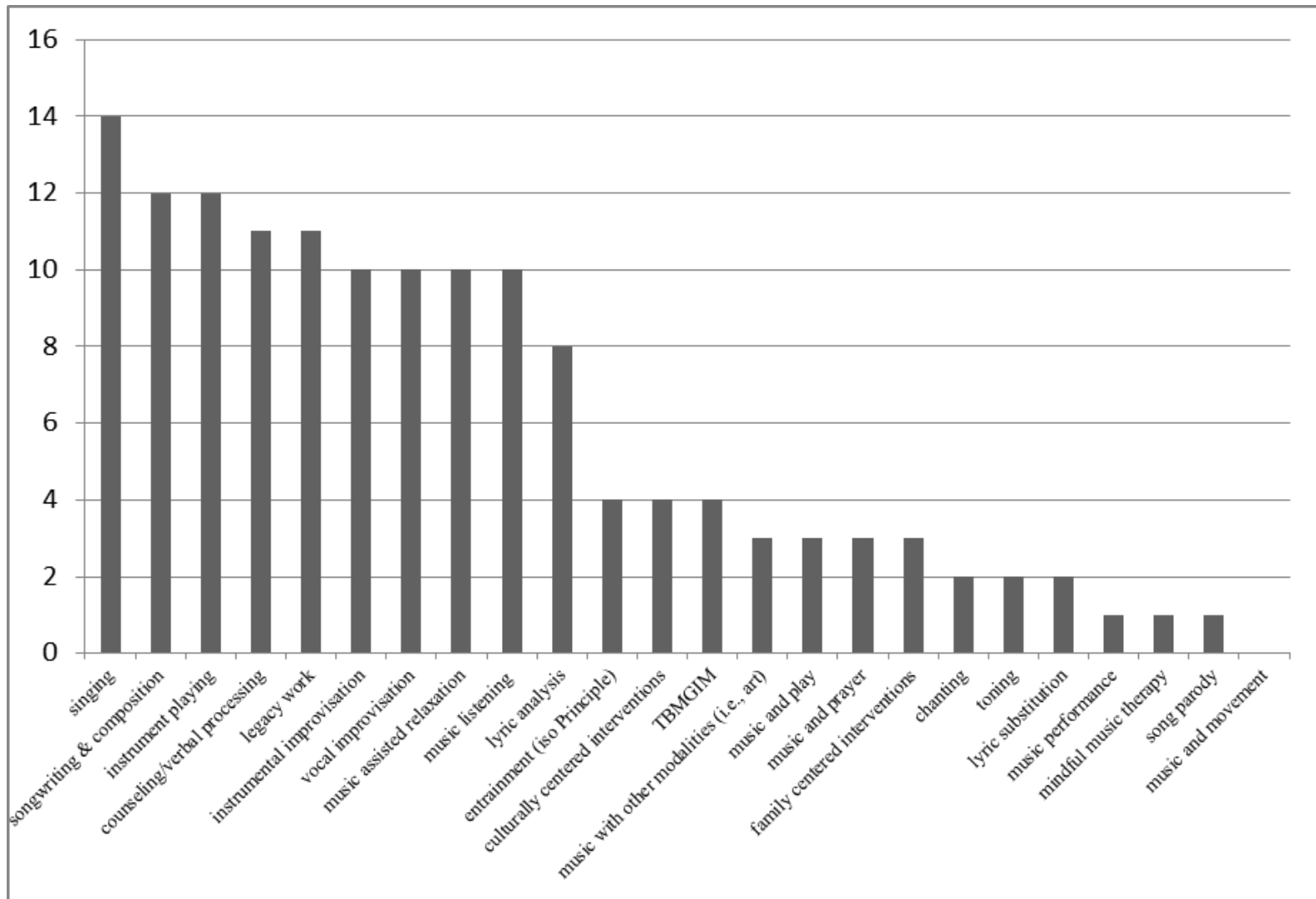


Figure 5. Music Therapy Interventions for Adults

As shown in Figure 5, singing, songwriting and composition, instrument playing, legacy work, and counseling/verbal processing are the most commonly used interventions for the adult population. Other relevant interventions commonly used with adult age group in end-of-life care include music-assisted relaxation, music listening, instrumental improvisation, vocal improvisation, and lyric analysis, respectively. Less commonly used interventions include The Bonny Method of Guided Imagery and Music, music with other modalities, lyric substitution, music therapy entrainment/iso principle, culturally centered interventions, music and prayer, toning, chanting, and mindful music therapy. Table 9 provides brief descriptions and examples of music therapy interventions extracted from Tables 5 through 8.

Table 9

*Descriptions of Music Therapy Interventions*

Music Therapy Intervention	Description	Author (s), year
TBMGIM: The Bonny Method of Guided Imagery and Music	The Bonny Method of Guided Imagery and Music involves specific sequence of Western classical music to unfold deeper levels of consciousness and inner processes. Patient listens to this sequence of music in an altered/relaxed state of mind and body, which elicits imagery that the patient verbalizes to therapist. Therapist records it and offers verbal support and guidance.	Cadrin (2006, 2009)
Music Therapy Entrainment (MTE) with iso principle	<p>Verbal processing of imagery and experiences during music listening.</p> <p>Music Therapy Entrainment involves 3 principles:</p> <ul style="list-style-type: none"> <li>-Iso principle</li> <li>-Resonance Vibration</li> <li>-Entrainment Principle</li> </ul> <p>MTE consists of 5 stages:</p> <ol style="list-style-type: none"> <li>1. assessment (“where is the pain?” “how long has it been occurring?”)</li> <li>2. goal formation (formulate goals for pain management)</li> <li>3. create auditory images (first, form auditory image of pain- “what would your pain sound like?” Next, form auditory image that would be capable of healing pain)</li> <li>4. Externalization of pain and therapeutic resonance</li> <li>5. Iso-continued application and evaluation</li> </ol> <ul style="list-style-type: none"> <li>-mainly improvised music on instrument (guitar or harp) using various chord progressions for music therapy entrainment</li> <li>-vocal entrainment can be effective as well, sometimes requiring therapist and patient vocalize the painful sound/moan and be in the pain for 25 minutes before transitioning to a healing sound</li> <li>-MTE can be used as a one-time intervention or throughout several interventions</li> </ul>	Dimaio (2010)

Table 9, continued

Music Therapy Intervention	Description	Author (s), year
Mindful Music Therapy	Mindful music listening: “direct patient’s attention to specific musical sounds, rhythms, melodic phrasing, harmonies and instrumentation, while also maintaining a non-judgmental awareness of the sensations elicited by music...”	Magill (2009) <sup>b</sup>
Legacy Work/Life Review	Involves music to review life experiences, positive memories; legacy work is used to leave a memento behind for loved ones.	Cadrin (2006)
	Ex. Compiling song lyrics in a journal accompanied by meaningful stories and insights	Duda (2013)
	Ex. Legacy booklet of songs related to death and separation; with accompanying tape left for husband	Sato (2011)
	Ex. Recording of improvisation and presenting it as a legacy gift	
	Ex. Songwriting and family legacy video with therapeutic questions for family (“What role has music played in each family member’s life?”)	
	Ex. Verbal discussion and song recording of important life events	
	<u>-MLR (Musical Life Review model)</u>	
	Stimuli (music, art, poetry, pictures, literature)	
	Theme (major life events, family, hobbies, work, community, life roles, relationships, spirituality, heritage)	
	Response (verbal processing, creative expression, sharing of memories)	
	Evaluation (verbal processing, creative expression, sharing of memories)	



