Hospice Music Therapy:

A Mindfulness-Informed Conceptual Framework

by

Benjamin Rynex

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Kymla Eubanks, Co-Chair Robin Rio, Co-Chair Ann Sebren

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ABSTRACT

Hospice Music Therapy is an established specialization area within the field of music therapy with significant empirical research confirming its efficacy. Much of the current research on hospice music therapy concerns the use of receptive music therapy and traditional counseling and psychotherapy techniques. According to a survey of people with terminal illness, the most common needs experienced are: pain management, support for autonomy to the fullest extent possible, psychosocial support, and spiritual support. Mindfulness and mindfulness based interventions have been linked to increased self-compassion, reduced stress, reduced anxiety, and a reduction in self-reported perception of pain. While music therapy performs well in empirical measures of hospicerelated need areas, mindfulness techniques and practice may enhance the music therapist's capacity for self-care and administering hospice treatment. Additionally, music therapy may be a good companion to a mindfulness based therapy due to similar cognitive effects and processes that are utilized in each. This thesis will formulate a conceptual framework in which mindfulness and body awareness might be used as an integral aspect to the music therapist's practice in the hospice setting.

DEDICATION

Dedicated to my family and to my fiancée Melissa, without whose love and support this would not have been possible.

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CHAPTER 1

INTRODUCTION

Elisabeth Kubler-Ross, author of *On Death and Dying* and hospice advocate said to the U.S. Congress in 1972:

We live in a very particular death-denying society. We isolate both the dying and the old, and it serves a purpose. They are reminders of our own mortality. We should not institutionalize people. We can give families more help with home care and visiting nurses, giving the families and the patients the spiritual, emotional, and financial help to facilitate the final care at home (History of Hospice Care).

In short, the hospice movement acknowledged death as part of life, and sought to support families and individuals as they made the transition into death. This is achieved through offering emotional, physical, social, and spiritual support in the individual's home or a setting that resembles home. After repeated efforts, the hospice movement began to gain momentum in the Unites States. In 1977, America's first free-standing hospice was built in Tucson, AZ (Hilliard, 2005, p. 4). As hospice and palliative care gained traction, music therapy developed alongside it. Kubler-Ross identified the power of music in addressing the needs of people in hospice care as early as 1974.

The American Music Therapy Association (AMTA) defines music therapy as "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." However, music therapy as a profession remained relatively small and for a long time, hospice facilities in the United States reported

insufficient funds for a music therapy program (Hilliard, 2005). Surveys indicate the number of music therapists employed in hospice has steadily increased since 2000. Hundreds of music therapists work in hospice settings across the country to provide improved quality of life, emotional support, and pain management (Hilliard, 2005, p. 10).

Mindfulness based cognitive therapy has been shown to have a positive effect on body awareness for patients with chronic pain co-morbid with depression (De Jong et al., 2016). A mindfulness-informed music therapy approach may help address pain management and quality of life goals that are endemic to nearly every hospice setting. In addition, music therapy is uniquely well-suited to implement mindfulness-informed therapy due to the connection of music to the body's natural rhythms of breathing and heartbeat (Taylor, 2010). Some criticisms of hospice environments may be that they are sometimes too fixated on death. A mindfulness approach may find the balance of accepting the concept of death and finding peace in life. Some find that the benefits of mindfulness reach far beyond immediate reduction of symptoms. One might experience a change in outlook which may bring peace and a sense of resolution at end of life to those who struggle with typical psychotherapy and counseling techniques.

Due to the increasing prevalence and seeming effectiveness of mindfulness as adjunctive treatment in a variety of healthcare settings, it is appropriate to question: How might mindfulness incorporated within the unique setting of hospice and integrated into a music therapy conceptual framework? Could a mindfulness approach better address certain needs than current standard hospice music therapy approaches? What precedent, if any, for this type of approach exists in the literature already? What further work needs to

be done in order to fully integrate mindfulness into hospice music therapy in an informed, evidence-based, protocol?

For the purposes of this research, a thorough examination of relevant literature will be performed. Relevant topics include: mindfulness practices in music therapy, mindfulness in hospice/palliative care, mindfulness and pain management, body awareness and pain management, body awareness in movement therapy, approaches in therapy and music therapy, and the eclectic nature of therapy in order to reach individual needs of clients. Other relevant topics and research areas may come up throughout the course of the research. Relevant research articles will be evaluated for relevancy of their components as they relate to thesis topic. Upon completing literature review, information will be synthesized into a conceptual framework for mindfulness-informed music therapy practice.

