

Current Trends in Music Therapy and Pain Management

By

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We, the thesis committee for the above candidate for the Master of Science degree, hereby  
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### **Abstract**

The purpose of this study is to examine music therapy (MT) as it is currently used in the treatment of individuals who are coping with pain. A 36-question survey, offering both multiple choice and short answer questions, was offered to professional music therapists (MT-BC) with clinical experience living and working within the United States (U.S.). Potential survey participants were identified through their membership with the American Music Therapy Association (AMTA). A total of 246 music therapists participated in this survey. The majority of respondents (36%) reported utilizing a combination of methods from a variety of MT theoretical perspectives. Fifty-eight percent of respondents indicated that they use music in sessions for the purpose of pain management at least "sometimes," and 93% perceive that the client-therapist relationship, otherwise referred to as the therapeutic relationship, is an extremely important factor in whether MT treatment will be successful in pain management. Ninety-four percent of all respondents admit to collaborating with at least one other type of helping professional, and 91% of respondents believe that interdisciplinary teamwork is very important when working with clients and pain management. Results of this survey indicate that Board-Certified Music Therapists in the U.S. are conducting therapeutic sessions utilizing various MT techniques for pain management, and believe in the necessity of an optimal client-therapist relationship. Implications of the results for clinical practice and future direction of music therapy research are discussed.

*Keywords:* music therapy, pain, treatment modalities, therapeutic relationship, interdisciplinary teamwork.

## **Introduction**

Pain is an extremely debilitating physical and psychological condition, which has the potential to impact many facets of daily living (Rosenquist, 2015). Patients suffering from pain may be initially treated with drug therapy. However, if medications are insufficient in pain alleviation or result in adverse effects, patients may then seek out alternative or integrative therapy, including music therapy (Astin, 1998). Patients may also choose to pursue integrative therapy as these forms of health care options may be more in line with their own "values, beliefs, and philosophical orientations towards health and life" (Astin, 1998, p. 1548). For all types of clinicians and therapists who work with those suffering from pain, a thorough understanding of the following is necessary for optimal outcomes: (a) pain type and characterization; (b) pain assessment tools and techniques; and (c) various methods of pain management including traditional and alternative therapy.

## **Literature Review**

### **Pain Type and Characterization**

A variety of definitions for pain currently exist. One such definition describes pain as "an unpleasant sensory and emotional experience associated with actual potential tissue damage or described in terms of such damage" (Merskey, 1994, p. 226). Much research has been conducted in an attempt to obtain a comprehensive understanding of both the biological processes of nociception as well as the subjective pain experience from a psychosocial perspective. Nociception is the process by which physical chemical stimuli are detected by sensory nerve cells [known as nociceptors] and is an important concept in the understanding of pain pathophysiology, or the physical changes linked to a particular disease (Dubin & Patapoutian,

2010). Despite the improvements that have been made in the understanding of pain mechanisms, pain management remains dissatisfactory, and optimizing the treatment of pain continues to be a necessity to address the millions of individuals suffering from pain (Rosenquist, 2015).

It has been estimated that chronic pain afflicts greater than 100 million people in the United States alone (Dowell, Haegerich, & Chou, 2016, p. 1). The experience of unrelieved pain, whether it is characterized as somatic, neuropathic, acute, and/or chronic pain, may predispose patients to a variety of comorbid conditions such as emotional dysregulation, social and interpersonal issues, mental health issues, as well as physiological disorders (Eating, 2009). The definition of chronic or persistent pain also varies among specialists, subspecialists, and organizations. According to the American Society of Anesthesiologists (ASA), chronic pain is categorized as “extending in duration beyond the expected temporal boundary of tissue injury” (ASA, 2010, p. 810). Conversely, the *Diagnostic and Statistical Manual of Mental Disorders*, 5<sup>th</sup> edition (DSM-V) published by the American Psychiatric Association (APA) refers to persistent pain as lasting for more than 6 months (Rassp, 2013). Unlike chronic pain, acute pain provides an adaptive purpose by alerting us to a potentially harmful injury or disease (Katz, Rosenbloom, & Fashler, 2015). One definition of acute pain that emphasizes the presence of this adaptive advantage is “the normal, predicted physiological response to an adverse chemical, thermal or mechanical stimulus...associated with surgery, trauma, and acute illness” (Carr, 2009, p. 2051). Despite the evolutionary advantages of the nociceptive pathway, it is clear that the experience of pain for many people is detrimental to overall wellbeing.

The management of both chronic and acute pain is driven by the pain pathophysiology as well as patient descriptors. Pain is often classified as originating from either a nociceptive or neuropathic process (Nicholson, 2006). As mentioned previously, nociceptive

pain results from actual tissue damage following harmful stimuli. Nociceptive pain must be distinguished from neuropathic pain, which is a pain type that is initiated following from damage to either the central or peripheral nervous system (Rosenquist, 2017). There are many causes of neuropathic pain such as diseases originating from disease of the spinal nerve roots and peripheral nerves (Nicholson, 2006). Examples of commonly seen neuropathic pain types characterized as either peripheral or central nervous system disorders include complex regional pain syndrome (CRPS), diabetic neuropathy, postherpetic neuralgia, posttraumatic neuralgias and spinal cord injury pain. The differentiation between nociceptive and neuropathic pain will help direct appropriate pain management. Additionally, one of the first steps in appropriate pain management is the ability to accurately identify pain pathophysiology and define both pain characterization and patient symptomatology.

Clinicians and therapists are responsible for obtaining a complete and comprehensive history for each patient/client encountered in order to assess pain status and/or determine if a referral is beneficial. The patient is often asked a series of questions pertaining to the nature of the pain including time of onset, aggravating and remitting factors, and physical descriptors (Rosenquist, Aronson, & Crowley, 2016). Patients may use descriptors to relay the nature of their pain experience, including adjectives such as sharp, shooting, stabbing, stinging, aching, dull, and/or throbbing. Other important considerations include the location of the pain, intensity, duration, and how the pain experience may impact both social and physical functioning. According to Rosenquist et al. (2016), patients should be asked various questions regarding the impact pain has had on their daily living including negative interference or impact on social/recreational functioning; energy or mood; relationships with family, coworkers, or significant others; employment/occupation; sleep patterns; and/or ability to exercise; and whether

there has been any alteration in independent performance of various activities of daily living (i.e. getting dressed, ambulation, driving, eating, toileting, etc.). A major factor in predicting the extent that clients' pain may have on their functioning is pain *intensity*. To formulate an accurate assessment of pain intensity, the assessor (i.e., practitioner, therapist, nurse) must utilize a reliable pain scale for pain measurement.

### **Pain Assessment**

A wide array of pain scales and measurement tools are available for pain assessment. All clinicians and/or therapists who work with clients or patients suffering from pain must be able to accurately assess how their therapeutic interventions are acutely impacting the individual; therefore a general understanding of the type and application of pain assessment tools is a necessity. The assessment tool utilized will vary depending on the individual. Commonly used pain assessment tools may either be quantitative or qualitative. Quantitative pain measurement correlates a patient's experience of pain with a numeric value to coincide with intensity. The purpose of qualitative pain assessment tools is to explore a patient's beliefs, behaviors and subjective experiences (Breivik et al., 2008). It is often extremely challenging to quantify pain, and according to Breivik et al. the assessment of pain in nonverbal patients, such as those who have dementia or cognitive impairment, or young children, is that much more difficult.

A variety of pain assessment techniques are available for patients unable to self-report pain (i.e., nonverbal), which includes careful observation and interpretation of patient behavior. For example, the analysis of facial expression (including grimacing, wincing, or frowning), body/activity motor movement and crying may be useful when evaluating pain in "infants, toddlers, & developmentally preverbal children who lack cognitive skills necessary to report and describe pain" (Herr, Coyne, McCaffery, Manworren, & Merkel, 2011, p. 223).

Similarly, critically ill individuals make up a patient population type who may also be unable to self-report pain. In this particular patient population, close observation of any change in movement and the presence of increased muscle tone, increased heart rate, and/or blood pressure may correlate with severe or worsening pain.

Contrastingly, for patients who are able to self-report, various pain measurements are available which include the visual analogue scale (VAS), numeric rating scale (NRS), verbal rating scale (VRS), and Wong-Baker Faces scale and McGill Pain Questionnaire (MPQ). According to Hawker, Mian, Kendzerska, and French Hawker et al. (2011), both the VAS and NRS are uni-dimensional and evaluate a single measure (i.e., pain intensity), which may not fully encompass the intricacies and individualistic characteristics of the pain experience. In contrast the MPQ is multidimensional, and is designed to “measure the sensory, affective and evaluative aspects of pain” (Hawker et al., 2011, p. S242). Within the MPQ, a Pain Rating Index is made up of four subscales, consisting of 78 pain descriptors. Each descriptor is then correlated with a numeric value to coincide intensity or characterization.

According to Rosenquist et al. (2016), none of the scales have been shown to be superior to the others in every circumstance and are not useful in comparing pain intensity among multiple patients, but instead they may allow assessors to determine if pain is intensifying or diminishing over time. If treatment is used, whether it be drug therapy or nonpharmacological interventions, assessing alterations in pain intensity will aid in the determination of whether said treatment is effective.

### **Pain Management**

The management of both chronic and acute pain is driven by the pain pathophysiology as well as patient pain descriptors. There are five major categories for the treatment of pain, which

includes drug therapy, physical medicine, behavioral medicine, neuromodulation, and surgical interventions (Rosenquist, 2017). The use of pharmaceuticals is one of the most commonly used methods for the treatment of pain. A variety of agents may be initiated for pain alleviation, some of which include nonsteroidal anti-inflammatory agents (NSAIDs, i.e. ibuprofen), opioid analgesics (i.e. oxycodone), antidepressants (i.e. amitriptyline), antiepileptic drugs, muscle relaxants (i.e. cyclobenzaprine), N-methyl-d-aspartate (NMDA) receptor antagonists, and topical anesthetics/analgesics (Rosenquist, 2017). Increased pain may lead to initiation of multiple pain medications, which has the potential for therapeutic duplication and increased incidence of polypharmacy. Polypharmacy is defined as “the use of multiple medications and/or the administration of more medications than are clinically indicated, representing unnecessary drug use” (Hajjar, Cafiero, & Hanlon, 2007, p. 345). Polypharmacy for the treatment of pain may place patients at an increased risk of experienced adverse effects of high-risk medication such as opioids/narcotics and/or non-steroidal anti-inflammatory drug. Risk of dosing confusion and potential for over-treatment of pain is also of concern (Giummarra, Gibson, Allen, Pichler, & Arnold, 2015).

In addition to the adverse effects of many medications used for pain management, comorbid conditions, such as anxiety and depression, may complicate treatment even further. In one systematic review, 38 studies were evaluated, and the authors concluded that there was increased incidence of anxiety and depression among patients suffering from the chronic pain condition, osteoarthritis (Sharma, Kudesia, Shi, & Gandhi, 2016). Not only were anxiety and depression more prevalent, but patients with these comorbid conditions reported experiencing more pain, had a greater number of hospital visits, were on more medications, and reported poorer outcomes. The authors also highlighted the many pharmacotherapy challenges resulting

from various patient demographics and characteristics. For example, patients with osteoarthritis often present with advanced age. Elderly patients are more susceptible to the adverse consequences of pain medications such as NSAID therapy. For this review, it is evident that quality of life (QOL), defined as the standard of ideal health and wellbeing, is negatively impacted in those suffering from pain with additional psychiatric conditions such as anxiety and/or depression. The authors also concluded that a “holistic” and “individualized” approach including modalities such as yoga or music therapy is necessary in ensuring optimal outcomes for patients, especially those who cannot tolerate pharmacotherapy (Sharma et al., 2016, p. 103).