Table 9, continued

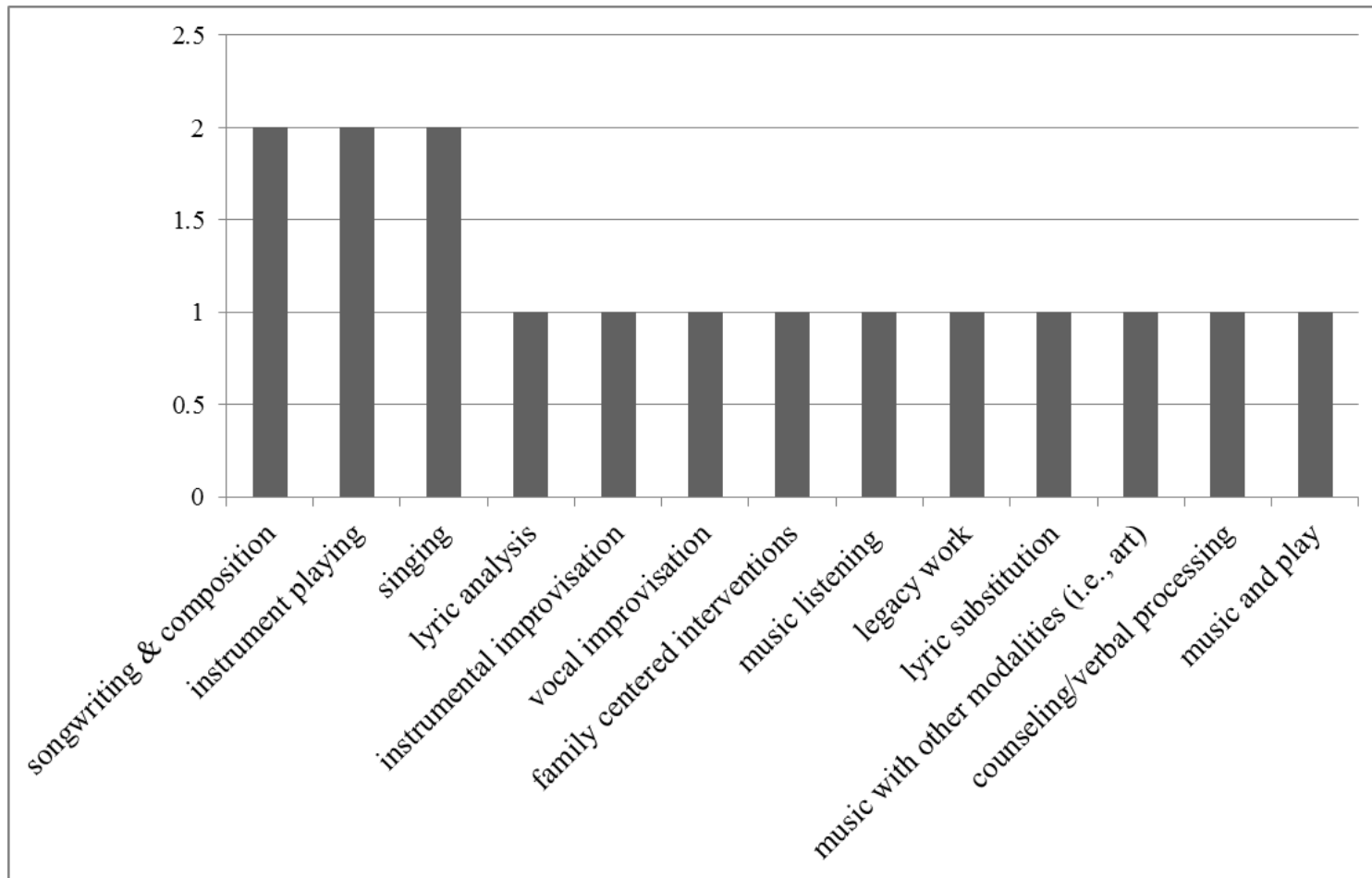
Music Therapy Intervention	Description	Author (s), year
Songwriting and Composition	<p>Heath and Lings describe songwriting involving a variety of approaches, such as:</p> <ul style="list-style-type: none"> <li>-improvisation on piano or metallophone for melody</li> <li>-brainstorming to generate lyrics</li> <li>-acrostic technique to generate lyrics</li> <li>-create framed copy of lyrics for patient at end</li> </ul> <p>Roberts provides a step by step approach to songwriting:</p> <p>Step 1: introducing songwriting</p> <p>Step 2: brainstorming ideas for the song</p> <p>Step 3: Determining the song structure</p> <p>Step 4: Lyric composition</p> <p>Step 5: Musical accompaniment composition</p> <p>Step 6: Finalizing all musical features and recording the song</p> <p>Step 7: make a CD cover and song folder cover</p>	<p>Heath &amp; Lings (2012)</p> <p>Roberts (2013)</p>

Table 9, continued

Music Therapy Intervention	Description	Author (s), year
Culturally Centered Interventions	<p>Culturally centered music interventions involve music related to patient’s upbringing/childhood.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>-Russian folk music and classical music: soft, reflective ballads, lullabies, laments and love songs (Forrest, 2001)</li>   <li>-consider the cultural song of family, therapist’s cultural song, and come together to create a new personalized song: “You sing your song, I sing my song, but together we create our song” (Forrest, 2014).</li>   <li>-Hartwig (2010): variety of music used in Tanzania from moslem recreational music to European hymns to brass bands. Instruments used: pembe (animal horn) and drums (ngoma). Traditional chaga music</li>   <li>-Nakayama (2009): Japanese lyrics and melodies  “Hotaru Koi”  “Moldau” “Ue O Muite Aruko”</li>   <li>- Wigram (2011): use of Mexican song form <i>corrido</i> in songwriting bereavement group. “The Mexican corrido has been described simply as a topical ballad form characteristic of Mexican popular music used as a means to spread news...it can tell of stories about heroes, heroines, revolution and love.”  -<i>El Corrido de los Perez</i>  -<i>Para ti....Nuestra Historia</i>  -Dalit Hymn (Potvin, 2014)</li> </ul> <p>(Rykov, 2001):</p> <ul style="list-style-type: none"> <li>-Hebrew camp songs of childhood days</li> <li>-Hebrew and Yiddish songs</li> </ul>	<p>Forrest (2001)  Forrest (2014)  Hartwig (2010)  Nakayama (2009)  Potvin (2014)  Wigram (2011)</p>

Table 9, continued

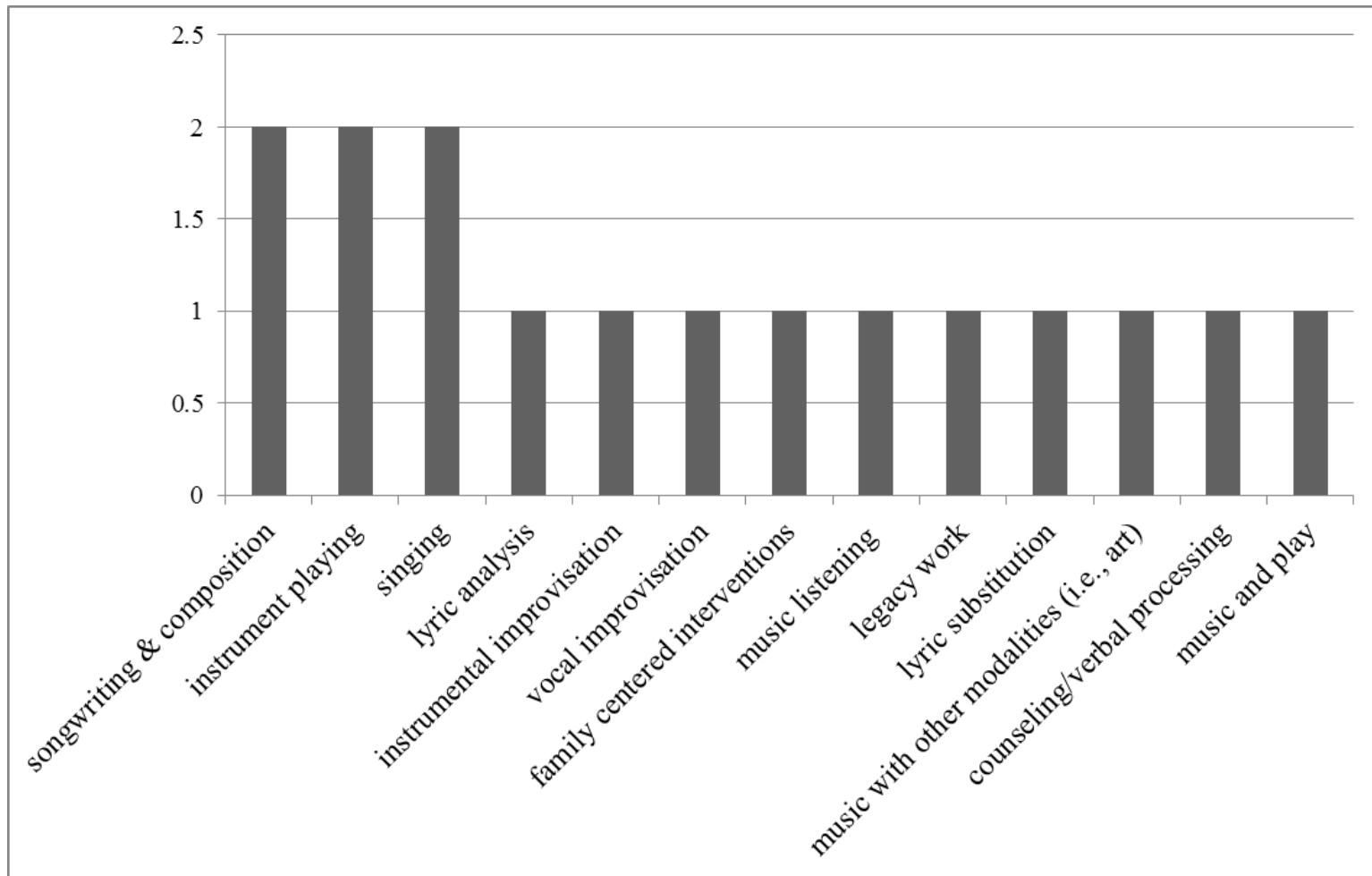
Music Therapy Intervention	Description	Author (s), year
Music and Prayer	<p>Music and prayer involve a large variety of approaches toward spiritual exploration and healing, based on patient’s religious preference.</p> <p>Ex: Hasidic manner of prayer with music                      -Steiger (musical mode in Ashkenazi tradition) (Rykov, 2001)</p> <p>Working with chaplains in hospice care to provide spiritual comfort through music therapy (Potvin, 2014, Krout, 2004)</p>	<p>Potvin (2014)                      Rykov (2001)                      Krout (2004)</p>
Toning	<p>Toning :“the singing of vowel sounds at different pitches...music therapist guides patient to direct attention and focus onto the sounds to release tension and enhance awareness”</p>	<p>Magill (2001)</p>
Music Assisted Relaxation	<p>Music assisted relaxation uses music to foster a more relaxed state in patient.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>-teach relaxation exercises using scripts and imagery</li> <li>-teach breathing techniques</li> <li>-muscle relaxation (PMR= progressive muscle relaxation) and autogenic relaxation exercises</li> </ul> <p>-synchronize music with patient’s respiratory rate and gradually bring it down or up as needed</p> <p>-play simple major chord progressions for security and warmth (I, IV, V, I) with narrow pitch and smooth narrow melodic movement</p>	<p>Hogan (2003)</p>