CHAPTER 2

HOSPICE AND HOSPICE MUSIC THERAPY

Overview of Hospice and Palliative Care

Hospice care is holistic care that is tailored toward end-of-life and the specific needs of people who are at the end stage of life (Walker & Adamek, 2008). Typically, a person may be recommended for hospice care by a physician who has determined the patient has less than six months to live. Admittance to hospice care entails discontinuing any curative or life-saving treatment and directing efforts toward symptom control. Hospice care may occur in an inpatient facility or at a person's home (Walker & Adamek, 2008).

Palliative care is a term that is often synonymous with hospice, and simply refers to the treatment of symptoms often associated with serious illness (Walker & Adamek, 2008). While hospice and palliative care organizations both provide services to people with terminal diagnoses and people nearing end of life, they may differ in their responsibilities, philosophy and services rendered. Palliative care may occur concurrently with primary treatment of a serious illness, whereas hospice is typically offered to people who have stopped treatment of the disease. Any hospice that wishes to be deemed Medicare-certified must follow specific guidelines set by the Center for Medicare and Medicaid Services (CMS) for the level of care provided in order to obtain certification (Hilliard, 2005). According to an overview provided by the CMS, hospice care addresses the patient's medical, physical, psychosocial and spiritual needs. Hospices which meet this level of care then charge a per diem fee which includes all services (2012). Palliative care organizations may provide similar services, but they are reimbursed by fee-for-

service and thus the organization is not structured in the same way as hospice (Hilliard, 2005). The general goal of palliative care is to relieve suffering, and therefore it is typically applied by hospice as a part of the overall treatment structure.

Hospice Music Therapy

Before addressing the specific field of hospice music therapy, it's important to address what music therapy is and how it is defined. AMTA defines music therapy thusly:

Music Therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. Music Therapy is an established health profession in which music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals... Through musical involvement in the therapeutic context, clients' abilities are strengthened and transferred to other areas of their lives (2018).

The Certification Board for Music Therapists (CBMT), on the other hand, presents this definition:

Music therapy is the specialized use of music by a credentialed professional who develops individualized treatment and supportive interventions for people of all ages and ability levels to address their social, communication, emotional, physical, cognitive, sensory and spiritual needs (2011).

Additionally, the implementation of music therapy typically follows a particular procedure of (1) Assessment, (2) Planning, (3) Implementation, (4) Evaluation and

Documentation and (5) Termination. Depending on evaluation results, the therapist may either return to planning or implementation after evaluation. Once treatment goals that were established in assessment are met, the therapist continues to termination. Each of these areas carries a specific set of AMTA competencies related to their execution. Some competencies that may be specifically relevant to hospice include:

- 13.1 Recognize, interpret, and respond appropriately to significant events in music therapy sessions as they occur.
- 13.2 Provide music therapy experiences that address assessed goals and objectives for populations specified in the Standards of Clinical Practice.
- 13.5 Utilize therapeutic verbal skills in music therapy sessions.
- 13.6 Provide feedback on, reflect, rephrase, and translate the client's communications.
- 13.7 Assist the client in communicating more effectively.
- 13.8 Sequence and pace music experiences within a session according to the client's needs and situational factors (2018).

Some of the competencies are rather broad. For example, competency 13.1 makes no attempt to describe what the *appropriate responses* may be. It would be impossible to contrive all of the possible scenarios in which a music therapist would have to respond. This is where the training and experience of the clinician translate into the necessary skills to address the competency.