Physical activity and yoga-based exercises may be one approach for the management of pain. In one study, authors conducted a review to assess various nonpharmacological strategies for pregnancy-related low back and pelvic pain (PR-LBPP) (Kinser, Pauli, Jallo, Shall, Karst, Hoekstra, & Starkweather, 2017). According to the authors, these modalities provide promising preliminary data for both pain relief and concomitant conditions such as stress and depression. The authors conclude that clinicians may recommend gentle physical activity and yoga interventions as treatment options for those with PR-LBPP.

Nonpharmacological therapies for the management of acute and chronic low back pain have also been previously evaluated (Chou & Huffman, 2007). In a systematic review, authors determined that interventions consisting of cognitive-behavioral therapy, exercise, spinal manipulation, interdisciplinary rehabilitation, acupuncture, massage, and yoga might be effective for chronic low back pain. One intervention that was found to be efficacious for acute lower back pain was superficial heat. Similar results were seen in a systematic review which concluded that gentle exercise and yoga are safe options for those with various chronic pain conditions;

however, authors point out that patients should be counseled to seek out appropriately trained and certified yoga instructors to ensure optimal safety (Achilefi, Joshi, Meier, & McCarthy, 2017).

### **Music and Pain Management**

Another form of integrative intervention is the use of music within a pain management regime. Music as an intervention for pain is a valuable, noninvasive treatment, which has the potential to elicit beneficial, neurobiological effects (Linneman, Kappert, Fischer, Doerr, Strahler, & Nater, 2015). For example, in a recent meta-analysis, a total of 97 randomized controlled trials demonstrated the beneficial effects of music interventions in terms of acute reduction in systolic and diastolic blood pressure and respiratory rate, as well as significant improvement in numeric pain scores, and decreased opioid and anesthetic use (Lee, 2016). Music has also been shown to both decrease the stress-related hormones, cortisol and alpha-amylase in women with fibromyalgia who were offered music listening experiences (Linnemann, Kappert, Fischer, Doerr, Strahler, & Nater, 2015), as well as lead to suppression of the sympathetic nervous system (Bradt, Potvin, Kesslick, Shim, Radl, Schriver, Gracely, Komarnicky-Kocher, 2014). Previous research has also found that music has the potential to improve oxygen saturation, respiratory rate, heart rate and blood pressure in children undergoing lumbar punctures, indicative of decreased anxiety and the fear response (Nguyen, Nilsson, Hellstrom, & Bengtson, 2010). These studies highlight the fact that music has profound positive physical impact; however the question remains as to whether the use of music for pain management requires the presence and expertise of a qualified music therapist.

Two types of music interventions that may be employed are music medicine (MM) or music therapy (MT). According to the American Music Therapy Association, MT 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” (Stephenson, Long, Oswanski, Plancon, Pujol, Smith-Morse, & Gainsfera, 2008, p. 10). Unlike MT, MM does not mandate the presence of a music therapist or rely on the therapist-client relationship to achieve therapeutic goals (Bradt et al., 2014). In an attempt to compare the psychological and pain outcomes of MT vs. MM in cancer patients, Bradt et al. (2014) conducted a mixed methods/randomized cross-over trial during which 31 adult cancer patients took part in two MT sessions with a music therapist and two MM sessions using pre-recorded music. Trial participants recorded their current somatic state (i.e. pain) and psychological/affective state (i.e., stress, mood, anxiety, and relaxation) using the quantitative pain assessment tools, visual analogue and numeric rating scales. As a result of the interventions it was found that while a few people preferred the music listening/music medicine experience, the vast majority of people preferred live music interaction with a therapist. While both MM and MT were seen as beneficial, this experiment shows how important it is to have a therapist present for verbal processing and support.

Although music listening/music medicine has been shown to positively impact perceived pain and improved physical response, if not preformed optimally or in a therapeutic manner, it may evoke additional, potentially harmful psychophysiological effects. In a qualitative study designed by Gold and Clare (2013), 11 patients living with chronic pain were afforded the opportunity to discuss and process the impact of music listening on their experience of pain. This particular study offers a way of looking at music that is multifaceted. For example, participants reported that music can uplift, console, energize, relax, distract, but can also upset and/or invoke memories. While the themes of the interviews suggest that music can be an effective self-

management strategy for chronic pain, it also highlights that music can be invasive, both emotionally and psychologically, potentially contributing to physiological effects. This emphasizes the necessity of an ongoing supportive, therapeutic relationship within the process of music therapy, and the importance of identifying consensus-based MT treatment modalities which may be utilized by Board-Certified Music Therapists potentially leading to optimally facilitated music listening and improved patient outcomes.

Not only can music therapy invoke physiological benefit, but can also have a positive effect on psychological and spiritual welfare as well. One clinical mode that focuses on treating the whole person, both the physical and non-physical, is known as Analytical Music Therapy (AMT) (Scheiby, 2015). Even though pain may originate at a physical level, the goal of using AMT for pain is to utilize each individual's psychological and spiritual resources to allow the person to learn to develop coping skills. Scheiby (2015) discusses various clinical interventions within a rehabilitation center group setting, including music-assisted breathing to slow heart rate and induce relaxation. Once again, the use of music to induce positive physiobiological changes is highlighted. Following the aforementioned interventions, clients reported being able to more fully understand and connect to their body even in moments of high pain, paying closer attention to their body's needs, and learning how to communicate about the pain experience, thus decreasing feelings of isolation and hopelessness. Other effects vary between individuals, but this study shows that there are many modalities even within a medical setting that can be employed to help individuals cope with pain.

Within a medical setting, there are many unique pain-inducing disease states for which music may be either an efficacious complementary modality or a viable alternative to drug therapy. Recent literature suggests that music interventions may be effective in such disease

states/conditions/situations as lumbar pain, fibromyalgia, inflammatory disease, neurological disease (Guetin, 2012), neuropathic pain (Korhan, Uyar, Eyigor, Hakverdioglu, Celik, & Korshid, 2014), chronic pain (Gold & Clare, 2013), pain during treatment procedures for burn victims (Li, Zhou, & Wang, 2017), and post-operative pain in pediatrics (Bradt, 2010). Additionally, music therapy may provide a great deal of benefit for pediatric patients and those confronting end of life care/palliative care. A plethora of research has been published regarding the effectiveness of music interventions within this setting, which is of great interest to many professionals, as these two populations may have limited therapeutic options or have exhausted conventional therapies.

Edwards (2006) discusses developing pain management approaches in music therapy with hospitalized children. Edwards also discusses the correlation between pain and anxiety for children in a hospital setting; remarking on the interconnectedness of pediatric pain and anxiety, Edwards suggests that there is no real need to distinguish between the two. To assess pain levels for children, Edwards used a Wong-Baker FACES pain rating scale, which offers different expressions of pains from “no hurt” to “hurts worst” on a scale of 1-5. Edwards describes three types of pediatric pain in her work: 1. Acute, 2. Chronic, and 3. Procedural which may affect her approach to working with each patient. Treatment interventions included: drumming (a way to release strong feelings), singing favorite songs (comfort and play), song creation (self-expression), music listening (for distraction and/or relaxation), among a host of other creative solutions. Edwards concludes that music can play a vital role in a child’s experience of pain, decreasing anxiety, fear, and isolation, and normalizing a stressful setting. Edwards offers theoretical foundations regarding how to work with children in pain within a medical setting,

based on one practitioner's clinical experience and findings through a series of individual case studies.

Additional research has been conducted, which evaluates the use of music on pediatric pain within a hospital setting (Kirby, Oliva, & Sahler, 2010). The authors offer a review of the preexisting literature regarding the use of clinical music therapy in reducing pain in pediatric patients as part of the effort to find nonpharmacologic therapies, or in other words, safe alternatives to sedatives and other invasive pain medications. According to this review, some of the goal areas most often targeted by music therapy clinical practice include: decreasing pain perception, decreasing anxiety and depression, reducing stress-related cardiovascular and endocrinology reactions, increasing relaxation, increasing immunologic defenses, encouraging resolution of grief issues, and enhancing patient communication. The findings of this review of the literature were varied, but one common theme was that self-reported pain and signs of distress of patients receiving MT were generally and often significantly lower than those of patients not receiving MT treatment. A conclusion of this analysis was that music therapy interventions have a place in treating pediatric pain.

Music therapy can offer an effective alternative or complement to pharmaceuticals in pediatrics as well as palliative care. For example, one randomized controlled trial was conducted to determine how a single music therapy session might reduce pain in palliative care patients (Gutgsell, Schluchter, DeGolia, McLaughlin, Harris, Mecklenburg, & Wiencek, 2013). Two hundred inpatients were enrolled in the study, randomized either to a control group or an experimental group. The researchers administered pre- and post-tests to assess pain levels using a numeric rating scale. The intervention incorporated autogenic relaxation and live music guided by a music therapist, and results of the study indicated a significant decrease in numeric rating

scale pain scores in the music therapy group. Similarly, Groen (2007) conducted a survey to better understand the role of music therapy in pain during end of life care, and particularly the way music therapy assessment of pain works. Groen (2007) asked 72 Board Certified Music Therapists and 92 hospice and palliative care nurses to report on assessment tools used in end of life care. Results indicated that professionals most frequently used the Numerical Rating Scale (NRS) and FACES scales, and identified them as appropriate for use by non-nursing members of the interdisciplinary hospice team. Once again, the utilization of reliable pain assessment tools is highlighted.

### **Purpose of the Study**

This background of music therapy in pain management begins to set the stage for where the music therapy community is in terms of information, awareness, collaboration with interdisciplinary professionals, and desire for further investigation. The review of the literature indicates that much research has been conducted to aid in the understanding of the following: (a) pain mechanisms, (b) assessment of pain may using tools and rating scales, (c) patients` subjective experience of pain and impact on daily living, (d) commonly used pharmacological agents for pain, (e) relevance of drug adverse effects and potential need for integrative medicine, and (f) music as a potentially effective pain intervention. However, more research is needed to evaluate music therapists` attitudes, beliefs and practices as pertaining to pain management. It is this type of research which may raise awareness among music therapists and aid in the identification of MT techniques that are effective for pain relief. The survey presented in the study works to shed additional light on the ways in which music therapists are currently utilizing music therapy interventions, developing treatment plans, collaborating with healthcare professionals, and supporting their clients within the pain management setting.

The purpose of this study was to shed additional light on the primary research question: In what ways are music therapists utilizing music therapy interventions, developing treatment plans, and supporting their clients within pain management? Sub-questions include: (a) Are music therapists who deal with pain in one type of setting (i.e., hospital) more likely to use one kind of methodology over another?; (b) Do music therapists who utilize a prescriptive, outcome-oriented treatment plan value or rely on the therapeutic relationship as much as their process-oriented counterparts?; (c) Does the type of pain (neuropathic, emotional, etc.) influence how it is treated or is treatment more closely correlated with the perspective of the therapist?