*Note:* No articles in this review discussed the following interventions with adolescents: music performance, chanting, music assisted relaxation, TBGIM, song parody, music and movement, entrainment (iso-principle), culturally centered interventions, music and prayer, mindful music therapy, or toning.

*Figure 6.* Music Therapy Interventions for Adolescents

In terms of music therapy interventions for adolescents, Figure 6 indicates that songwriting and composition, singing and instrument playing are the most commonly used music therapy interventions in end-of-life care. Other interventions include lyric analysis, instrumental improvisation, vocal improvisation, family centered interventions, music listening, legacy work, lyric substitution, music with other modalities, counseling/verbal processing, and music and play. Details about the articles that specifically discuss interventions with adolescents in end-of-life care ( Dalton, 2006; McFerran, 2010; Roberts, 2006) can be found in Tables 6 and 8, with summaries and general details for aforementioned articles provided in Table 1.

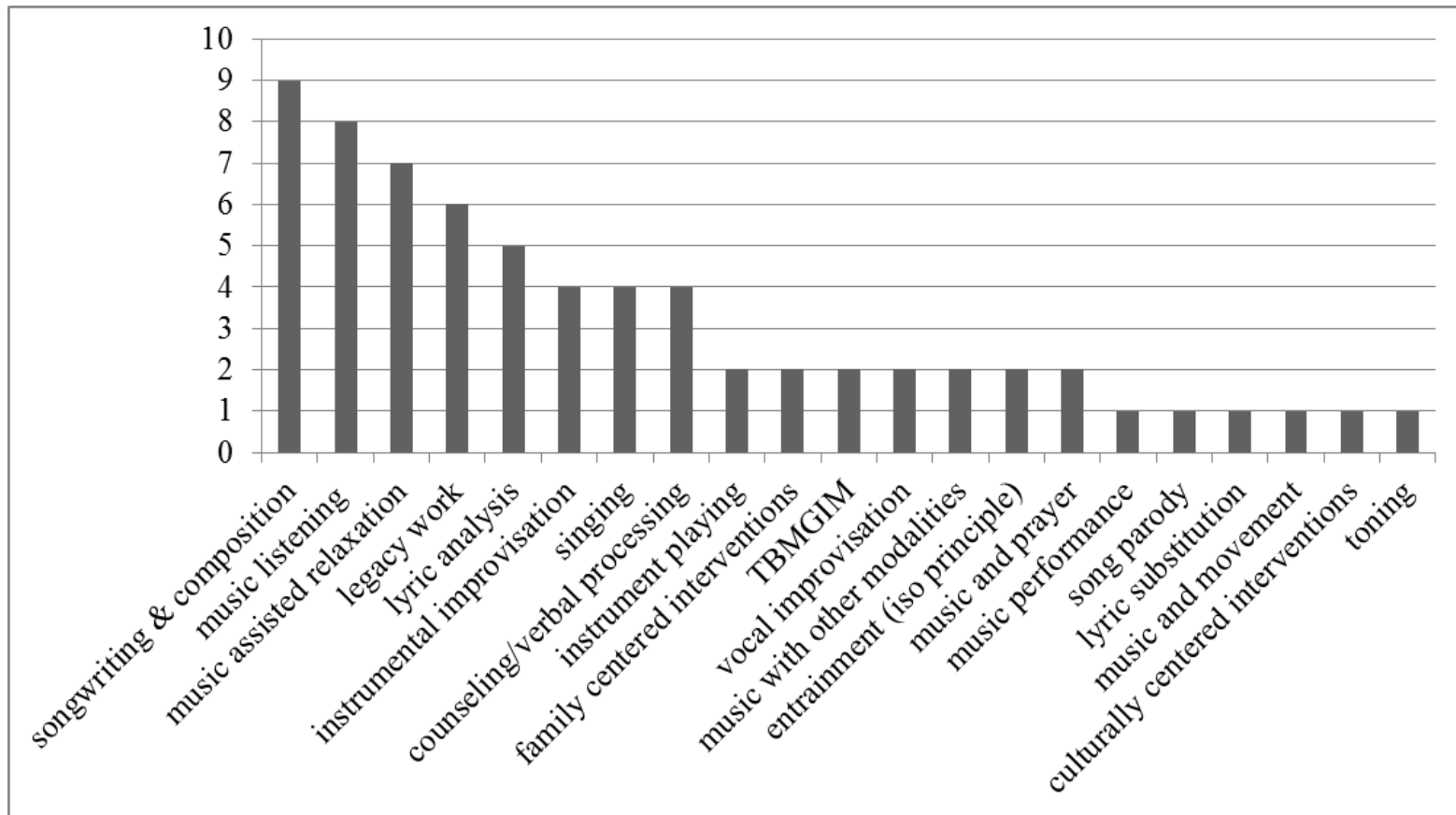


*Note:* No articles in this review discussed the following interventions with children: mindful music therapy, music and prayer, toning, or TBGIM.

*Figure 7.* Music Therapy Interventions for Children

As shown in Figure 7, the most commonly used music therapy interventions used with children include songwriting and composition and instrument playing respectively. Additionally, singing, counseling/verbal processing, instrumental improvisation, vocal improvisation, family centered interventions, music assisted relaxation, and music listening are commonly used. Legacy work, song parody, music and movement, music and play, and music with other modalities also play a positive impact for children in end-of-life care. The articles specifically geared to music therapy interventions for children in end-of-life care can be found in Table 2; with summaries and general details provided for aforementioned articles in Table 1.

Not all populations used all 24 interventions listed in above figures; for instance, both adolescent and child population did not use mindful music therapy. The most commonly used music therapy interventions that overlap for all 3 populations appear to be songwriting and composition, singing, instrument play, vocal and instrumental improvisation, legacy work, music listening, counseling/verbal processing, music with other modalities, music and play, lyric substitution and family centered interventions.



*Note:* No articles in this review discussed the following interventions with varied ages: chanting, mindful music therapy, or music and play.

*Figure 8.* Music Therapy Interventions for varied ages



According to Figure 8, the most common interventions in studies that included varying age groups are as follows: songwriting and composition, music listening, music-assisted relaxation, legacy work, and lyric analysis. Other interventions include counseling/verbal processing, singing and instrumental improvisation, instrumental playing, vocal improvisation, family centered interventions, TBMGIM, music with other modalities, entrainment and music and prayer.