Hospice music therapy is an established sub-field within music therapy with many active music therapists. As early as 1974, one of the early proponents of hospice, Elisabeth Kubler-Ross, recognized the importance of music in a hospice environment to

engage with patients who are withdrawn at the end of life as. Similar to the effect that music can have with adults with Alzheimer's Disease (AD), music can engage adults in a hospice setting into a beneficial conversation centered around reminiscence. Additionally, many people with end stage Alzheimer's are receiving hospice services. A life review that includes the music of important life events may help hospice patients achieve a feeling of resolution before passing (Ando, Morita, Okamoto, & Ninosaka, 2008). The playing of preferred music that the patient would have enjoyed at various points of their life can trigger reminiscence which can be guided by the music therapist to help the patient achieve a measure of life satisfaction (Walker & Adamek, 2008). As hospice music therapy has grown, music therapists in hospice work have focused on helping their clients improve their spiritual wellbeing, pain management, quality of life, facilitating communication, and to decrease anxiety. Hospice music therapy is unique to many other music therapy practices, since most populations served are in active treatment programs with aims to improve, restore, change behavior, or make measured gains towards health and wellness, depending on the needs and abilities of the client or patient. In hospice, the practitioners do not treat with the intent of rehabilitation or to change behavior. It may be a goal to bring about some change in the client insofar as the change improves quality of life for the patient, it is directed by the patient, and is feasible within the patient's remaining time. Ultimately the goal is to provide the highest possible quality of life and a 'good death.' Weisman initially introduced this concept as appropriate death and refers to the death that people would choose for themselves if they truly had a choice (1988). Each person's death experience is highly individualized and as such hospice music therapy treatment and hospice treatment must be individualized.

Communication is an essential aspect to a person's psychosocial well-being and is another aspect of functioning that tends to decline with age. Communication may be restricted by several factors that are common in hospice settings depending on the unique diagnosis. Some neurological conditions which may restrict or prohibit typical speech include cerebrovascular accidents or CVAs (sometimes referred to as stroke-induced aphasia), Amyotrophic Lateral Sclerosis (ALS), Multiple Sclerosis (MS), and Huntington's Chorea (Hilliard, 2005). Additionally, speech may be restricted by shortness of breath that is typical with end of life, particularly end stage respiratory disease such as Chronic Obstructive Pulmonary Disease, lung cancer or pneumonia. To further complicate the issue of communication, hearing typically declines with age which may make discerning speech difficult. Finally, speech may become nonfluent due to cognitive decline and primary progressive aphasia related to AD or end-stage dementia. In all these cases, music therapy can have a uniquely beneficial effect.

In many cases where communication has been impeded, the music therapist facilitates therapeutic interaction between the hospice patient and their family. A music therapist may achieve this in a number of ways. A live music experience involves engaging both the therapist and patient in active music making together. This method is preferred when the patient is capable of manipulating instruments or utilizing their voice in any way. The therapist may involve the patient's family in a group songwriting experiential where the family discusses pleasant memories through songwriting. In other cases, the patient may be able to express themselves through the use of instruments when speech is not possible. However, in the cases where the patient is not capable of manipulating instruments it may be necessary for the music therapist to utilize a receptive

approach. A receptive approach is defined as the therapist providing music for the purpose of active or passive listening for the patient and possibly their family.

Due to the fact that the perception of a "good death" is often directly related to being pain free and comfortable, one of the primary goals of hospice care is to provide appropriate and effective pain management. For many diseases such as cancer, the experience of pain increases as the disease progresses further and therefore more frequent and intense pain management interventions are often required as the patient nears end of life (Goldberg, Mor, Wiemann, Greer, & Hiris, 1986). In clinical pain management, pain is typically categorized into acute (due to an injury), chronic (from chronic or terminal illness such as cancer), breakthrough (pain which erupts, or breaks through a long-lasting painkiller) or episodic (Burger, 2001).

Music therapy has been proven as an effective adjunctive therapy in the area of pain management alongside pharmacological interventions. In addition to the endogenous responses of the body to music, music therapy has been proven effective in the area of pain distraction. Taylor hypothesizes that "because all sound stimuli are accessed by all parts of the brain, sound as music affects pain perception through its direct effect on the somatosensory cortex..." (2010, p. 135). The nervous system can only process a finite amount of simultaneous information, and perception of music, especially preferred music, as a distraction may block out some other signals such as pain. There also seems to be evidence that live music is more effective than recorded music to this end (Taylor 2010, p.152).