The current author has been a music therapist for 3 years, and is reviewing this research within a psychotherapeutic context. The author's theoretical orientation can be described as humanistic, yet for this study, a post-positivistic stance was warranted. The author defines her humanistic orientation as one that emphasizes a holistic approach to therapy with faith in each individual's natural inclination to move toward healing with appropriate, individualized, therapeutic support. Her interest in music therapy for pain management originally grew out of the hypothesis that pain is most effectively treated with individualized treatment planning stemming from a humanistic worldview, one that considers all facets and categories of pain. In order to gather from a large pool of information, however, survey style research was needed to hear from music therapists across the U.S. to collect feedback regarding their own clinical practice, theoretical stances, and experiences.

## **Method**

### **Study Design**

This study was approved by the SUNY New Paltz HREB (Human Subjects Review Board 2016-038). Following approval, the 36-question survey was electronically disseminated to

prospective participants utilizing the American Music Therapy Association (AMTA) Database. The survey was sent to approximately 800 prospective participants. (See APPENDIX C for full information on how prospective participants were notified.) The survey consisted of both multiple choice and short answer questions, and was offered to professional music therapists (MT-BC) with clinical experience of any duration and level, and living and working within the United States. Participants filled out the questionnaire on the Qualtrics weblink. Because there is no advanced certification or credential needed by music therapists in order to work with individuals within pain management, the survey was left open to any board certified music therapist. Approximately twenty-five minutes was required to complete the survey. All results obtained were stored in a secure location in Qualtrics and in a password-protected computer in the researcher's home.

### **Data Analysis**

The survey used in this study was created and analyzed using the research software Qualtrics. Closed-ended items were analyzed using descriptive statistics, allowing for the data to be summarized with characteristics potentially indicative of the population of Board-Certified Music Therapists within the United States. The analysis of each survey item was based on response frequency. Additionally, responses were filtered based on whether the therapist reported using music specifically for pain management at least "sometimes," in order to evaluate whether those therapists who have experience working with individuals in pain may utilize different approaches compared to those therapists who do not have experience in this area. The author assessed the two open-ended items through evaluation of response content, which allowed for the identification of trends. Each written response was reviewed by the author. If a key word, concept, or phrase was frequently used, this was determined by the author to be a trend. For

example, the key word, “distraction,” was identified within 15 unique responses. Each response was evaluated further to determine the context of the word “distraction,” i.e. MT provides distraction or MT is more than a distraction.

### Participants

A total of 246 (N = 246) Board Certified Music Therapists participated in this confidential survey, with the majority of respondents identifying as Caucasian (90.7%), Cisgender females (82.5%), between the ages of 21 and 39 (54%) (See Table 1).

Table 1

*Demographic characteristics of Board Certified Music Therapists, United States*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Gender</b>				
Cisgender Female	203	83	115	80
Cisgender Male	27	11	20	14
Transgender	2	0.8	2	1.4
Other	2	0.8	1	0.7
Declined to answer	12	4.89	5	3.5
<b>Race/Ethnicity</b>				
Asian	6	2.4	5	3.5
Black/ African American	2	0.8	1	0.7
Hispanic/Latino	6	2.4	2	1.4

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
White/Caucasian	223	91	130	90
A combination of the above/ Mixed	4	1.6	3	2.1
Other	3	1.2	1	0.7
Declined to answer	1	0.4	1	0.7
<b>Age Group</b>				
21–29	68	28	42	29
30–39	65	26	42	29
40–49	40	16	22	15
50–59	35	14	23	16
60–69	27	11	11	7.7
70+	7	2.9	2	1.4
Declined to answer	4	1.6	1	0.7
<b>Religious Affiliation</b>				
Atheist/Agnostic	22	8.9	10	7.0
Buddhist	4	1.6	2	1.4
Christian/Catholic	148	60	86	60
Hindu	0	0.0	0	0.0
Jewish	20	8.1	8	5.6

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Muslim	1	0.4	1	0.7
Pagan	1	0.4	0	0.0
A combination of the above/mixed	25	10	16	11
Other	16	6.5	16	11
Declined to answer	9	3.7	4	2.8
<b>United States Region /Location</b>				
Great Lakes Region	62	25	39	27
Mid-Atlantic Region	64	26	38	27
Midwest	22	8.9	9	6.3
New England	12	4.9	6	4.2
Southwest	17	6.9	10	7.0
Southeast	39	16	25	18
Western Region	26	11	15	11
Declined to answer	4	1.6	1	0.7
<b>Sexual Orientation</b>				
Lesbian	3	1.2	3	2.1
Gay	8	3.3	7	4.9
Heterosexual	202	82	115	80
Bisexual	14	5.7	9	6.3

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	N	%	N	%
Pansexual	4	1.6	4	2.8
Asexual	1	0.4	0	0.0
Other	1	0.4	1	0.7
Declined to answer	13	5.3	4	2.8

Forty-six percent of participants had >11 years working as a music therapist, with 57% earning a master’s degree in MT/related field or equivalency, and 7% earning a doctorate in MT/related field. At least 79% of respondents had some form of specialized training (i.e., Neurological MT (27%), Bonny Method of Guided Imagery and Music (13%), Creative MT/Nordoff-Robbins MT (8%), neonatal intensive care unit (7%), institute training in psychotherapy (4%)). The client age range that is served by the respondents are evenly distributed, with 50-60% of respondents reporting that they work with children, adolescents, adults, and older adults; however 21% of respondents also have experience working with the infant population. The disease state/disorder/syndrome that is present within the client/patient population varies widely among respondents, encompassing abused/sexually abused, Alzheimer’s/dementia, autism spectrum disorder, behavioral disorder, developmentally disabled, eating disorders, hearing impairment, learning disability, mental health diagnoses, neurological impairment, post-traumatic stress disorder, stroke, substance abuse, visual impairment, etc. The pain specific diagnoses that are present within the client population serviced by the respondents include cancer

(25%), chronic pain (26%), terminally ill (32%), and medical/surgical patients (22%) (See Table 2).

Table 2

*Board Certified Music Therapists` Professional Characteristics*

	<b>246 Participants All Respondents</b>		<b>143 Participants Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Years of Experience in MT*</b>				
0-2	36	15	23	16
3-5	53	22	37	26
6-10	38	15	19	13
11-20	51	21	33	23
20+	62	25	28	20
Declined to Answer	6	2.4	3	2.1
<b>Professional Setting</b>				
Rural	20	8.2	10	7.0
Urban	90	37	55	39
Suburban	84	34	45	32
A Mixture of Settings	49	20	32	22
Declined to Answer	3	1.2	1	0.7
<b>Education (related to MT*)</b>				
Bachelor’s Degree	140	57	84	59

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Post Baccalaureate Equivalency	15	6.1	9	6.3
Master’s Degree in MT	71	29	45	32
Equivalency/Master’s Degree	35	14	17	12
Master’s Degree (in related field)	34	14	20	14
Doctorate or Doctoral Studies	13	5.3	5	3.5
Doctorate (in related field)	4	1.6	2	1.4
Other	21	8.5	11	7.7
Declined to answer	1	0.4	0	0.0
<b>Specialized Training</b>				
Analytical MT	4	1.6	3	2.1
Bonny Method <sup>a</sup>	31	13	18	13
Creative MT/ Nordoff-Robbins MT	20	8.1	12	8.4
Neurologic MT	67	27	38	27
Advanced Certificate in Related Field	28	11	21	15
Institute Training in Psychotherapy	9	3.7	7	4.9
NICU	17	6.9	----	----

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Other	18	7.3	----	----
Declined to Answer	52	21	21	15
<b>Setting of Care</b>				
Clinic/Agency	31	13	10	7.0
School	44	18	13	9.1
Residential Facility	28	11	18	13
Day Treatment Center	17	6.9	11	7.7
Hospital/Medical Facility	66	27	59	41
Nursing Home/Assisted Living	40	16	30	21
Hospice/ Palliative Care	44	18	43	30
Private Practice	73	30	34	24
Combination of the Above	19	7.7	11	7.7
Other	18	7.3	8	5.6
Declined to Answer	3	1.2	0	0.0

MT, Music Therapy; NICU, Neonatal Intensive Care Unit; a. The Bonny Method of Guided Imagery and Music

## Results

This study aims to evaluate music therapists' attitudes, beliefs and practices as pertaining to pain management. The purpose of the survey presented in this study was to shed additional light on the ways in which music therapists are currently utilizing music therapy interventions, developing treatment plans, collaborating with healthcare professionals, and supporting their clients within the pain management setting. The survey also aimed to identify: (a) current perceptions of music therapists regarding pain type encountered within a clinical setting (b) commonly used music therapy methodologies for pain alleviation, (b) the necessity interdisciplinary collaboration and a therapeutic relationship for optimal client/patient outcomes. A total of 246 (N = 246) Board Certified Music Therapists participated in this confidential survey. Participants were provided with the opportunity to respond to 34 close-ended questions, and 2 open-ended questions categorized as follows: (a) professional work characterization, (b) pain type and characterization, (c) MT utilization and techniques, and (d) Board Certified Music Therapists' perceptions and opinions on MT.

### Close-Ended Questions

Regarding the MT practice, 18% of respondents characterized their work as strictly cognitive-behavioral, while another 18% characterized theirs as existential/humanistic. However, the majority of respondents (36%) reported utilizing a combination of methods from a variety of MT treatment modalities (i.e. psychotherapeutic, psychodynamic, cognitive-behavioral, existential/humanistic, educational, recreational, music-centered etc.). Of the therapists with experience working with patients in pain, the majority utilizes either a combination of approaches (38%), or adheres to an existential/humanistic modality (21%) (See Table 3).

Table 3

*Professional Work Characterization*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Therapeutic approach</b>				
Psychotherapeutic	7	2.9	6	4.2
Psychodynamic	5	2.0	4	2.8
Cognitive-behavioral	45	18	19	13
Existential/Humanistic	44	18	30	21
Educational	13	5.3	4	2.8
Recreational	10	4.1	6	4.2
Music-Centered	16	6.5	10	7.0
A Combination of the Above	88	36	54	38
Other (please specify)	14	5.7	9	6.3
Declined to answer	4	1.6	1	0.7

MT, Music Therapy

The majority of respondents (58%) indicated that they use music in sessions for the purpose of pain management at least “sometimes,” with 25% reporting that they use music often to facilitate pain alleviation. Regarding the type of pain that is most often encountered by the music therapist, 33% of respondents reported dealing with patients suffering from a variety of pain types (i.e., somatic, psychological, neuropathic, visceral), and 55% of music therapists reported treating patients with both acute and chronic pain. The remaining respondents indicated

that they are primarily exposed to patients with one predominant pain type: somatic pain (15%), psychological pain (14%), neuropathic pain (7%), and visceral pain (2%) (See Table 4).