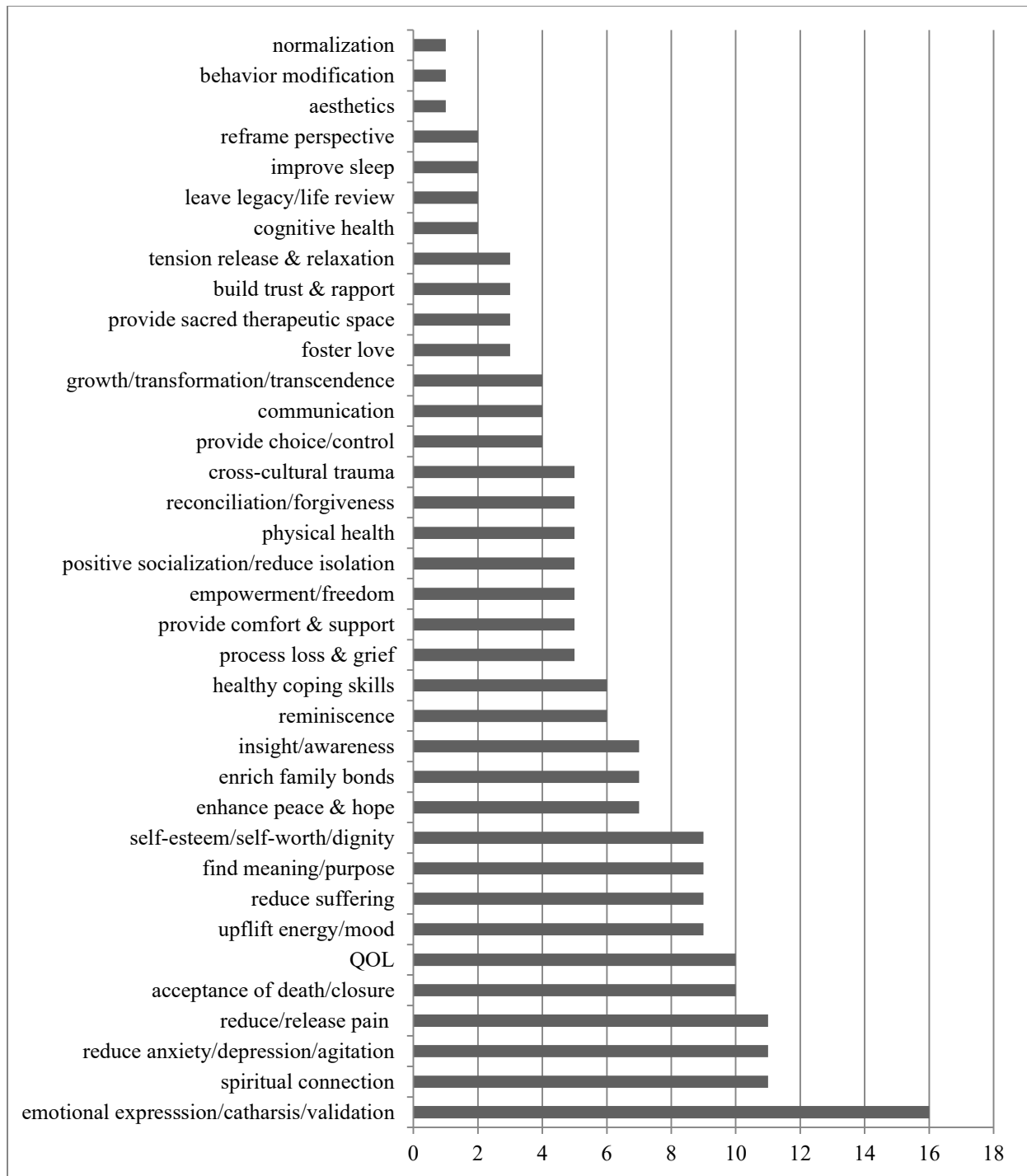


Figure 9. Music Therapy Goals for Adults

As seen in Figure 9, the most commonly addressed music therapy goals with adult population include emotional expression/catharsis/validation, pain reduction/release, decreasing anxiety/depression/agitation, spiritual connection, acceptance/closure of death, and QOL, respectively. Additionally relevant music therapy goals, although not as commonly used as the aforementioned ones, include self-esteem/self-worth/dignity/identity, finding meaning/purpose, reducing suffering/distress, and uplifting mood/energy.

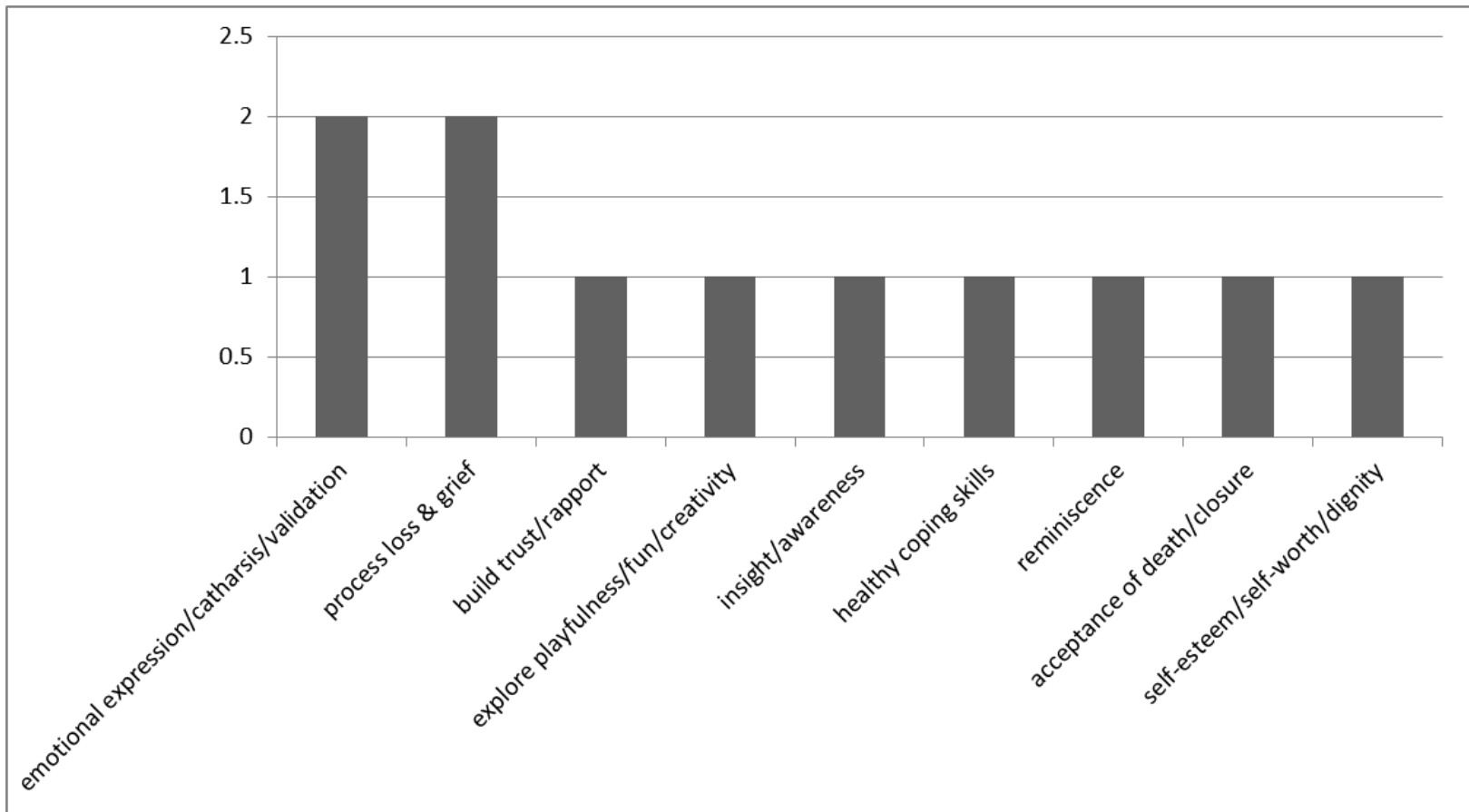


Figure 10. Music Therapy Goals for Adolescents

With the adolescent population, shown in Figure 10, the most frequently used goals were as follows: emotional expression/catharsis/validation, processing loss and grief, building trust/rapport, exploring playfulness/fun/creativity, developing insight/awareness, building self-esteem/self-worth/identity, building healthy coping skills, acceptance of death/closure, and reminiscence, respectively.