Anxiety, depression, and many other symptoms seen in hospice have an interconnected nature. Symptoms of anxiety and depression have been shown to increase

the perception of pain (Woo, 2010). Because music therapy interventions have been shown to decrease anxiety in hospice patients, it follows that it may also reduce perception of pain. In addition to increasing perception of pain, anxiety may trigger dyspnea, or shortness of breath. This in turn may trigger further anxiety, thereby worsening the shortness of breath. Such a cycle often requires medical or pharmacological intervention, but can be interrupted by non-pharmacological interventions such as music therapy (Hilliard, 2005). Due to the effectiveness of music therapy interventions in hospice patients experiencing anxiety, music therapy may also reduce the patient's perception of pain. Due to the interconnected nature of pain, anxiety, depression, and quality of life, the music therapist affects all these areas with targeted interventions.

Death represents an inherent degree of uncertainty, which often manifests itself through a need for spiritual experience. Many people fulfill this need in a hospice setting through counseling with a chaplain or engaging with others in their own religious community. In some cases, a patient may not fit inside a religious mold and may wish for support outside of traditional religious institutions. In the perception of death and anticipatory grief around death, mindfulness may serve a specific need that may address this need for spiritual connection and community.

Empirically Studied Hospice Music Therapy Interventions

Hospice music therapy has been studied in a variety of ways, and the results of the empirical studies have been examined in this section. In appendix A, a table of empirically studied hospice music therapy interventions is compiled and compared. Of particular interest to this study are the prevalence of studies which support the use of

music therapy for reduced perception of pain, increased perception of spiritual support, and for psychosocial support.

Wlodarczyk's study is the only current empirical study to look specifically at music therapy and spiritual support (2007). Wlodarczyk conducted a study with an ABAB format utilizing interventions which consisted of live performance of preferred music, sung and performed improvisation, and patient-selected music for prayer and worship. Results based on a questionnaire of spiritual well-being indicated significant positive differences in visits where music was incorporated (Wlodarczyk, 2007).

There are three primary empirical studies which examined the effect of music therapy on pain perception (Krout, 2001; Hilliard, 2003; Gutgsell et al., 2013). Krout's (2001) study utilized pre- and post-tests to study the effects of playing live preferred music combined with relaxation and imagery experiences on self-reported pain control, physical comfort, and relaxation. Results indicated significant positive differences in all dependent variables. Hilliard's study included measures of perceived control over pain as a part of overall quality of life measures (2003). Hilliard's (2003) study utilized a randomized clinical trial to study the effects of live music designed by music therapists to treat need areas on quality of life and length of life. Results indicated significant improvement in quality of life, but no change in length of life (Hilliard, 2003). Gutgsell et al. (2013) conducted a randomized controlled trial to examine the effects of therapist-guided autogenic relaxation with live music on self-reported pain, consolability, and functional pain on Likert scale. Results indicated significant improvement in self-reported pain in music therapy group (Gutgsell et al., 2013).

There are three empirical studies which examine psychosocial measures (Gallagher, 2001; Hilliard, 2003; Choi, 2010). Gallagher conducted surveys of patients receiving music therapy over time (2001). Results indicated that patients receiving music therapy had increased patient satisfaction over time (Gallagher, 2001). Similar to the measure of pain perception, Hilliard's study of quality of life also included measures of a psychosocial nature (2003). A randomized controlled trial conducted by Choi studied the effect of progressive muscle relaxation combined with live music on anxiety, fatigue, and quality of life in family caregivers (2010). Results indicated significant reduction in fatigue in anxiety in the music therapy group over control groups (Choi, 2010).

The study that was conducted by Choi (2010) seems to indicate that a progressive muscle relaxation is more effective when accompanied by music than when simply performed on its own. Progressive muscle relaxation is similar to a pillar of mindfulness training, the body scan. Therefore, this may indicate that mindfulness training and practice techniques may be enhanced by music and music therapy techniques. In some of these studies, in particular the study by Choi, more information on the precise nature of the intervention is required (2010). In addition, more specific explanation of how music therapy affects the components which affect quality of life may be required.

Psychotherapy Approaches in Hospice

In many ways, the development of music therapy approaches has mirrored the development of psychotherapy approaches. Any aspect of verbal communication employed by the music therapist may be informed by one or many psychotherapeutic approaches, or the interventions themselves may represent an underlying philosophy or theoretical framework. A majority of surveyed psychotherapists, around 40%, reported

utilizing an eclectic approach, or one informed by a variety of established schools of thought (Arkowitz, 1992). In order to understand the many psychosocial aspects of hospice and the myriad ways the music therapist may respond, it may be helpful to explore these various psychotherapy approaches.