Table 4

*Pain Type and Characterization*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>I use MT for pain management</b>				
Always	4	1.6	4	2.8
Often	61	25	61	43
Sometimes	78	32	78	55
Rarely	54	22	0	0.0
Never	46	19	0	0.0
Declined to Answer	3	1.2	0	0.0
<b>Pain Type Encountered in MT Session</b>				
Somatic	37	15	30	21
Visceral	6	2.4	4	2.8
Neuropathic	18	7.3	14	5.8
Psychological	34	14	13	9.1
A combination of the above	81	33	75	52
Other	18	7.3	4	2.8
Declined to Answer	52	21	3	2.1

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Client Pain Type</b>				
Chronic	26	11	15	11
Acute	13	5.3	7	4.9
Both	135	55	115	80
Other (please explain)	21	8.5	5	3.5
Declined to Answer	51	21	1	0.7
<b>Populations served</b>				
Abused/Sexually Abused	38	15	30	21
AIDS	9	3.7	9	3.7
Alzheimer's Disease/ Dementia	102	42	71	50
Autism Spectrum Disorder	122	50	49	34
Behavioral Disorder	93	38	47	33
Cancer	60	24	57	40
Chronic Pain	64	26	63	44
Comatose	16	6.5	16	11
Developmentally Disabled	128	52	57	40
Dual Diagnosed	70	29	37	26
Early Childhood	72	29	35	<b>25</b>

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Eating Disorders	17	6.9	15	11
Elderly Persons	96	39	67	47
Emotionally Disturbed	58	24	35	25
Forensic	13	5.3	10	7.0
Head Injury	54	22	39	27
Hearing Impaired	44	18	31	22
Learning Disabled	76	31	35	25
Medical/Surgical	54	22	51	36
Mental Health	83	34	58	41
Multiply Disabled	74	30	38	27
Music Education (college students)	6	2.4	3	2.1
Music Therapy (college students)	33	13	20	14
Neurologically Impaired	92	37	62	43
Non-Disabled	24	9.8	51	36
Other	20	8.1	16	11
Parkinson's Disease	43	18	36	25
Physically Disabled	84	34	48	34

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Post-Traumatic Stress Disorder	49	20	39	27
Rhett Syndrome	19	7.7	10	7.0
School Age Population	79	32	40	28
Speech Impaired	79	32	42	29
Stroke	68	28	48	34
Substance Abuse	44	18	33	23
Terminally Ill	73	30	71	50
Visually Impaired	61	25	37	26

MT, Music Therapy

The majority of music therapists indicated that their work consists of both music interventions as well as verbal interventions; although 42% indicated that they make mostly music interventions during therapy sessions. The types of interventions made by the surveyed music therapists within their work consist of the following in descending order of frequency: singing familiar songs (62%), music listening (59%), playing familiar songs with instruments (49%), improvisation with instruments (48%), music and imagery (44%), vocal improvisation (36%), music and meditation (35%), songwriting (33%), and lyric analysis (28%). Of the music therapists who work with patients with pain, the types of interventions made when working in this setting are as follows in descending order of frequency: singing familiar songs (54%), music listening (50%), improvisation with instruments (41%), music and imagery (36%), playing

familiar songs with instruments (31%), music and meditation (24%), vocal improvisation (18%), songwriting (15%), and lyric analysis (10%). These results indicate that certain modalities may be more commonly used in therapy (i.e. singing familiar songs, music and imagery, and music listening) regardless of the setting of care (See Table 5).

Table 5

*Music Therapy Utilization and Techniques*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT* for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>My MT work consists of:</b>				
Music Interventions	105	43	48	34
Verbal Interventions	1	0.41	1	0.7
An Equal Amount of Both	128	52	87	61
Neither/Other	11	4.5	7	4.9
Declined to Answer	1	0.4	0	0.0
<b>MT Interventions in pain management (all):</b>				
Improvisation with Instruments	119	48	90	63
Vocal Improvisation	83	34	66	46
Playing Familiar Songs with Instruments	121	49	94	66
Singing Familiar Songs	152	62	118	83
Lyric Analysis	68	28	53	37

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT* for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Song Writing	80	33	62	43
Music and Imagery	109	44	89	62
Music Listening	146	59	115	80
Music and Meditation	86	35	71	50
Other	31	13	16	11
Declined to Answer	43	18	0	0.0
<b>MT interventions pain management (Top 3)</b>				
Improvisation with Instruments	79	32	58	41
Vocal Improvisation	34	14	28	20
Playing Familiar Songs with Instruments	59	24	41	29
Singing familiar songs	104	42	80	56
Lyric Analysis	19	7.7	12	8.4
Song Writing	29	12	19	13
Music and Imagery	69	28	57	40
Music Listening	95	39	78	55
Music and Meditation	45	18	35	25
Other	24	9.8	13	9.1

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT* for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Declined to Answer	55	22	3	2.1

MT, Music Therapy; a. Bonny Method of Guided Imagery and Music

Sixty-four percent of participants reported that they agree and/or strongly agree that there are certain MT interventions that are more effective than others in treating pain, 7% of respondents believe that MT is contraindicated for individuals with pain, while 9% are unsure. Of the 14 participants who either "agree" or "strongly agree" that MT is contraindicated, 86% report utilizing MT for pain alleviation (See Table 6).

Table 6

*Board Certified Music Therapists' Perceptions/Opinions on MT*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least "sometimes"</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>Certain MT interventions are more effective than others in treating pain</b>				
Strongly disagree	4	1.6	1	0.7
Disagree	6	2.4	5	3.5
Neutral	32	13	20	14
Agree	116	47	79	55
Strongly agree	42	17	27	19

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Unsure	19	7.7	10	7.0
Declined to Answer	27	11	1	0.7
<b>In my experience, MT is often contraindicated for individuals in pain</b>				
Strongly disagree	47	19	38	27
Disagree	99	40	70	50
Neutral	25	10	14	9.8
Agree	11	4.5	9	6.3
Strongly agree	3	1.2	3	2.1
Unsure	19	7.7	5	3.5
N/A	32	13	2	1.4
Declined to answer	10	4.1	2	1.4

The majority of respondents (70%) agrees and/or strongly agrees that they are “very successful as a music therapist when working with clients in pain management,” and 77% believe that MT produces both short- and long-term benefits for the alleviation of pain. An overwhelming majority of participants (93%) perceive that the client-therapist relationship is an extremely important factor in whether MT treatment will be successful in pain management. The results of this survey also highlight the likely perception of music therapists that a positive and productive interaction with other healthcare/helping professionals may lead to positive patient/client outcomes. Ninety-four percent of all respondents admit to collaborating

with at least one other type of helping professional, such as creative arts therapists, medical doctors, nurses, psychiatrists, mental health counselors, occupational therapists, physical therapists etc. Ninety-one percent of respondents reported that they either “agree” or “strongly agree” that interdisciplinary teamwork is very important when working with clients and pain management, and 94% designated that they enjoy collaborating with other helping professionals (See Table 7).

Table 7

*Board Certified Music Therapists` Perceptions/Opinions on MT*

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
<b>I am successful as music therapist when working with clients in pain management</b>				
Strongly Disagree	3	1.2	3	2.1
Disagree	3	1.2	1	0.7
Neutral	37	15	23	16
Agree	107	44	87	61
Strongly Agree	23	9.4	23	16
Unsure	12	4.9	5	3.5
Declined to Answer	61	25	1	0.7
<b>MT is effective in alleviating pain</b>				
Short-Term Only	43	18	28	20
Long-Term Only	0	0.0	0	0.0

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Both Short- and Long-Term	147	60	99	69
Neither	0	0.0	0	0.0
Declined to Answer	56	23	16	11
<b>The client-therapist relationship is an extremely important factor in whether MT treatment will be successful or not</b>				
Strongly Disagree	7	2.9	2	1.4
Disagree	1	0.4	1	0.7
Neutral	3	1.2	2	1.4
Agree	69	28	45	32
Strongly Agree	161	65	93	65
Unsure	1	0.4	0	0.0
Declined to Answer	4	1.6	0	0.0
<b>The client-therapist relationship is an extremely important factor in whether MT treatment will be successful in pain management</b>				
Strongly disagree	4	1.6	3	2.1
Disagree	2	0.81	2	1.4
Neutral	22	8.9	14	9.8
Agree	93	38	60	42
Strongly agree	15	6.1	63	44
Unsure	15	6.1	1	0.7

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Declined to Answer	14	5.7	0	0.0
<b>Interdisciplinary teamwork is very important when working with clients in pain</b>				
Strongly disagree	3	1.2	3	2.1
Disagree	1	0.41	1	0.7
Neutral	17	6.9	3	2.1
Agree	98	40	58	40.41
Strongly agree	110	45	77	54
Declined to Answer	17	6.9	1	0.7
<b>I enjoy collaborating with other healthcare professionals</b>				
Strongly Disagree	4	1.6	2	1.4
Disagree	0	0.0	0	0.0
Neutral	3	1.2	1	0.7
Agree	80	33	45	32
Strongly Agree	151	61	92	64
Declined to Answer	4	1.6	2	1.4
<b>Other helping professionals with whom I typically interact with in a work week</b>				
Creative Arts Therapist	57	23	35	25
Recreation therapist	76	31	53	37
Medical Doctor	76	31	72	50

	<b>246 Participants</b>		<b>143 Participants</b>	
	<b>All Respondents</b>		<b>Respondents who report using MT for pain management at least “sometimes”</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Nurse	147	60	116	81
Psychiatrist	41	17	33	23
Psychologist	65	26	50	35
Mental Health Counselor	44	18	28	20
Social Worker	140	57	112	78
Case Worker/ Case Manager	73	30	52	36
Home Health Aide	50	20	38	27
Occupational Therapist	99	40	59	41
Physical Therapist	88	36	56	39
Speech Therapist	97	39	50	35
Other	68	28	34	24

### **Open-Ended Questions**

Survey respondents were given the opportunity to respond to two open-ended questions at which point they were asked to elaborate on what they would like other healthcare workers to know about music therapy and the integral role of the music therapist. The open-ended questions received a total of 150 responses (See Table 8 and APPENDIX C for a complete list of open-ended responses).

Table 8

*Board Certified Music Therapist Perceptions/Opinions on MT [Open-ended responses]*

<b>150 Participants</b>		
<b>Themes Identified</b>	<b>N</b>	<b>%</b>
MT as an efficacious and Evidence-Based treatment modality	37	25
Optimal outcomes is dependent on a patient-centered/individualized therapeutic approach	17	11
MT is complementary to pharmaceuticals and/or serves to decrease drug doses	10	6.7
MT and distraction:		
MT provides distraction	9	6.0
MT is MORE than a distraction	6	4.0
Interdisciplinary collaboration is necessary for optimal pain outcomes	7	4.7

### **Discussion**

This chapter aims to examine and explore the results of this study about the current utilization of music therapy for the treatment and alleviation of various forms of pain.

#### **Demographics and Racial Matching**

Eighty-three percent of survey respondents identified as cisgender female, and 90.7% identified as White/Caucasian. The implications of racial matching within the context of a therapeutic relationship (e.g., a situation in which the client shares the same race as the therapist), has previously been discussed in the literature. Studies have suggested that racial match may be associated with positive outcomes and well as improved patient satisfaction, and decreased likelihood of therapy termination (Meyer & Zane, 2013). Although there have been no

studies examining the effect of racial mismatching between music therapists and their clients, it can nevertheless be presupposed that multicultural competence on the part of the music therapist is vital.