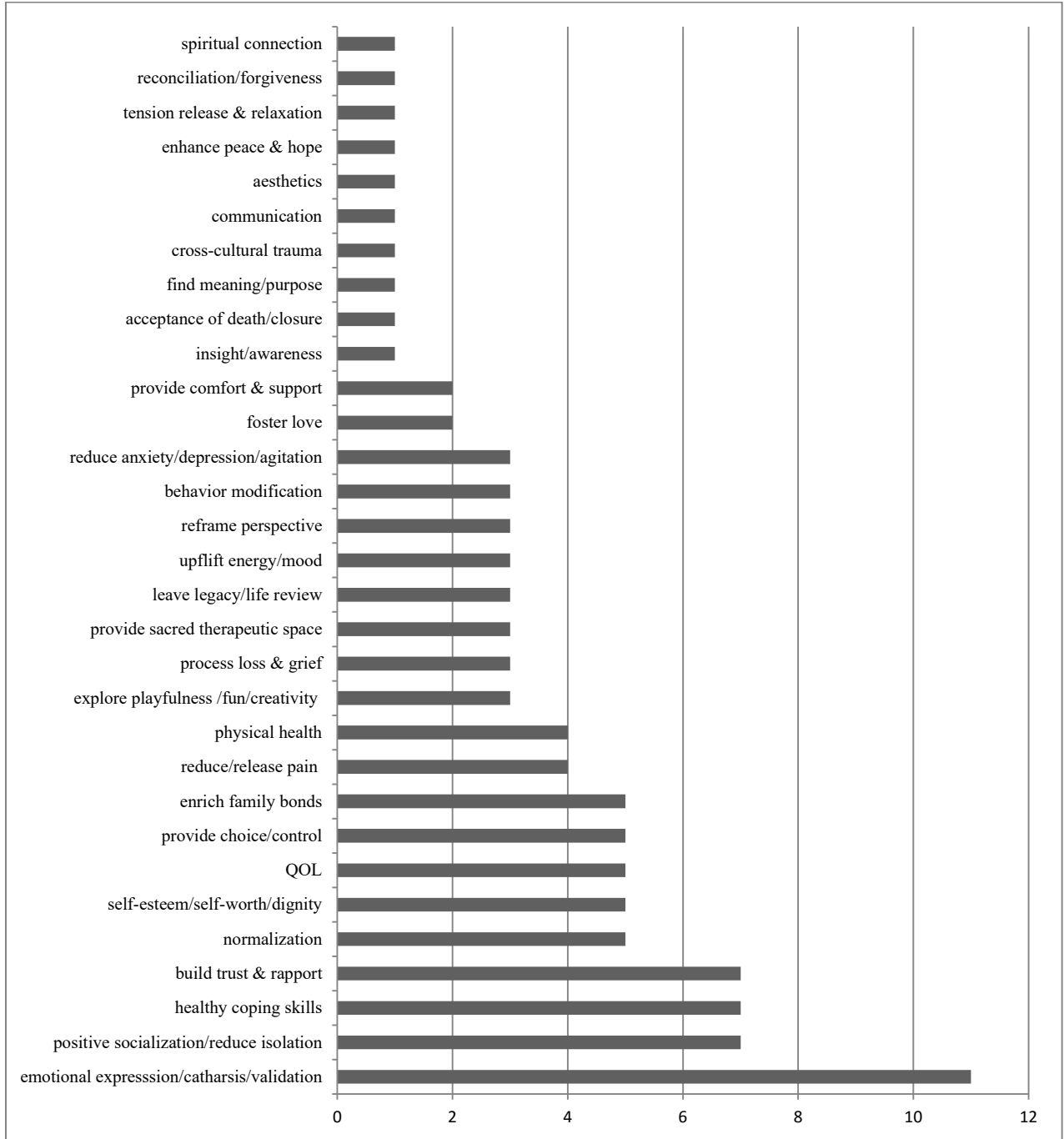


Figure 11. Music Therapy Goals for children

Figure 11 shows the following music therapy goals as the most commonly used with the child population, in the following order: emotional expression/catharsis/validation, positive socialization/reduce isolation, build trust and rapport, healthy coping skills, enrich family bonds/interaction, normalization, self-esteem, and QOL, respectively.

It appears that the overarching music therapy goal for all 3 age groups- is emotional expression/catharsis/validation. Not all authors described all 36 goals listed above with every population. The main and most commonly addressed goals by all 3 populations are as follows: emotional expression/catharsis/validation, develop insight/awareness, process loss/grief, healthy coping skills, acceptance of death/closure, building trust/rapport, reduce anxiety/depression/agitation and self-esteem/self-worth.

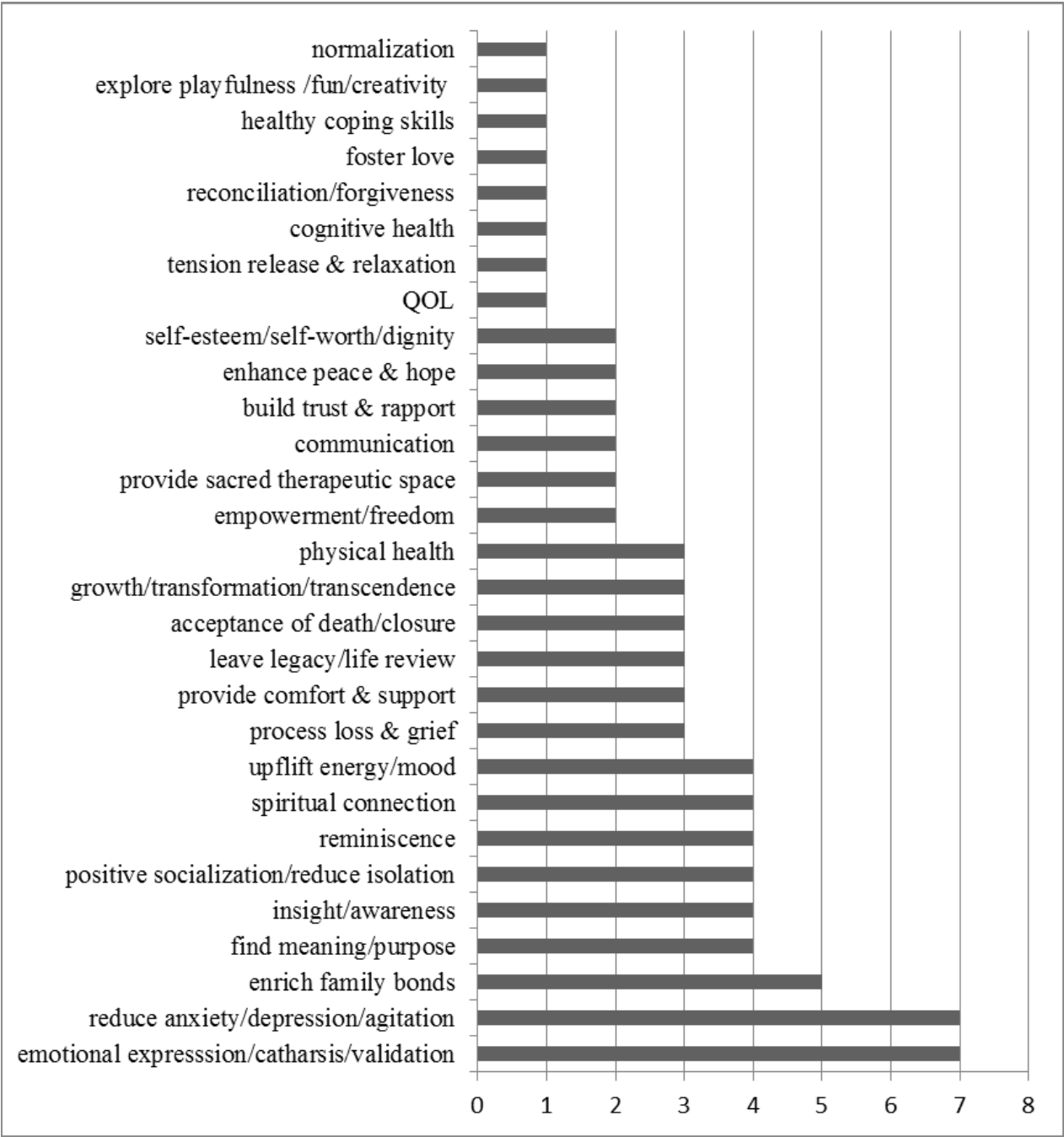


Figure 12. Music Therapy Goals for varied ages



As shown in Figure 12, the most common music therapy goals used in studies with varying age groups are as follows: emotional expression/validation, reducing anxiety/depression/agitation, reducing/releasing pain, and enriching family bonds, respectively. Other common interventions include positive socialization/reduce isolation, uplift energy/mood, reminiscence, develop insight/awareness, finding meaning/purpose at the end of life, and spiritual connection. With all 4 bar graphs, emotional expression appears to be the most commonly used music therapy goal.