Psychodynamic psychotherapy is often the first thing that comes to mind when many people consider the concept of psychotherapy. Sigmund Freud, the forefather of analytical and dynamic psychotherapy, contributed an enormous amount of literature and theory. Psychodynamic approaches place special emphasis on the unconscious and the power of the unconscious to drive behavior (Eagle, 1992). The analytic or dynamic psychotherapist attempts to ascertain the factors which drive the client's unconscious in order to grant insight and ultimately resolution to any conflict.

Behavior therapy emphasizes the importance of reinforcement and learned behavior (Ford & Urban, 1998). Behavior therapy distinguishes between typical and atypical behavior and analyzes the possibility of correcting maladaptive atypical behaviors through reinforcement strategies. Some notable contributors to the field of behavior therapy are Pavlov, Skinner, and Thorndike. Pavlov conducted the renowned experiment with dogs which together with Thorndike introduced the concept of classical conditioning. Skinner built on the concept of classical conditioning to develop operant conditioning (Ford & Urban, 1998).

Cognitive and cognitive behavioral therapy emerged as a response or dissatisfaction with behavioral therapy as a singular modality of therapy (Meichenbaum, 1995). Cognitive therapy introduced the importance of cognition, or thinking, into the framework. Similar to behavioral therapy, cognitive therapy focuses on abnormal or

dysfunctional behaviors, but instead of utilizing operant conditioning to explain these behaviors, it focuses on the power of cognition and the effect that cognition can have on behaviors (Ford & Urban, 1998). Meanwhile, cognitive behavioral therapy combines certain aspects of the two and remains one of the most widespread psychotherapeutic modalities today.

Humanistic therapies, including Gestalt and Existential represent important philosophical questions, and the approach reflects a commitment to a certain belief system and answer to these questions (Patterson & Watkins, 1996). Of significant and primary importance is the belief in self-determination, or the possibility of individuals to choose their paths for themselves. Another of these important beliefs is the possibility of self-actualization which exists within all of us. This was particularly developed by Maslow and refers to the potential to meet certain needs in order to find meaning in life. This possibility is fostered by the therapist in part by another concept of particular importance in the humanistic approach – the 'unconditional positive regard.' This is the demeanor with which the therapist dialogues with the client and responds to issues the client brings up. An unconditional positive regard typically means that the therapist is encouraging, understanding, and empathetic as opposed to judgmental or admonishing (Patterson & Watkins, 1996).

Each of the distinct therapeutic approaches have advantages and disadvantages, and most therapists find a blend which works for them. In psychotherapy, this is referred to as eclecticism (Arkowitz, 1992). For hospice in particular, a blend of approaches may be necessary, though there may be some concepts which are contraindicated for a hospice population. For example, some approaches attempt to alter certain patterns of thinking or

behavior. Given the possibility of limited frequency of engagement with the patient in a hospice setting, utilizing an approach that promotes altering cognitive or behavioral processing is likely not the most effective form of intervention. Utilizing an approach which may take time for effectiveness to be apparent or experienced due to the time that may be required for a "breakthrough" may be not as effective as other therapeutic approaches or may be contraindicative. However, some hospice patients may feel the need to experience some kind of resolution to an internal or interpersonal conflict at the end of life, which a psychodynamic therapist may try to achieve. None of these particular approaches directly addresses the common need for spiritual experience or affirmation toward the end of life. This is a possible area where mindfulness and mindfulness-informed practice may fill a particular niche.

Summary

Hospice music therapy enjoys a rich tradition of effective interventions which address the commonly treated areas in hospice. The areas of anxiety, depression, pain management, psychosocial support and spiritual support are all addressed either primarily or adjunctively by music therapy. Music therapists are increasingly being employed to work in the hospice setting, and the efficacy of hospice music therapy is shown through the numbers of positive quantitative studies. However, as needs and preferences of hospice patients vary, music therapy as a profession must be flexible enough to meet the needs of the individual. Many people are enjoying the benefits of mindfulness and mindfulness-based protocol as treatment for psychosomatic disorders and as preventative treatment. Historically, music therapists have borrowed many ideas from related fields, the most notable being psychology and psychotherapy. Adding new ideas and tools to

music therapists' repertoire is a healthy and necessary practice to ensure the relevancy and efficacy of music therapy in the future.