### **Pain Type and Characterization**

Fifty-two percent of music therapists who work with individuals who have pain report encountering a combination of pain types such as somatic, visceral, neuropathic and/or psychological; and 80% of respondents work with patients experiencing either chronic or acute pain (see Table 4). It is interesting to note that over 20% of all respondents declined to answer questions related to pain type encountered in MT sessions, most likely due to the fact that a large percentage of the sample surveyed have little experience in this area. Some studies have demonstrated the beneficial effects that music interventions have for the alleviation of different pain types such as acute, procedural, and cancer/chronic pain (Lee, 2016). Shorter term therapy might be more appropriate for people in acute pain. MT may be utilized for relaxation, distraction, and breathing, as the client may only be able to offer a limited amount of active participation. Someone with chronic pain might need a more in depth approach and a longer treatment plan. Additional interventions may consist of talk therapy within a psychodynamic approach.

### **Open-Ended Response Trends**

Numerous trends were identified among participant open-ended responses relating to the following: (a) MT as an efficacious and evidence-based treatment modality, (b) necessity of a patient-centered/individualized approach, (c) MT as adjunctive therapy potentially leading to a decrease in pain medications (e.g., opioids), (d) MT as a distraction, and (e) importance of an interdisciplinary collaboration, advocacy, and respect.

*Evidence-Based Therapy.* Nearly 25% of music therapists, who responded to the survey and completed the open-ended portion of the questionnaire, described MT as an evidence-based and effective treatment modality, supported by research. One respondent reported that in their experience, MT is “effective in both short-term relief as well as creating coping strategies for long-term improved Health-Related Quality of Life.” The results of this survey suggest that a significant portion of music therapists not only believe in the effectiveness of their work in terms of improved patient outcomes, but also would like other disciplines to consider recommending MT when indicated for the treatment of pain. This trend also highlights the necessity of conducting research in the field of MT in order to enhance the profession and truly incorporate external evidence into clinical practice.

*Client-centered MT approach.* Another trend identified within participant responses involved the need for creating an individualized plan of care taking into consideration each patient’s treatment goals, unique experiences, and preferences. One respondent remarked that it is paramount that the music therapist tailors the plan to meet the needs of each individual, within the “context of a therapeutic relationship.” This is consistent with the well-founded principle that effectual music therapists are those who strive to improve the quality of their practice while also working to best meet the needs of each individual client, by way of identifying a client’s needs and strengths, response to music, and musical preferences, diagnoses, functioning level, spirituality, cultural background, concomitant medications, psychosocial condition, current health status etc. (Stephenson et al., 2008). Despite the need for an individualized plan, 64% of respondents either “agree” or “strongly agree” that certain interventions are more effective than others in treating pain (see Table 6), and approximately 60% report using the methods of “music listening” and “singing familiar songs” for patients in pain (see Table 5).

Interestingly, 7% of respondents believe that MT may be contraindicated for individuals with pain; while 9% are unsure. The notion that MT may be contraindicated for the treatment of pain may stem from the fact that certain conditions (e.g., migraines) may be potentiated or triggered due to patient specific sensitivity to sound (MTJ, 2013). Similarly if a patient hears a type of music that elicits a negative emotional response, pain may be subsequently exacerbated. Although music may provide migraines in some patients, there are studies that have shown that MT may be effective in reducing pain frequency in patients with primary headache disorders (Koenig, 2014). Ideally a comprehensive assessment is conducted by the music therapist, during which all potential triggers such as music types, instruments, and lyrics are identified to avoid worsening the pain response. If a client is nonverbal, the music therapist must use all observable evidence available to avoid triggering or exacerbating a pain response.

*MT as Adjunctive Therapy.* The results of this survey further highlight the importance of an accurate and thorough patient assessment prior to the initiation of MT, in order to provide patient-centric care. Within this assessment, the music therapist may evaluate current patient health status, diagnoses, and concomitant drug therapy, as mentioned previously. Utilizing proper pain assessment tools may help music therapists evaluate the current pain status of the patient and determine the appropriateness of their interventions (see Section 1.2 for overview of pain assessment tools). According to the survey responses of 10 Board Certified Music Therapists, MT may serve to complement the pharmaceutical approach to pain management, or allow for the reduction in drug doses. Various studies have been conducted in an attempt to determine the effect of music interventions on concomitant pain medication dosages, such as opioids; however more research is needed in this area as results demonstrating statistically

significant improvements are not consistent (Hsu, Chen, & Hsieh, 2016; Chen, Chen, Huang, Hsieh, & Lai, 2015).

*Role of Distraction in Pain Management.* Another trend identified within participant responses relates to MT as a distraction. Nine respondents mentioned that MT is efficacious in that it serves as a distraction to help patients “take their mind off” the pain; however, 6 respondents indicated that they would like healthcare professionals to know that MT is “more than just a distraction.” Research has demonstrated that music therapy may be effective as procedural support during medical procedures, during which the music therapist is responsible for the refocus of the patient’s attention made possible through positive patient/therapist interactions and the incorporation of distraction (Ghetti, 2011). It is the author’s opinion that MT as a distraction may be valid for people in highly intense states of acute pain who have agreed that music is a good distraction, but distraction is not the overall purpose of MT for individuals in pain. When it comes to emotional or psychic pain, it is likely that music will always have some degree of meaning, and may not serve to be a distraction, but instead may create images, associations, and elicit emotions.

*Interdisciplinary Collaboration.* Results of the survey also indicated the desire for interdisciplinary collaboration among this population of music therapists. Ninety-four percent of all respondents admit to collaborating with at least one other type of helping professional, and 91% of respondents believe that interdisciplinary teamwork is very important when working with clients and pain management. Additionally, 7 respondents chose to reiterate the importance of collaboration among different disciplines and care settings. One respondent remarked that music therapists “have the ability to make high differences for clients if given the opportunity to be part of the treatment team, included in treatment planning and implementation along with other

professionals." Another respondent expressed disappointment that MT is often not well understood or appreciated by support staff, and therefore "more education, support, and advocacy would be beneficial."

### **Limitations**

This survey looked at music therapist perceptions regarding MT use in pain management. The majority of questions were close-ended, and respondents were not able to elaborate on every question. Because of this, it is not known whether there was any misinterpretation of the questions.

Another limitation of this study was related to the fact that a test for the assessment for homogeneity of variance was not conducted, and only descriptive statistics were used for statistical data. Additionally, there was significant variability in total number of responses per question, and a substantial percentage of the responders declined to answer certain questions. None of the questions were mandatory and so the denominators provided by Qualtrics were variable. For example, over 20% of participants declined to answer the question relating to "Pain Type Encountered in MT Session" (see Table 4). This may have been due to the fact that a large portion of the sample surveyed did not have substantial experience in the area of pain management, and therefore could not provide a response. The denominator used in analysis was total number of respondents who answered at least one question (N=246). This may have impacted the survey by either overestimating or underestimating the data results. However because of this, it is difficult to identify trends within subsets of the sample population. Although respondents were asked to identify whether they work with clients with pain conditions, their expertise or percentage of time spent in this area is not evident. Because the extent of expertise is

unknown, it is not clear whether the survey results may be extrapolated to the population of Music Therapists who have ample experience working in pain management.

While it was the author's intent to include survey questions in order to collect accurate demographic information, a select number of participants had concerns with the inclusive nature of the demographics, and indicated that they believed certain questions regarding sexual orientation and gender were irrelevant. This may have hindered the responder's desire to answer the subsequent questions, contributing to the high percentage of those who declined to answer.

### **Suggestions for Future Research**

In order to more completely comprehend the impact that music therapy has on the pain experience, additional large scale randomized controlled trials should be conducted in this area. Within this survey, numerous music therapists reported that they believe that music therapy is an effective modality for pain that should be considered a validated therapeutic option by other healthcare professionals. Future research incorporating validated pain assessment tools and scales must be conducted in order to assess the true effectiveness and feasibility of music therapy in unique practice settings for a variety of patient populations and pain types. Results of this study also indicate that many practicing Board-Certified Music Therapists often utilize techniques such as singing familiar songs, music listening, and music and imagery when working with patients in pain. Future research should be conducted in order to assess the efficacy of these techniques, as well as whether these techniques allow for a statistically significant reduction in pain pharmaceuticals. Results of this study indicate that a large sample of the music therapists is Caucasian women. Research should be conducted on the effect that racial matching has on client/patient therapeutic outcomes.

### **Conclusion**

Results of this survey indicate that Board-Certified Music Therapists in the U.S. are conducting therapeutic sessions utilizing various MT techniques for pain management. According to the results of this survey, music therapists believe that MT produces both short- and long-term benefits for patients in pain. It is also evident that many music therapists believe in the necessity of an optimal client-therapist relationship, which may contribute to the effectiveness of MT for pain. The results of this survey also highlight the likely perception of music therapists that a positive and productive interaction with other healthcare/helping professionals may lead to positive patient/client outcomes and the belief that interdisciplinary teamwork is very important when working with clients and pain management.

### References

- Achilefi, A., Joshi, K., Meier, M., & McCarthy, L.H. (2017). Yoga and other meditative movement therapies to reduce chronic pain. *The Journal of Oklahoma State Medical Association*, *110*(1), 14–16. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5298891/>
- Astin, J. A. (1998). Why patients use alternative medicine: Results of a national study. *The Journal of the American Medical Association*, *279*(19), 1548–1553. <http://doi.org/10.1001/jama.279.19.1548>
- American Massage Therapy Association. (2013). *Massage Therapy Journal*. 1–23. Retrieved from [https://www.amtamassage.org/uploads/cms/documents/ce\\_web\\_su13.pdf](https://www.amtamassage.org/uploads/cms/documents/ce_web_su13.pdf)
- Breivik, H., Borchgrevink, P. C., Allen, S. M., Rosseland, L. A., Romundstad, L., Hals, E. K., & Stubhaug, A. (2008). Assessment of pain. *British Journal of Anaesthesia*, *101*(1), 17–24. <http://doi.org/10.1093/bja/aen103>.
- Bradt, J. (2010). The effects of music entertainment on postoperative pain perception in pediatric patients. *Music and Medicine*, *2*(3), 150–157. <http://doi.org/10.1177/1943862110369913>.
- Bradt, J., Potvin, N., Kesslick, A., Shim, M., Radl, D., Schriver, E...Komarnicky- Kocher, L.T. (2015). The impact of music therapy versus music medicine on psychological outcomes and pain in cancer patients: a mixed methods study. *Supportive Care in Cancer*, *25*(5), 1261–1271. <http://doi.org/10.1007/s00520-014-2478-7>.
- Bruscia, K. (2014). *Defining music therapy. Third Edition*. Gilsum, NH: Barcelona Publishers.
- Carr, D. B., & Goudas, L. C. (1999). Acute pain. *Lancet*, *353*(9169), 2051–2058. [http://doi.org/10.1016/S0140-6736\(99\)03313-9](http://doi.org/10.1016/S0140-6736(99)03313-9).