## CHAPTER FIVE

### DISCUSSION

The purpose of this study was to collect, compile and code specific interventions used in music therapy and end-of-life care. Additionally, identifying and coding therapeutic goals helped to put the music therapy interventions in context.

The results of this integrative review identified 24 music therapy interventions and 36 music therapy goals, each of which were categorized by age group. Results indicate that in each age group, songwriting and composition appear to be a commonly used intervention, and emotional expression and validation appear to be the most commonly addressed therapeutic goal in end-of-life care.

Being aware of these results, it is recommended that music therapists continue to expand and hone their songwriting skills, in order to effectively meet patient and family needs in hospice care. Songwriting can involve a variety of approaches and creative methods, including but not limited to improvisation on a melodic instrument to create a melody, brainstorming to generate lyrics, recording the final song to leave as a legacy, and framing the lyrics for the patient to preserve the intimate songwriting experience (Heath & Lings, 2012). Roberts and McFerran (2013) explained songwriting in a step by step process: beginning with an approachable introduction, working with patient to determine a song structure either from a pre-existing composition or as an original work, composing lyrics or using pre-existing lyrics, poems or journal entries preferred by the patient, developing a melody and chord progression that resonates with the theme and/or lyrics of the song, and recording the song with personalized CD cover. Dalton (2006)

discussed a grief songwriting group process, the details of which can be referred to in Table 9.

The results of this integrative review are similar to the results of related reviews by Anderson (2011), Archie et al. (2013), Bowers and Wetsel (2014), Leow (2011), and Hilliard (2005), among others. For instance, the results of Anderson's (2011) systematic review show that the adult population is most prevalent in hospice care, which is in agreement with the results of this integrative review. Additionally, Anderson (2011) found that the most common therapeutic goal in a systematic review of 76 studies was emotional wellbeing, which is similar to the most common therapeutic goal, emotional expression, extracted through this integrative review.

The results of reviews by Bowers and Wetsel (2014), Archie et al. (2013), Leow (2011) and Hilliard (2005) indicate that music therapy helps to address pain, anxiety, QOL, energy, mood, spirituality, and emotional-social support. Results of previous literature reviews are similar, with the exception that the aforementioned studies measured therapeutic outcome relative to goals in end-of-life music therapy, whereas this integrative review described music therapy interventions and goals. All the reviews seek to contribute to a wider and richer pool of research that can help improve clinical efficacy.

### **Research Question**

*What music therapy interventions and goals for patients in end-of-life care are described in the research literature?*

Results of this study indicate that a variety of music therapy interventions play a role in end-of-life care, with the most commonly used intervention for all populations

being songwriting and composition. Additionally, although a variety of goals specific to end-of-life in music therapy were found through this integrative review, it appears that emotional expression/catharsis/validation is most commonly used music therapy goal for all populations.

The results suggest that songwriting and composition may play a positive role in facilitating emotional expression and catharsis of feelings related to loss, impending death, grief, fear, pain, while providing emotional validation through the process of sharing one's story in musical format. Although the most common intervention used in end-of-life care appears to be songwriting and composition, and the most common therapeutic goal used in end-of-life care appears to be emotional expression, catharsis and validation; one cannot assume that completing the intervention with a patient will help to meet the aforementioned goal.

### **Age Group**

Results of this study show that out of 55 articles, the largest portion, included adults (49%), followed by children (25%), mixed (22%), and adolescents (4%). This suggests the following:

- 1) The interventions and goals obtained through this integrative review are more representative of the adult age group rather than child or adolescent population.
- 2) More research/studies are needed on music therapy in child and adolescent age range for end-of-life care.
- 3) In spite of the smaller sample size of studies with the child and/or adolescent age group, the most common goal and intervention appeared to be similar to the intervention and goal used in adult population.

## **Country**

Results of this study show that out of a selection of 55 articles meeting specific criteria, the most common countries were as follows: United States (43%), Australia (22%), Canada (22%), United Kingdom (3%), and England, Ireland, Japan, Spain and Tanzania (each at 2%). This suggests the following:

- 1) The interventions and goals obtained through this integrative review are more representative of the United States, Australia, and Canada compared to any other portion of the world. This may be due to the inclusion criteria, which required studies be published in English.
- 2) Future research is needed on music therapy interventions and end-of-life care in other parts of the world.

## **Setting**

Results of the review show that the majority of studies occur in a hospice center setting (31%), followed by hospital (24%) and home (18%). This suggests the following:

1. The interventions and goals obtained through this integrative review occur most often in hospice and hospital settings.
2. The interventions and goals obtained through this review can be offered in a home setting (18%), which can prove beneficial for those who may not have means or access to a hospital.
3. More research is needed on music therapy interventions and goals for bereaved children in a school setting.

## **Music Therapy Interventions**

Results of this integrative review show that a variety of interventions are used in music therapy and end-of-life care, including: songwriting and composition, lyric analysis, instrument playing, music performance, instrumental improvisation, vocal improvisation, singing, chanting, family centered interventions, music assisted relaxation, TBMGIM, music listening, legacy work, song parody, lyric substitution, music and movement, music with other modalities (i.e., art), counseling/verbal processing, music and play, entrainment (with iso principle), culturally centered interventions, music and prayer, mindful music therapy, and toning.

The most commonly used music therapy interventions that overlap for all 3 populations appear to be songwriting and composition, singing, instrument play, vocal and instrumental improvisation, legacy work, music listening, counseling/verbal processing, music with other modalities, music and play, lyric substitution and family centered interventions.

This suggests the following:

1. Music therapy students and music therapists have an arsenal of interventions, techniques and tools with which to provide effective healing services for patients in end-of-life care.
2. Music therapists can refer to Tables 5-9 in Chapter 4 in order to learn more details of various interventions, including songwriting, legacy work, TBGIM, and entrainment.
3. Further research is needed on interventions related to therapeutic orientation.

### **Music Therapy Goals**

Results of this integrative review show that a wide range of goals are used in music therapy and end-of-life care, including: foster love, provide sacred therapeutic space, explore playfulness/fun/creativity, emotional expression/catharsis/validation, normalization, positive socialization/reduce isolation, enrich family interactions/bonds, uplift mood and energy, develop insight/awareness, find empowerment/freedom, reduce/release pain, reduce suffering/distress, process loss and grief, provide comfort/support, leave legacy/life review, healthy coping skills, reminiscence, acceptance of death/closure, find meaning/purpose/life validation, growth/transformation/transcendence, cognitive health, physical health, improve sleep, reframe perspective, communication, address and process cross-cultural trauma, build trust & rapport, reduce anxiety/depression/agitation, provide aesthetics, enhance peace and hope, tension release and relaxation, build self-esteem/self-worth/dignity/identity, behavioral modification, improve QOL, provide choice/control, find reconciliation/forgiveness, and spiritual connection/healing.

The main and most commonly addressed goals by all 3 populations are as follows: emotional expression/catharsis/validation, develop insight/awareness, process loss/grief, healthy coping skills, acceptance of death/closure, building trust/rapport, reducing anxiety/depression/agitation and self-esteem/self-worth. This suggests the following:

1. A large variety of music therapy goals exist in end-of-life care, which can help to set the framework for an effective music therapy session with a patient in end-of-life care. By being aware of the most common therapeutic goals in this field,

music therapy students and therapists may feel more prepared in completing initial and ongoing assessment.

2. It is also important for music therapists to simultaneously consider the unique culture, needs and strengths of each patient and family and individualize the intervention and/or goal accordingly.
3. Further research is needed on music therapy goals related to therapeutic orientation.

### **Limitations**

Although the data were extracted and coded in a careful and thorough manner, it is possible that one or two interventions or goals were overlooked, thus indicating a small possibility that songwriting and composition is a popular intervention in end-of-life care, yet not necessarily the most commonly used intervention. Similarly, it is possible that certain goals were overlooked by the researcher when reading and extracting data from articles, indicating a small likelihood that emotional expression may be an important therapeutic goal, yet not necessarily the most common one in end-of-life care.

The researcher completed a hand search of 9 music therapy journal articles and a keyword search of 2 databases. It is possible that the researcher overlooked some articles during the hand search, database search, or while reviewing/discarding full text articles. Additionally, only 2 search engines (PyscInfo and CINAHL) were used. The majority of studies used in this integrative review are narrative case studies, indicating a possibility that several articles used in this study already contain the authors' own biases and limitations.