CHAPTER 3

MINDFULNESS

Mindfulness and mindfulness based therapy are expanding in popular science as well as the therapy world. Mindfulness is becoming popular perhaps partially because of its accessibility—the only thing anyone needs to explore mindfulness is some instruction and the willingness and intention to do so. While many people are exploring mindfulness on their own, there is a strong theoretical and empirical grounding which supports the use of mindfulness based interventions by professionals in clinical settings.

Defining Mindfulness

The term "mindfulness" is the translation typically chosen from the Pali words sati and sampajaña, which refers to bare awareness, clear comprehension, and remembering to pay attention in an abiding way (Shapiro & Carlson, 2017). The Western conceptualization of mindfulness arose from a need to introduce the core concepts of mindfulness as present in Buddhist philosophy in a vessel that is more palatable and digestible to a Western, more science-oriented population.

Mindfulness is a deceptively simple concept and can be difficult to describe to someone who is not familiar with mindfulness practice. Mindfulness has been defined as a "form of nonjudgmental, nonreactive attention to experiences occurring in the present moment, including cognitions, emotions, and bodily sensations as well as sights, sounds, smells, and environmental stimuli" (Baer & Lykins, 2011, p. 335). However, there are a number of core components that have been identified in the literature as key to the operational definition of mindfulness (Bishop et al., 2004). The primary components of mindfulness that have been identified in the literature are self-regulation of attention, an

open and receptive orientation to experience, and an intentional stance toward sustaining and cultivating mindful and caring awareness (Bishop et al., 2004; Shapiro et al., 2005).

The first component that has been identified in the literature is the self-regulation of attention. Self-regulation of attention involves the capacity for sustaining and switching attention. In this context, sustaining can be defined as maintaining focus over a period of time, whereas switching can be defined as the ability to move flexibly between the various components of experience that may demand attention (Bishop et al., 2004). The process of switching within the context of mindfulness practice is often cyclical: focus, mind wandering, recognizing the loss of focus, letting go of the wandering, and finally refocusing (Malinowski, 2013). As Baer and Lykins point out in their definition of mindfulness, attention is focused on present moment experience (2011). Carmody asserts that the three major components of experience are bodily sensations, thoughts, and feelings (2015). As Carmody (2015) notes, these components which make up experience tend to blend together in the beginning years of life. For example, when one feels pain there is typically an emotional reaction to that pain. These are two separate components of experience, but without mindfulness training most experience them synonymously as indistinguishable from one another. Blending of components of experience inhibits the potential for self-regulation of emotion. Carmody then goes on to describe how over time, learning to recognize and distinguish these components of experience allows for greater self-regulation of attention (2015). As mindfulness training progresses through formal and informal practice, this process becomes more effortless underlying the cultivation of what Bishop et al. (2004) describe as a nonelaborative mindful state. This nonelaborative state refers to the inhibition of secondary elaborative processing or the

tendency to "get caught up in the ruminative, elaborative thought streams *about* one's experience and its origins, implications, and associations" (Bishop et al., 2004, p. 232). In contrast, mindfulness involves the direct experience of sensations, thoughts, and emotions as simply events occurring in the present moment within the body and mind.

Although the regulation of attention is important, it is also important to cultivate a particular manner of orienting to experience that is curious, open to experience, and accepting (Bishop et al., 2004). This is another core component of mindfulness. Bishop et al. define acceptance in the context of the ideal orientation of experience as "being experientially open toward the reality of the present moment" (2004, p. 233). Furthermore, it is predicted that adopting this orientation to experience will reduce the instances of cognitive and behavioral maladaptive coping mechanisms (Bishop et al., 2004). In addition to the reduction of maladaptive coping mechanisms, the experience of distress will seem to be less uncomfortable, or the practitioner will experience increased distress tolerance (Bishop et al., 2004). Finally, by approaching the exploration of internal experience with an attitude of curiosity and acceptance, there is increased possibility for internal examination to be accurate and thorough. Bishop et al. refer to this aspect of mindfulness as a "process of investigative awareness" which is predicted to lead to increased ability to distinguish the aforementioned components of experience (2004, p. 234).