- Chen, H. J., Chen, T. Y., Huang, C. Y., Hsieh, Y. M., & Lai, H. L. (2015). Effects of music on psychophysiological responses and opioid dosage in patients undergoing total knee replacement. *Japan Journal of Nursing Science, 12*(4), 309–319.  
<http://doi.org/10.1111/jjns.12070>
- Chou, R., & Huffman, L. H., (2007). Nonpharmacologic therapies for acute and chronic low back pain: a review of the evidence for an American Pain Society/American College of Physicians clinical practice guideline. *Annals of Internal Medicine, 147*(7), 492–504. Retrieved from <http://annals.org/aim/article/736834/nonpharmacologic-therapies-acute-chronic-low-back-pain-review-evidence-american>.
- Dowell, D., Haegerich, T. M., & Chou, R. (2016). CDC Guideline for prescribing opioids for chronic pain-United States, *MMWR Recomm, 65*(RR-1), 1–49.  
<http://dx.doi.org/10.15585/mmwr.rr6501e>.
- Dubin, A. E., & Patapoutian, A. (2010). Nociceptors: the sensors of the pain pathway. *Journal of Clinical Investigation, 120*(11), 3760–3772. <http://doi.org/10.1172/JCI42843>
- Eating, H. (2009). Depression and pain. *Harvard Health Publications*. Retrieved from [http://www.health.harvard.edu/mind-and-mood/depression\\_and\\_pain](http://www.health.harvard.edu/mind-and-mood/depression_and_pain).
- Edwards, J., (2006). Developing pain management approaches in music therapy with hospitalized children. Dileo, C., Loewy, J. *Music therapy at the end of life*. Cherry Hill, NJ : Jeffrey Books.
- Fredenburg, H., & Silverman, M. (2014). Effects of music therapy on positive and negative affect and pain with hospitalized patients recovering from a blood and marrow transplant: A randomized effectiveness study. *Arts in Psychotherapy, 41*(2), 174–180.  
<https://doi.org/10.1016/j.aip.2014.01.007>.

- Ghetti, C. M. (2011). Music therapy as procedural support for invasive medical procedures: toward the development of music therapy theory. *Nordic Journal of Music Therapy*, 21(1), 3–35. <http://dx.doi.org/10.1080/08098131.2011.571278>.
- Giummarra, M. J., Gibson, S. J., Allen, A. R., Pichler A. S., & Arnold, C. A. (2015). Polypharmacy and chronic pain: Harm exposure is not all about opioids. *Pain Medicine*, 16(3), 472–479. <http://doi: 10.1111/pme>.
- Gold, A. & Clare, A. (2013). An exploration of music listening in chronic pain. *Psychology of Music*, 41(5), 545–564. <http://doi.org/10.1177/0305735612440613>.
- 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(2), 90–112. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/17484524>.
- Guétin, S. (2012). The effects of music intervention in the management of chronic pain: A single-blind, randomized controlled trial. *The Clinical Journal of Pain*, 28(4), 329–337. <http://doi.org/10.1097/AJP.0b013e31822be973>.
- Guttsell, K., Schlucter, M., Margecicius, S., DeGolia, P. A., McLaughlin, B., Harris, M., Wiencek, C. (2013). Music therapy reduces pain in palliative care patients: a randomized control trial. *Journal of Pain and Symptom Management*, 45(5), 822–831. <http://doi.org/10.1016/j.jpainsymman.2012.05.008>.
- Hajjar, E. R., Cafiero, A. C., & Hanlon, J. T. (2007). Polypharmacy in elderly patients. *The American journal of geriatric pharmacotherapy*, 5(4), 345–351. <https://doi.org/10.1016/j.amjopharm.2007.12.002>.

- Hawker, G. A., Mian, S., Kendzerska, T., French, M. (2011). Measures of adult pain: Visual Analog Scale for pain (VAS Pain), Numeric Rating Scale for Pain (NRS Pain), McGill Pain Questionnaire (MPQ), Short Form McGill Pain Questionnaire (SF MPQ), Chronic Pain Grade Scale (CPGS), Short-Form 36 Bodily Pain Scale (SF-36 BPS), and Measure of Intermittent and Constant Osteoarthritis Pain (ICOAP). *Arthritis Care & Research*, 63(S11), S240–S252.
- Hsu, K. C., Chen, L. F., & Hsieh, P. H. (2016). Effect of music intervention on burn patients' pain and anxiety during dressing changes. *Burns*, 42(8), 1789–1796.  
<https://doi.org/10.1016/j.burns.2016.05.006>.
- Herr, K., Coyne, P. J., McCaffery, M., Manworren, R., & Merkel, S. (2011). Pain assessment in the patient unable to self-report: Position statement with clinical practice recommendations. *Pain Management Nursing*, 12(4), 230–250.  
<http://doi.org/10.1016/j.pmn.2011.10.002>.
- Katz, J., Rosenbloom, B. N., & Fashler, S. (2015). Chronic pain, psychopathology, and DSM-5 somatic symptom disorder. *The Canadian Journal of Psychiatry*, 60(4), 160–167.  
<http://doi.org/10.1177/070674371506000402>.
- Kinser, P. A., Pauli, J., Jallo, N., Shall, M., Karst, K., Hoekstra, M., & Starkweather, A. (2017). Physical activity and yoga-based approaches for pregnancy-related low back and pelvic pain. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 46(3), 334–346.  
<http://doi.org/doi:10.1016/j.jogn.2016.12.006>.
- Kirby, L. A., Oliva, R., & Sahler, O. J. (2010). Music therapy and pain management in pediatric patients undergoing painful procedures: A review of the literature and a call for research. *Journal of Alternative Medicine Research*, 2(1), 7–16. Retrieved from

- [http://www.upstatemusictherapy4kids.com/wpcontent/uploads/2010/12/Music\\_therapy\\_and\\_pain\\_management\\_in\\_pediatric\\_patients\\_undergoing\\_painful\\_procedures.pdf](http://www.upstatemusictherapy4kids.com/wpcontent/uploads/2010/12/Music_therapy_and_pain_management_in_pediatric_patients_undergoing_painful_procedures.pdf).
- Koenig, J. (2014). Music Therapy in the treatment of primary headache disorders. *Alternative Medicine*, 2(1), 1-3. Retrieved from <http://www.oapublishinglondon.com/images/article/pdf/1409761721.pdf>.
- Korhan, E. A., Uyar, M., Eyigör, C., Hakverdioğlu, Y. G., Çelik, S., & Khorshid, L. (2014). The effects of music therapy on pain in patients with neuropathic pain. *Pain Management Nursing*, 15(1), 306–214. <http://doi.org/10.1016/j.pmn.2012.10.006>.
- Lee, J. H. (2016). The effects of music on pain: a meta-analysis. *Journal of Music Therapy*, 53(4), 430–477. <https://doi.org/10.1093/jmt/thw012>.
- Li, J., Zhou, L., & Wang, Y. (2017). The effects of music intervention on burn patients during treatment procedures: a systematic review and meta-analysis of randomized controlled trials. *BMC Complementary and Alternative Medicine*, 17, 158. <http://doi.org/10.1186/s12906-017-1669-4>.
- Linnemann, A., Kappert, M. B., Fischer, S., Doerr, J. M., Strahler, J., & Nater, U. M. (2015). The effects of music listening on pain and stress in the daily life of patients with fibromyalgia syndrome. *Frontiers in Human Neuroscience*, 9, 434. <http://doi.org/10.3389/fnhum.2015.00434>.
- Merskey, H., & Bogduk, N. (1994). *Classification of Chronic Pain*. Second Edition, IASP Press, Seattle.
- Meyer, O. L., & Zane, N. (2013). The influence of race and ethnicity in client's experiences of mental health treatment. *Journal of Community Psychology*, 41(7), 884–901. <http://doi.org/10.1002/jcop.21580>.

- Nicholson, B. (2006). Differential diagnosis: nociceptive and neuropathic pain. *American Journal of Managed Care*, 12(9 Suppl), S256-S262. Retrieved from <http://www.ajmc.com/journals/supplement/2006/2006-06-vol12-n9Suppl/Jun06-2326pS256-S262/>.
- Nguyen, T., Nilsson, S., Hellstrom, A. L., & Bengtson, A. (2010). Music therapy to reduce pain and anxiety in children with cancer undergoing lumbar puncture: A randomized clinical trial. *Journal of Pediatric Oncology Nursing*, 27(3), 146–155. <http://doi.org/10.1177/1043454209355983>.
- American Society of Anesthesiologists Inc. (2010). Practice guidelines for chronic pain management. *Anesthesiology*, 112(4), 810. <http://doi.org/10.1097/ALN.0b013e3181c43103>.
- Rassp, R. G. (2013). Pain disorders and the new DSM-5. *LexisNexis*. Retrieved from <https://www.lexisnexis.com/legalnewsroom/workers-compensation/b/recent-cases-news-trends-developments/archive/2013/08/01/pain-disorders-and-the-new-dsm-5.aspx>.
- Rosenquist, E. (2015). Definition and pathogenesis of chronic pain. *UpToDate*. Retrieved from [https://www.uptodate.com/contents/definition-and-pathogenesis-of-chronic-pain?source=search\\_result&search=Definition%20and%20pathogenesis%20of%20chronic%20pain.&selectedTitle=1~150](https://www.uptodate.com/contents/definition-and-pathogenesis-of-chronic-pain?source=search_result&search=Definition%20and%20pathogenesis%20of%20chronic%20pain.&selectedTitle=1~150).
- Rosenquist, E., Aronson, M., & Crowley, M. (2016). Evaluation of chronic pain in adults. *UpToDate*. Retrieved from [https://www.uptodate.com/contents/evaluation-of-chronic-pain-in-adults?source=search\\_result&search=Evaluation%20of%20chronic%20pain%20in%20adults&selectedTitle=1~150](https://www.uptodate.com/contents/evaluation-of-chronic-pain-in-adults?source=search_result&search=Evaluation%20of%20chronic%20pain%20in%20adults&selectedTitle=1~150).
- Schieby, B. B. (2013). Analytical music therapy for pain management and reinforcement of self-

- directed neuroplasticity in patients recovering from medical trauma. In J. Mondanaro & G. Sara (Eds.) *Music and medicine: Integrative Models in Pain Medicine*. New York: Satchnote Press. 149–180.
- Scheiby, B. (2015). Analytical group music therapy (AMT): A non-prescriptive, evidence-based approach to pain management with adult clients in recovery from medical trauma. Dileo, C. (Ed). *Advanced Practice in Medical Music Therapy: Case Reports*. Jeffrey Books / Music Therapy Resources. 218–231.
- Sharma, A., Kudesia, P., Shi, Q., Gandhi, R. (2016). Anxiety and depression in patients with osteoarthritis: impact and management challenges. *Open Access Rheumatology*, 8, 103–113. <http://doi.org/10.2147/OARRR.S93516>.
- Simvali, S., Kaygusuz, I., Gumus, I., Usluogulları, B., Yildirim, M., Kafali, H. (2014). Effect of music therapy during vaginal delivery on postpartum pain relief and mental health. *Journal of Affective Disorders*, 156, 194–199. <http://doi.org/10.1016/j.jad.2013.12.027>.
- Stephenson, C., Long, J., Oswanski, L., Plancon, J. R., Pujol, K., Smith-Morse, T., & Gainsfera, M., (2008). Music Therapy Clinical Self Assessment Guide. AMTA Professional Advocacy Group.1-39. Retrieved from <http://www.musictherapy.org/assets/1/7/selfassessmentguide.pdf>.