Results from a survey of 72 board certified music therapists (Groen , 2007) indicate that music listening and music assisted-relaxation are used most often to meet patient needs in hospice care (with patients experiencing acute or chronic pain). This is similar to one area of findings in this integrative review, which show that music listening and music-assisted relaxation are almost as commonly used as songwriting (see Figure 8). This could suggest that the survey and integrative review methods may be two different yet consistent approaches towards gaining skills and knowledge in the field of music therapy and end-of-life care. However, it is also important to note that surveys can reflect a more realistic and comprehensive pattern of the current trends observed in any field, because information is collected from a variety of people. In this integrative review, information was mainly collected and compiled from case studies. As professionals, being informed of multiple research sources, including an integrative review, systematic review or survey, can help equip us to best meet patient and family needs.

Lastly, it is important to recognize that the interventions and goals extracted and compiled in this review are intended to provide just a starting point for therapists and students, and should be used with proper discretion and guidance. Each music therapy session varies, as does the dynamic between therapist-patient and therapist-family; making it necessary to be adaptable and flexible with ongoing assessment of patient needs, formulating goals and implementing music therapy interventions.

### **Future Research**

Based on the results and discussion, it appears that future research can be taken in several directions. First, a review of music therapy interventions specifically with children in end-of-life care is a suggestion. A similar option with the adolescent age

group is also recommended. Completing a review of music therapy interventions in end-of-life care at senior living centers and nursing homes could also prove helpful to researchers. Additionally, a review of the music therapy program proposals and in-services in end-of-life care might prove beneficial for therapists in extending their hospice music therapy services to less represented settings.

More experimental and quantitative research on music therapy interventions and goals is also recommended, as the majority of articles obtained through this integrative review were narrative case studies. Evaluating the therapeutic outcomes of the aforementioned goals and interventions through randomized controlled trials might help to contribute to the growth of evidence based research in music therapy and end-of-life care. For instance, measuring and quantifying the impacts of songwriting on observable behaviors of emotional expression may be helpful in contributing to primary research.

### **Implications for Clinical Practice**

Music therapy is integral to an interdisciplinary and even synerdisciplinary approach in end-of-life care (Krout, 2004). A synerdisciplinary approach is a unique team approach, in which the music therapist works hand in hand with other allied health professions and disciplines, from social workers, to chaplains, to massage therapists to hospice home aides, to provide the most compassionate, individualized and effective care for the patient and family. Education and advocacy about the benefits of music therapy in the hospice field, specifically to other non-music therapy team members, are crucial for gaining further entryway and positively impacting patients in hospice and palliative care. As illustrated through this integrative review, music therapy has the means to provide holistic, culturally centered, individualized, evidence-based complementary care within a

treatment team, and therefore should be utilized in more hospice centers throughout the world. Having specific advanced credentials such as the certificate in hospice and palliative care in music therapy (HPMT) can also help to provide further credibility and recognition of the benefits of this allied health profession in end-of-life care. Although music therapy is gaining prominence in the field, there are still further steps that can be taken to help promote its utilization in end-of-life care. It is hoped that this integrative review can provide a stepping stone for music therapists to not only gain further understanding of the interventions, goals and song details relevant to this specific niche, but also be able to propose a collaborative approach to caring for patients and families within an interdisciplinary hospice treatment team.

### **Conclusion**

As the need and demand for music therapists grows in end-of-life care, it is the responsibility of music therapists to update and improve their knowledge and skills to best serve patients and families. Hence, this paper is intended to serve as a current integrative review of common music therapy interventions and goals that will hopefully guide music therapists in making a positive impact with patients and family and even working collaboratively with staff in end-of-life care. It can also be used as a reference tool for the student aspiring to learn more about this niche in preparation for practicum or clinical internship. Through continued research in this direction, music therapists can develop best practices for music therapy in end-of-life care.

## References

- Aasgaard, T. (2001). An ecology of love: Aspects of music therapy in the pediatric oncology environment. *Journal of Palliative Care, 17*, 177-181.
- American Music Therapy Association. (2016a). *Definition and quotes about music therapy*. Retrieved from <http://www.musictherapy.org/about/quotes/>
- American Music Therapy Association. (2016b). *History of Music Therapy*. Retrieved from <http://www.musictherapy.org/about/quotes/>
- American Music Therapy Association (2014). *Workforce Analysis*. Retrieved from [http://www.musictherapy.org/2014\\_workforce\\_study\\_now\\_available/](http://www.musictherapy.org/2014_workforce_study_now_available/)
- Anderson, V. A. (2011). Music, death, and dying: A systematic review of hospice and palliative care literature (Order No. 1503465). Available from ProQuest Dissertations & Theses Global. (915644162).
- Archie, P., Bruera, E., & Cohen, L. (2013). Music-based interventions in palliative cancer care: A review of quantitative studies and neurobiological literature. *Supportive Care in Cancer, 21*, 2609-24.
- Baxter, C. (2010). Decisions about the future use of music therapy: Products created by palliative care patients. *The Australian Journal of Music Therapy, 21*, 2-20.
- Bowers, T. A., & Wetsel, M. A. (2014). Utilization of music therapy in palliative and hospice care. *Journal of Hospice & Palliative Nursing, 16*, 231-239 9p.
- Cadrin, M. (2009). Dying well: The Bonny method of guided imagery and music at end of life. *Voices: A World Forum for Music Therapy, 9*.  
doi:10.15845/voices.v9i1.373
- Cadrin, M. L. (2006). Music therapy legacy work in palliative care: Creating meaning at end of Life. *Canadian Journal of Music Therapy, 12*, 109-137.

- Clark, B. A., Siden, H., & Straatman, L. (2014). An integrative approach to music therapy in pediatric palliative care. *Journal of Palliative Care*, 30, 179-187.
- Clements-Cortes, A. (2011). Portraits of music therapy in facilitating relationship completion at the end of life. *Music and Medicine*, 3, 31-39.  
doi:10.1177/1943862110388181
- Clements-Cortés, A. (2010). The role of music therapy in facilitating relationship completion in end-of-life care. *Canadian Journal of Music Therapy*, 16, 123-147.
- Dalton, T. A. (2006). The grief song-writing process with bereaved adolescents: An integrated grief model and music therapy protocol. *Music Therapy Perspectives*, 24, 94-107.
- Daveson, B. A., & Kennelly, J. (2000). Music therapy in palliative care for hospitalized children and adolescents. *Journal Of Palliative Care*, 16, 35-38.
- Daveson, B. A. (2001). Music therapy and childhood cancer: Goals, methods, patient choice and control during diagnosis, intensive treatment, transplant and palliative care. *Music Therapy Perspectives*, 19, 114-120.
- Dimaio, L. (2010). Music therapy entrainment: A humanistic music therapist's perspective of using music therapy entrainment with hospice clients experiencing pain. *Music Therapy Perspectives*, 28, 106-115.
- Demmer C. (2004). A survey of complementary therapy services provided by hospices. *Journal of Palliative Medicine*, 23,510-516.
- Domingo, J. P., Matamoros, N. E., Danés, C. F., Abelló, H. V., Carranza, J. M., Ripoll, A. R., & ... Rossetti, A. (2015). Effectiveness of music therapy in advanced

- cancer patients admitted to a palliative care unit: A non-randomized controlled, clinical trial. *Music and Medicine*, 7, 23-31.
- Duda, L. J. (2013). Integrating music therapy into pediatric palliative care. *Progress in Palliative Care*, 21, 65-77.
- Forrest, L. (2001). Addressing issues of ethnicity and identity in palliative care through music therapy practice. *Voices: A World Forum for Music Therapy*, 1.  
doi:10.15845/voices.v1i2.60
- Forrest, L. (2014). Your song, my song, our song: Developing music therapy programs for a culturally diverse community in home-based pediatric palliative care. *The Australian Journal of Music Therapy*, 25, 15-27.
- Gallagher, L. M., Huston, M. J., Nelson, K. A., Walsh, D., & Steele, A. (2001). Music therapy in palliative medicine. *Supportive Care in Cancer*, 9(3), 156-61.
- Gallagher, L. M., Lagman, R., Walsh, D., Davis, M. P., & Legrand, S. B. (2006). The clinical effects of music therapy in palliative medicine. *Supportive Care in Cancer*, 14, 859-66.
- Gooding, L. F., & Yinger, O. S. (2014). Students with disabilities in the string classroom: An integrative review. *String Research Journal*, 5, 5-27.
- Groen, K. M. (2007). Pain assessment and management in end of life care: A survey of assessment and treatment practices of hospice music therapy and nursing professionals. *Journal of Music Therapy*, 44, 90-112.
- Gutgsell, K. J., Schluchter, M., Margevicius, S., DeGolia, P. A., McLaughlin, B., Harris, M., & ... Wiencek, C. (2013). Music therapy reduces pain in palliative care