The third and final component is intention. A simple way to describe intention is having a reason for practicing mindfulness, whether it be formally or informally. Kabat-Zinn described intention thusly: "Your intentions set the stage for what is possible. They remind you from moment to moment of why you are practicing in the first place" (2005)

p. 32). Shapiro and Carlson (2017) also refer to the range of intentions which practitioners utilize. These intentions range from "self-regulation to self-exploration, and finally to self-liberation and selfless service" (Shapiro & Carlson, 2017, p. 9).

Additionally, these intentions seem to correlate with the outcomes that practitioners achieve—mindfulness practitioners tend to achieve the outcome that is associated with their intention (Shapiro & Carlson, 2017). This revelation puts Kabat-Zinn's quote of intention "setting the stage for what is possible" in sharp relief (2005, p.32). The mindfulness practitioner ultimately controls their destiny through their intention, but the journey of the mindfulness practitioner tends to begin with self-regulation and shift toward self-liberation with growth (Shapiro & Carlson, 2017).

Body Awareness

Body awareness is described by Bien and Didonna as "the foundation of mindfulness" (2008, p.485). It may be described as being aware of external sensations of the body as well as internal biological processes. In scientific terms, a distinction is made between internal and external sensations. External awareness is exteroception, and internal awareness is interoception. For example, being able to feel one's own heartbeat at rest without checking your pulse with touch or an instrument is a standard measure of interoceptive awareness (Garfinkel, Seth, Barrett, Suzuki, & Critchley, 2015). This ability to perceive sensations of the body and accept them non-judgmentally is a foundation of practice in the Mindfulness Based Stress Reduction (MBSR) protocol. MBSR incorporates body awareness through the use of body scans, awareness of breath, sensations, sound, mindful yoga, and mindful walking. Some research indicates that

there is a positive correlation between interoceptive awareness and reduced pain perception, while others indicate no relationship (Farb et al., 2015).

Music and Mindfulness Practice: A Personal Retrospective

Many people find a calling to the helping professions for a personal reason -acalling beyond a simple vocational choice. It's possible that some people are born with an urge to help others, or that it is something which arises out of a personal experience or trial. Although therapists in all fields bring the literature, research, and wisdom of their field, therapists invariably also incorporate their own experience when it comes to their therapeutic practice. One thing that it is important to note, is that it is important to consider and examine a variety of approaches during assessment frequently expanding beyond the preferred theoretical approach of the therapist in order to best meet the needs of the client. Similar to voices in a choir, a therapist's personal approach, or voice, is just one of many and it cannot exist independently of the choir. However, it is the most personal and most intimately understood voice, and perhaps the only one which can truly be shaped and determined. Similarly, one's own mind is the only mind which can truly be navigated, understood, and shaped. For this reason, I am including this section on my own personal experiences in music and mindfulness in an attempt to examine the intricacies of their components.

In my case, music and mindfulness are two aspects of my life which have proven to be highly influential. Of course, my interest in music and helping others led me to music therapy, but my interest in mindfulness seemed only tangentially related to my music therapy practice. However, unwinding the strands that are the components of music therapy and mindfulness has revealed that they are woven from much of the same

material. For example, much of music therapy practice is based on music experiences, which require the cultivation of a non-judgmental mindset both for the client and therapist. This was an important aspect of my development as a music therapist. Having come from a classical background, a judgmental attitude about both my own and others' music was a default mode. This led to a stifled, and for me, ultimately unsatisfactory experience of music. In my experience of mindfulness practice, non-judgment is important though it comes as more of an abstract concept which refers to the way one relates to one's own thoughts. The human journey is full of experiences that many would label 'good' or 'bad.' Often when one labels an experience as 'bad,' this sets in motion the desire for things to be different. This desire can be useful. It has allowed humans to improve our quality of life by certain measures and allow us more leisure time. However, it can backfire with situations that cannot be changed or are unrealistic to change. In these situations, wishing for things to be different can cause further suffering that is unnecessary. By letting go of this wish for things to be different, then I can be free to experience the present moment as it is, rather than through the filters of judgment and bias. Again, this concept is just as important in mindfulness as it is in music. As previously mentioned, attention will inevitably wander during effortful manipulation of attention. There is a critical moment when attention wanders where a judgment may happen about the current situation. By practicing awareness of these judgments and letting them go, then I may be able to avoid the cascading effects of emotions and thoughts that follow judgment. If no degree of mindfulness or awareness is achieved, this will continue in a habitual cycle without any awareness of the processes of the mind or nature of thought.