## Appendices

### APPENDIX A

#### *Survey: Music Therapy and Pain Management*

Q1. My race and ethnicity can be described as:

- American Indian/Alaska Native/ Indigenous
- Asian
- Black/ African American
- Hispanic/ Latino/a/x
- Native Hawaiian/ Pacific Islander
- White/Caucasian
- A combination of the above/ mixed (please explain)
- Other (please explain)

Q2. My age is:

- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70-79
- 80+

Q3. My religious affiliation is:

- Atheist/Agnostic
- Buddhist
- Christian
- Hindu

- Jewish
- Muslim
- Pagan
- A combination of the above/ mixed (please explain)
- Other (please explain)

Q4. I identify as:

- Cisgender woman
- Cisgender man
- Transgender/gender non-conforming
- Other

Q5. I identify as:

- Lesbian
- Gay
- Heterosexual
- Bisexual
- Pansexual
- Asexual
- Other

Q6. In the U.S., I live in the

- Great Lakes Region
- Mid-Atlantic Region
- Midwestern Region
- New England Region
- New England Region
- Southeastern Region
- Western Region
- Unsure

Q7. I have been a Board Certified Music Therapist (MT-BC) for:

- 0-2 years
- 3-5 years
- 6-10 years
- 11-20 years
- 20+ years

Q8. I practice music therapy in a

- Rural setting
- Urban setting
- Suburban setting
- A mixture of settings

Q9. My education consisted of (select all that apply)

- A bachelor's degree in music therapy
- A post baccalaureate equivalency in music therapy
- A master's degree in music therapy
- A master's degree in a related field
- A doctorate or doctoral studies in music therapy
- A doctorate in a related field
- Other (please explain)

Q10. My current work is best described as

- Psychotherapeutic
- Psychodynamic
- Cognitive-behavioral
- Existential/ humanistic
- Educational
- Recreational
- Music-centered
- A combination of the above (please explain)

- Other (please explain)

Q11. The client age-range I currently serve is (select all that apply)

- Infant
- Children
- Adolescents
- Adults
- Older Adults

Q12. I use music mostly:

- As therapy
- In therapy
- Both

Q13. Most of my work consists of

- Music interventions
- Verbal interventions
- An equal amount of both
- Neither/other (please explain)

Q14. The type of pain I work with is

- Somatic
- Visceral
- Neuropathic
- Psychological
- A combination of these (please explain)

Q15. I use music for pain management with clients

- Always
- Often
- Sometimes

- Rarely
- Never

Q16. The kind of pain my clients suffer from is

- Chronic
- Acute
- Both
- Other (please explain)

Q17. Of the following interventions, please select all you employ when working in pain management

- Improvisation with instruments
- Vocal improvisation
- Playing familiar songs with instruments
- Singing familiar songs
- Lyric analysis
- Songwriting
- Music and imagery
- Music listening
- Music and meditation
- Other (please explain)

Q18. Select your top 3 most effective interventions when working with MT and pain (indicating a 1, 2, or 3, in the text box)

- Vocal improvisation
- Playing familiar songs with instruments
- Singing familiar songs
- Lyric analysis
- Songwriting
- Music and imagery
- Music and medication

- Other (please explain)
- Improvisation with instruments

Q19. I currently work in a (select all that apply)

- Clinic/agency
- School
- Residential facility
- Day treatment center
- Hospital/ medical facility
- Nursing home/ assisted living facility
- Hospice/ palliative care
- Private practice
- Combination of the above
- Other (please explain)

Q20. I am very successful as a music therapist when working with clients in pain management

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q21. Music therapy is effective in alleviating pain

- Short-term only
- Long-term only
- Both short- and long-term
- Neither
- Unsure

Q22. The client-therapist relationship is an extremely important factor in whether music therapy treatment will be successful or not:

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q23. The client-therapist relationship is an extremely important factor in whether music therapy treatment will be successful in pain management:

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q24. Certain music therapy interventions are more effective than others in treating pain

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q25. In my experience, music therapy is often contraindicated for individuals with pain

- Strongly disagree

- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q26. Other helping professionals with whom I typically interact in a work week are (check all that apply)

- Creative Arts therapist
- Recreation Therapist
- Medical Doctor
- Nurse
- Psychiatrist
- Psychologist
- Mental Health Counselor
- Social Worker
- Case Worker/ Case Manager
- Home Health Aide
- Hospice Professional
- Occupational Therapist
- Physical therapist
- Speech therapist
- Other/s (please specify)
- I don't interact with other helping professionals

Q27. Interdisciplinary teamwork is very important when working with clients and pain management

- Strongly disagree
- Disagree
- Neutral

- Agree
- Strongly agree
- Unsure
- N/A

Q28. I enjoy collaborating with other helping professionals

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree
- Unsure
- N/A

Q 29. My specialized training consists of (select all that apply)

- Analytical Music Therapy
- Bonny Method of Guided Imagery and Music
- Creative Music Therapy/ Nordoff-Robins Music Therapy
- Neurologic Music Therapy
- An advanced certificate in a related field (please specify)
- Institute training in psychotherapy (please specify)
- Other (please explain)

Q 30. The population(s) I currently serve include(s) (select all that apply)

- Abused/Sexually Abused
- AIDS
- Alzheimer's Disease/ Dementia
- Autism Spectrum Disorder
- Behavioral Disorder
- Cancer
- Chronic Pain

- Comatose
- Developmentally Disabled
- Dual Diagnosed
- Early Childhood
- Eating Disorders
- Elderly Persons
- Emotionally Disturbed
- Forensic
- Head Injury
- Hearing Impaired
- Learning Disabled
- Medical/ Surgical
- Mental Health
- Multiply Disabled
- Music Education College Students
- Music Therapy College Students
- Neurologically Impaired
- Non-Disabled
- Other (please specify)
- Parkinson's Disease
- Physically Disabled
- Post Traumatic Stress Disorder
- Rett Syndrome
- School age population
- Speech Impaired
- Stroke
- Substance Abuse
- Terminally Ill
- Visually Impaired

Q31. What I would most like healthcare professionals to know about music therapy and pain management (feel free to write as much or as little as you would like):

Q32. Anything else that you would add that has not been asked about(feel free to write as much or as little as you would like):

**APPENDIX B**

All of the participants volunteered their time and information after receiving the following message:

Greetings!

You are invited to participate in a study on Music Therapy techniques in current clinical practices. This study has been approved by the SUNY New Paltz HREB (Human Subjects Review Board 2016-038) and is being conducted by Jillian Vicinanza and Dr. Laurie Bonjo via SUNY New Paltz in order to obtain information about current practices in music therapy. This survey has been constructed to collect data for a graduate thesis. All survey answers are anonymous and confidential. You will not be asked to provide your name. The survey should take less than ten minutes. You must be at least 18 years of age or older to complete the survey and a practicing music therapist to participate. Please note: Your name is being used with permission of the American Music Therapy Association following a review of this study. There are no known risks associated with participating in this study. If you need any assistance or have any questions, please contact Jillian Vicinanza at [jillianmarieclare@gmail.com](mailto:jillianmarieclare@gmail.com) or Dr. Laurie Bonjo at [bonjol@newpaltz.edu](mailto:bonjol@newpaltz.edu). Thank you so much for your contribution! Your feedback is greatly appreciated. Please click the link below:

Current Practice in MT Survey

Warmest Regards,

Jillian Vicinanza MT-BC

SUNY New Paltz

**APPENDIX C***Participant Open-ended Responses:*

"What I would most like healthcare professionals to know about music therapy and pain management"

- "Music therapy can intervene and channel the brain to think about the music and not the pain. The client is involved in the music making much of the time, so they are actively doing something to keep their mind off the pain. Sometimes, it is simple being there and singing or playing something so they are more comfortable."
- "Pain and the interventions to treat it are fluid. Just because something worked before doesn't mean it will always work. Always be ready to be flexible and try something new"
- "First, that it is an option. Then that MT should do an assessment before the staff member promises the patient that the MT will definitely help. (A recipe for disaster). That MT for pain management is much more than giving someone a CD."
- "It is so effective that research has shown some decrease in needed pain medication as a result of using music therapy; specifically before, during, and after procedures."
- "In my hospice organizations, medical/helping professionals acknowledge and advocate the use of music therapy for pain management via appropriate patient referrals."
- "It is beneficial! It works with pain medication and allows it to work faster and better."
- "It's a process and it all depends on the patient for what is effective."
- "I've seen it work in many cases and it surprises people, especially when there is an improvised drum circle and clients were expecting suffering and find that it helps their pain on more than one level."

- "We are here and can be an effective way to manage pain and stress without additional pharmacological interventions."
- "There are myriad ways in which music therapy can be helpful in pain management; it is imperative to allow for space to find the right intervention for each client. When this is given, often clients benefit greatly."
- "Music therapy is both effective and fun when engaging clients in a therapeutic setting. It's not a cure all and will not fix the situation in one visit, but the effectiveness of music therapy when working with clients managing pain is something you may quantify over time."
- "Smaller group/individual sessions with live music tend to be more effective than large groups all put together regardless of addressing their specific needs."
- "Music therapy can be as effective as some medications with some patients and in some situations. My hospice nurses often 'music therapy sessions can be better than morphine.'"
- "That it should be considered as an alternative and/or complimentary therapy in pain management."
- "It's benefits and effectiveness go beyond pain management."
- "It reaches and sustains the perception of pain without losing the ability to attend to and enjoy one's life."
- "The body reacts to music, both as a distraction and as a means of working through pain by practicing progressive muscle relaxation and other relaxation techniques. Also use vibroacoustic therapy via the Somatron clinical recliner, which the Veterans love, call it the 'healing chair' and does lesson pain, and stress by Veteran report."
- "It can take your mind off the pain and reduce cost of medical care."

- "The ability for music to cross the blood-brain barrier."
- "It is only effective if everyone works together to use it when the client most needs it."
- "Music therapy can be a helpful addition to pain management."
- "Music therapy can assist children with psychological and physical pain by providing a controlled stimulus of music, can be paired with breathing as a coping skill, and can help individuals process psychological pain."
- "How they can measure the results of MT"
- "MT for pain management needs to be individualized; not just the particular music selection, but also the type of music experience. Some clients may prefer a receptive experience, others need to actively sound out their pain. Long-term pain relief can occur when the MT educates the client about coping strategies involving music for pain outside of the MT session."
- "It works and can be used to support pain management along with medications."
- "It's not always just about redirection or being a generic mood lifter."
- "The ability music has to alleviate pain can be determined by how open a patient is to trying new things (i.e. music therapy), and how severe their pain is. MT is not a magic cure-all for pain. That all being said, I've witnessed how impactful MT can be on a patient's pain score quite often. Kids with Sickle Cell disease experience so much pain they receive narcotics. Nurses often come in the room to ask what the patient's pain score is. After 30 min or an hour of music therapy, I've often heard patients say a lower pain score than they just told the nurse, because of MT."
- "It is an effective & research-based modality."
- "It is a viable option worth offering and exploring with patients."