- patients: A randomized controlled trial. *Journal of Pain and Symptom Management*, 45, 822-831. doi:10.1016/j.jpainsymman.2012.05.008
- Hartley, N. A. (2001). On a personal note: A music therapist's reflections on working with those who are living with a terminal illness. *Journal of Palliative Care*, 17, 135-141.
- Hartwig, R. (2010). Music therapy in the context of palliative care in Tanzania. *International Journal of Palliative Nursing*, 16, 499-504 6p.
- Heath, B., & Lings, J. (2012). Creative songwriting in therapy at the end of life and in bereavement. *Mortality*, 17, 106-118.
- Hilliard, R. E. (2001a). The use of music therapy in meeting the multidimensional needs of hospice patients and families. *Journal of Palliative Care*, 17, 161-166.
- Hilliard, R. E. (2001b). The effects of music therapy-based bereavement groups on mood and behavior of grieving children: A pilot study. *Journal of Music Therapy*, 38, 291-306.
- Hilliard, R. (2003). Forum. Music therapy in pediatric palliative care: complementing the interdisciplinary approach. *Journal of Palliative Care*, 19, 127-132 6p.
- Hilliard, R. E. (2004). A post-hoc analysis of music therapy services for residents in nursing homes receiving hospice care. *Journal of Music Therapy*, 41, 266- 281.
- Hilliard, R. E. (2005). Music therapy in hospice and palliative care: A review of the empirical data. *Evidence-Based Complementary and Alternative Medicine*, 2, 173-178.

- Hilliard, R. E. (2007). The effects of Orff-based music therapy and social work groups on childhood grief symptoms and behaviors. *Journal of Music Therapy, 44*, 123-138.
- Hogan, B. (2003). Soul music in the twilight years: music therapy and the dying process. *Topics in Geriatric Rehabilitation, 19*, 275-281 7p.
- Kidwell, M. D. (2014). Music therapy and spirituality: How can I keep from singing? *Music Therapy Perspectives, 32*, 129-135. doi:10.1093/mtp/miu023
- Krout, R. E. (2005). Applications of music therapist-composed songs in creating participant connections and facilitating goals and rituals during one-time bereavement support groups and programs. *Music Therapy Perspectives, 23*, 118-128.
- Krout, R. E. (2003). Music therapy with imminently dying hospice patients and their families: Facilitating release near the time of death. *American Journal of Hospice & Palliative Care, 20*, 129-133. doi:10.1177/104990910302000211
- Krout, R. E. (2004). A synerdisciplinary music therapy treatment team approach for hospice and palliative care. *Australian Journal of Music Therapy, 15*, 33-45.
- Leow, M. Q. (2011). Music therapy in the palliative setting: a systematic review. *Singapore Nursing Journal, 38*, 14-21.
- Magee, W. L. (2007). A comparison between the use of songs and improvisation in music therapy with adults living with acquired and chronic illness. *Australian Journal of Music Therapy, 18*, 20-38.
- Magill, L. (2009). The meaning of the music: The role of music in palliative care music therapy as perceived by bereaved caregivers of advanced cancer patients.



*American Journal of Hospice & Palliative Medicine*, 26, 33-39.

doi:10.1177/1049909108327024

- Magill, L. (2009). Caregiver empowerment and music therapy: Through the eyes of bereaved caregivers of advanced cancer patients. *Journal of Palliative Care*, 25, 68-75.
- Magill, L. (2001). The use of music therapy to address the suffering in advanced cancer pain. *Journal of Palliative Care*, 17, 167-172.
- McFerran, K. (2010). Tipping the scales: A substantive theory on the value of group music therapy for supporting grieving teenagers. *Qualitative Inquiries in Music Therapy*, 5, 1- 42.
- Moxley-Haegert, L. (2015). Leaving a legacy' and 'letting the legacy live': Using narrative practices while working with children and their families in a child palliative care program. *The International Journal of Narrative Therapy and Community Work*, (2), 58-69.
- Mramor, K. M. (2001). Music therapy with persons who are indigent and terminally ill. *Journal of Palliative Care*, 17, 182-187.
- Nakayama, H., Kikuta, F., & Takeda, H. (2009). A pilot study on effectiveness of music therapy in hospice in japan. *Journal of Music Therapy*, 46, 160-72.
- O'Callaghan, C. (2008). Lullament: Lullaby and lament therapeutic qualities actualized through music therapy. *American Journal of Hospice & Palliative Medicine*, 25(2), 93-99. doi:10.1177/1049909107310139

- O'Callaghan, C. C., McDermott, F., Hudson, P., & Zalcborg, J. R. (2013). Sound continuing bonds with the deceased: The relevance of music, including preloss music therapy, for eight bereaved caregivers. *Death Studies, 37*, 101-125 25p.
- O'Callaghan, C., & Barry, P. (2010). Music therapists' practice-based research in cancer and palliative care: Creative methods and situated findings. *Voices: A World Forum for Music Therapy, 9*. doi:10.15845/voices.v9i3.53
- Pawuk, L., & Schumacher, J. (2010). Introducing music therapy in hospice and palliative care: an overview of one hospice's experience. *Home Healthcare Nurse, 28*, 37-44 8p. doi:10.1097/01.NHH.0000366795.71528.ac
- Potvin, N. (2015). The role of music therapy and ritual drama in transformation during imminent death. *Music Therapy Perspectives, 33*, 53-62.
- Potvin, N., & Argue, J. (2014). Theoretical considerations of spirit and spirituality in music therapy. *Music Therapy Perspectives, 32*, 118-128.  
doi:10.1093/mtp/miu022
- Register, D. M., & Hilliard, R. E. (2008). Using Orff-based techniques in children's bereavement groups: A cognitive-behavioral music therapy approach. *The Arts in Psychotherapy, 35*(2), 162-170. doi:10.1016/j.aip.2007.10.001
- Rigney, M. (2011). Using reflexive tools for coping and bringing closure in pediatric palliative care: A music therapist's story of working with a terminally ill child. *Voices: A World Forum for Music Therapy, 11*.doi:10.15845/voices.v11i3.287
- Roberts, M., & McFerran, K. (2013). A mixed methods analysis of songs written by bereaved preadolescents in individual music therapy. *Journal of Music Therapy, 50*, 25-52.

- Roberts, M. (2006). "I want to play and sing my story": Home-based songwriting for bereaved children and adolescents. *The Australian Journal of Music Therapy, 17*, 18-34.
- Romo, R., & Gifford, L. (2007). A cost-benefit analysis of music therapy in a home hospice. *Nursing Economics, 25*, 353-358.
- Rykov, M. H. (2001). Insights from a Jewish hospice experience. *Canadian Journal of Music Therapy, 8*, 64-74.
- Salmon, D. (2001). Music therapy as psychospiritual process in palliative care. *Journal of Palliative Care, 17*, 142-146.
- Sato, Y. (2011). Musical life review in hospice. *Music Therapy Perspectives, 29*, 31-38.
- Sheridan, J., & McFerran, K. (2004). Exploring the value of opportunities for choice and control in music therapy within a pediatric hospice setting. *Australian Journal of Music Therapy, 15*, 18-32.
- Wigram, T. (2011). The Mexican "corrido" and its use in a music therapy bereavement group. *The Australian Journal of Music Therapy, 22*, 2-20.
- Whitehead, P. (2011). Music therapy for end-of-life care. *Clinical Journal of Oncology Nursing, 15*, 697-698.
- Włodarczyk, N. (2007). The effect of music therapy on the spirituality of persons in an in-patient hospice unit as measured by self-report. *Journal of Music Therapy, 44*, 113-122.

## CURRICULUM VITAE

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B.A. Music, Minor in CRS, May 2010

### Professional Experience

6/15 to 12/15, Philadelphia PA:

Music therapy intern, post-intern, employee

1/16 to present, Bay Area CA:

Independent Contractor Music Therapist

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### Certification

2016: Board Certification in Music Therapy (MT-BC)

2015: Certificate for Counseling Skills for Music Therapy from *The Center for Music Therapy in End of Life Care*