- "Avoid twisting, do gentle muscle strengthening and deep breathing to music."
- " Music can heal and provide greater benefits than just distraction from the pain."
- "It is often difficult to know (because I work with people who don't use speech to communicate) how effective my interventions are. That said, music therapy is regarded as a positive experience for our clients (many of whom have significant medical challenges in addition to their severe disabilities). Ideally, it would be nice to be recognized as providing a clinical service and given more information regarding people's health needs. Many of our clients convey physical discomfort through behavioral means. As such, their pain is often under-recognized or not recognized at all. I often have to look for behavioral indications to know 1) whether clients are in pain and 2) whether or not my intervention has been helpful (sometimes this can be evidenced in terms of whether or not there has been a shift in behavior)."
- "Music and pain are processed in the same area of the brain- thus, music is able to counteract the pain receptors - the only issue related to using music in pain management - is it is most important to use music that is non-descript and that the patient does not "love" as it might ruin their love for that specific type of music."
- "It's a non-threatening, cost effective way to address pain."
- "Various MT interventions."
- "That music can help alleviate pain or distract from pain. Singing brings about regular breathing and helps to oxygenate the body. Music, breathing with the musical phrases can stimulate relaxation and distraction. "
- "That the music therapist should assess the patient to educate the patient on how music therapy can be used to best meet the needs of the patient. Therefore the patient is building

a relationship with the therapist and can ask questions to the music therapist that will be working with them, not another medical professional who may not know all the ways music therapy can be used to help the patient."

- "The seriousness and importance in how MT as a viable intervention can be quite effective."
- "It is applied on an individual basis, and will vary as to which intervention is used as per individual needs."
- "A pre-existing relationship helps immensely when working with young children in pain, but it is almost always worth a shot!"
- "It can be done."
- "Music taps into inner pharmacy thus less reliance on pharmaceuticals, and can aid in other [pain management] interventions such as distraction, self hypnosis, etc."
- "That music therapy, when proper assessment is done, and close collaboration, including treatment goals and thorough knowledge of client's records is in place, successful collaboration concerning treatment planning also - then successful, more effective/efficient outcomes/results can be achieved. Much education needs to be provided to other healthcare professionals as to what music therapy is and what professional music therapists can accomplish alongside other healthcare disciplines, either as primary or secondary therapeutic treatment providers."
- "It's more than just playing a CD. We're trained and skilled in applying interventions for pain abatement."
- "Is that the clients respond favorably to music they enjoy listening to."

- "For individuals that use music as a coping method at home, they will most likely benefit from music therapy for pain management because it is familiar."
- "Is that it can be very effective, but isn't magic, and doesn't work for every patient."
- "It works."
- "Music therapy is more than a distraction."
- "[Evidence-Based Practice] and historical basis."
- "The choice of music can have an effect on whether a client will find relief from pain or not."
- "That is takes time to find the right music for the individual. But once they have the right music for them, as well as the imagery tools and methods for using music for themselves, they can administer music to alleviate pain on their own (if they are physically and mentally capable of doing so)."
- "Call early and often! I often don't hear about an individual's pain until after the fact."
- "That music therapy is an effective treatment intervention for pain management goals."
- "We provide a holistic and no pharmaceutical approach that is proven to be effective in dealing with pain."
- "I would like healthcare professionals to know that music therapy can assist patients by either distracting them from pain, or working to alleviate different types of pain through teaching relaxation, using imagery, or using specialized techniques such as entrainment."
- "Music Therapists are so much more than recreational assistants! We have the ability to make huge differences for clients if we are given the opportunity to be part of the treatment team, included in treatment planning and implementation along with other professionals."

- "Is that music therapy is more than just singing to clients and our skills can be used to reinforce the goals they are working towards as well as looking at individualized music therapy goals."
- "It requires time, trust, and a closed, quiet space."
- "Music Therapy can be extremely beneficial, but is often not well understood or necessarily appreciated by support staff. More education, support, and advocacy would be beneficial."
- "That it works, and a combination of medicine, creative therapies, and holistic remedies have the greatest positive effect."
- "There are many music therapy interventions and success with pain management is dependent upon an accurate assessment of what music therapy method would be likely to be successful. As music preferences are very different, so are the approaches within music, but the methodology and rationale is best practice."
- "It is not recreative- music helps pain due to [music therapist] meeting patient therapeutically. MT's take environment, culture, spirituality etc.. into consideration when planning music therapy interventions."
- "Music aids in [distracting] the focus. .. pain."
- "Music therapy can be a vital part of engaging and motivated individuals for treatment to alleviating psychological pain and gaining insight."
- "It can be a very effective tool."
- "There is no special music for pain management."
- "Very individual. Assessment first is very important."
- "That MT can be used to manage pain in more ways than just 'a distraction'".

- "There are studies that show the effectiveness of music therapy and pain management."
- "The body has a physiological response to music, which can reduce the perception of pain. Music therapy treatment goes beyond 'listening to music to feel better'".
- "A therapeutic relationship is very important."
- "Trust the process. Provide your patients with knowledge about all available non-pharmaceutical interventions for pain management."
- "That it can be helpful to patients. I would like it used as a primary intervention."
- "We can be a great asset, particularly in acute situations when pain medications are unavailable or have not yet begun working."
- "That music is not a pill but a process- and that the therapeutic relationship holds great sway in the efficacy of music therapy for pain."
- "It works especially well as a distractor from pain."
- "It is an evidence based client centered practice."
- "I would like them to try Music Therapy over pain medication."
- "It can work. While I would love to collaborate, I often do not get the chance because I work contract work (so a few hours a week at different settings) and it is hard to develop rapport with multiple professionals. This can be especially hard in rural areas and at small contracts."
- "Address pain through music therapy, particularly in end-of-life care, is complex and requires flexibility, empathy, and resilience on the part of the clinician."
- "That it works."

- "Music has the ability to reduce perception of pain level, but is not a "cure" for pain. It is very helpful in reducing, or sometimes eliminating, the regular doses of pain medications."
- "It is effective and often preferred over medical interventions."
- "Give it a chance -- it really can help."
- "To not forget to call on the music therapist or wait too long."
- "It is best when music therapy is introduced before the painful stimuli occurs or before the pain meds have begun to be weaned."
- "Each of our disciplines can be enhanced when we share, interact and collaborate together increasing the patient/client's opportunities for success and habilitation."
- "Most of the work I do is with group and provides a distraction from pain. Therapeutic music can also be effective when used appropriately."
- "Music therapy can be a very effective tool for pain management during pregnancy, birth, & postpartum, through using a variety of therapeutic interventions."
- "Have the patient's own goals in mind."
- "That they complement each other."
- "Biomedical foundations of Music Therapy (Dale Taylor) and their relevance to pain."
- "Can be very effective in both short-term relief as well as creating coping strategies for long-term improved health related quality of life. Can help build confidence and rebuild meaningful sense of self and self in the world. Can provide outlet for grief for patients with chronic pain who must let go of some of old patterns of living."
- "I have found that MT is effective in satiating pain while waiting for next scheduled dose of pain medication, therefore collaboration and preplanning will benefit patients."

- "In mental health, pain management can be tricky because of co-occurring disorders and histories of substance use. Since pain is subjective, it is unclear how much of the perception of pain is present or if the clients are seeking medications."
- "Music is a vehicle to alleviate pain in many different ways. Each method is specific for the client and can include relaxation, guided imagery, distraction, emotional regulation, etc."
- "It is a form of treatment."
- "People assume that if someone is in pain, they will not be 'in the mood' for music therapy. I seek to educate staff about the effectiveness of music therapy as a 'help' when an individual is processing pain. Any interaction with the body and music affects biological changes. Verbal suggestions, i.e. with imagery, is even more effective. For example relaxation with breathing and vocal toning or singing."
- "It works beautifully in conjunction with pain medication."
- "Music is indicated. Research exists."
- "That it is an effective way to manage pain."
- "That music is a useful and effective modality."
- "I'd like for them to have the opportunity to see it in action to better understand its effectiveness."
- "It works!! Also that it is an evidence-based therapy, not entertainment, not just a distraction, not a 'nice thing to do', and not volunteer work."
- "Music reaches into the deepest parts of the brain and may help to regulate pain in a unique, primal way."
- "It can effectively supplement pharmacological interventions."

- "Music therapy is a valid option for pain management."
- "It can be used as a way to reduce acute pain episodes."
- "It works."
- "That music interventions are effective if used correctly."
- "Music therapy is not contraindicated for pain management. It can address pain through the total pain concept at all levels and for all types of pain. Sometimes music therapy is just as effective as other types of pain management. It is effective and looks different for each person and that 'Amazing Grace' and 'Canon in D' have their place, yet are not the only songs to use in order to 'relax.' A person may not have been 'relaxed' for a long time, therefore, saying 'just relax' is more stress inducing. We need to aid in step by step figuring out as to how to help them move/breath to ease into a state of calm."
- "MT is proven to be an effective intervention for pain, and I believe everyone suffering from chronic or acute pain should at the minimum attend 1 MT session before determining if MT is appropriate or not."
- "It is research based and has been shown [to be] effective. Also, recorded music is different than live music."
- "How intentional and individualized we are in our work."
- "There is a scientific, neurological basis to music therapy and pain management principles."
- "It is individually tailored to each individual. There is no 'magic pill' for pain management. Music \*can\* be a very effective tool, especially in the context of a therapeutic relationship."

- Is there anything else that you would like to add that has not been asked about (Feel free to write as much or as little as you like):
- "I work with trauma, both combat and other types of trauma, and fine music is a great healer of the psyche and body. Some Veterans rely on music therapy to help them get through their PTSD treatments. They will report that the music therapy kept them in the program."
- "Pain is typically not the focus of clinical intervention in the school setting; however, both physical and psychological wellness is usually a consideration when working on communication, social, and academic skills."
- "While I have not personally practiced MT for pain management, I have overseen research studies on the topic and feel that there is no one-size-fits-all approach. Pain varies greatly, as do people and their preferences. Plus a one-time music experience cannot cure anyone of pain for the long-term, the patient must have the means to turn to music experiences whenever needed."
- "Double check strengthening exercises w/medical, PT or OT staff that know participant."
- "I have many clients who also cope with a great deal of psychological pain. It is certainly possible their emotional pain is perceived as physical discomfort."
- "Some of my patients have stated they are in pain when I arrive, and don't want to talk about it. They just want to listen and/or sing. Also, patients state that once I'm there, they have forgotten all about it (pain)."
- "I know we've fought for years to be accepted by the medical establishment, but I think we are doing ourselves a disservice by not looking closer at some of the Sound Healing techniques being employed. I, for one, am interested!"

- "In some cases, music therapy may be contraindicated for pain treatment - there are many mitigating factors - and what may not be appropriate at one time of day, etc. may be very beneficial at another time of day - other variables as well."
- "Music therapists need to be respected among other health care positions."
- "Sometimes interventions for pain are quite simple and successful, while others require a tremendous amount of skill and application within integrated systems of providers."
- "MT interventions for pain relief are not morphine - it can't be "dosed" as medications can and should not be relied upon for guaranteed effectiveness. "
- "How Music Therapy is used to redirect behaviors."
- "I believe and have observed that different interventions are more or less effective depending on the client, the client's relationship with music, environmental factors (presence of others, strength of our rapport, etc.), and the person's belief about the pain experience (ex: pain is punishment, pain is purifying, etc.)."
- "I think that the efficacy of the intervention is dependent on several factors. I don't feel that one intervention is better than another; instead, I feel that some interventions are more appropriate in certain situations."
- "How medical profession often defines music therapy as simply using music, whether it be a recording or by a nurse. MT is not understood or defined appropriately."