The non-judgment which happens in the context of music therapy (and perhaps music in general) is more immediate and social in nature. If the therapist is judgmental of a musical phrase uttered by the client, this will inhibit understanding and the relationship with the client. Similarly, if the therapist places undue judgment and focus on their own musical performance, this may result in less perception and understanding of the client. Ultimately, the development of a non-judgmental perception of my own music, and music in general has led to general relief, a receding of the past neuroses associated with music and also a greatly expanded appreciation of all genres of music.

In addition to the importance of non-judgment, music experiences often require the presence of attention in the present moment. Although I was perhaps not aware that this experience was happening at the time, group music performance cultivates and even requires a mindful presence in the moment. This is due to the active listening and participation in the music. Highly focused attention must be kept and maintained, often for hours during practice and performance. This aspect of group music experience is a big part of what drove my interest. This component of mindfulness, the focus of attention on the present moment is helpful in the performance of music, but also helpful for navigating the difficulties of life.

Many musicians are well acquainted with the spectrum of intentions that may inform a reason for playing music at all. Whether a musician plays for adulation and the aggrandizement of their own ego, to enrich the lives of others, or to express something which can't be put into words, they may reach a high level of precision and proficiency with any of the above reasons. However, in my experience these intentions may not result in a similar amount of satisfaction. Throughout the course of my life I have played for all

these reasons, but what I found to be the most fulfilling was when I played to communicate with others on a different plane from verbal communication. In other words, it was a way of being connected with others. I believe this is a big part of what mindfulness practice is about, understanding our inherent interconnectedness and embracing rather than struggling with it.

In American novelist David Foster Wallace's (2009) renowned essay/commencement speech "This is Water," he explores the adage 'the mind is a powerful tool but a terrible master.' As Foster Wallace says in his speech "This, like many clichés, so lame and unexciting on the surface, actually expresses a great and terrible truth" (2009). I believe this refers to processes of the mind that could be described as negative self-talk. It may also refer to feeling out of control of the direction of one's own thinking. A fierce commitment to the truth may inevitably lead to situations where one's own value is thrown into question. This type of situation can certainly feel degrading and can lead to a sense of worthlessness. Foster Wallace then asserts that many suicides are an effort to free oneself from the terrible master (2009). Perhaps what Foster Wallace is referring to here is the tendency of an unattended mind toward depression. I would argue that achieving a state of Mindfulness is another escape from this problem of feeling enslaved by one's own mind. Becoming aware of the repetitive and often subconscious processes of the mind entails the possibility of becoming freed from those processes. Further, being aware of the processes of the mind enables this to happen free from the confines of prejudice and judgment. This is another essential aspect to being mindful—approaching experience with an accepting, non-judging mind. Once you are

able to do this, it may be possible to truly *pay attention* and experience the sublime breadth of experience life has to offer. As author Franz Kafka excellently put it:

You need not do anything. Remain sitting at your table and listen. You need not even listen, just wait. You need not even wait, just learn to be quiet, still and solitary. And the world will freely offer itself to you unmasked. It has no choice, it will roll in ecstasy at your feet (2006, p.109).

CHAPTER 4

TOWARD A MINDFULNESS-INFORMED MUSIC THERAPY

Mindfulness Based Interventions

There are a number of treatment philosophies which have implemented mindfulness as a core principle and could be grouped with explicit mindfulness based implementations. Mindfulness-based stress reduction (MBSR) was the first and currently the most widespread. MBSR is an 8-week program in which participants meet on a weekly basis for 2.5 to 3 hours at a time, with a 6-hour silent retreat between the sixth and seventh sessions. MBSR participants are instructed to complete homework in between weekly guided sessions, amounting to 45 minutes per day. Mindfulness practices that are taught during the MBSR program include: body scan, seated meditation practice, walking meditation, gentle yoga and home informal practice (Shapiro & Jazaieri, 2015). During the group MBSR sessions, the instructor provides instruction on the mindfulness practices through modeling and gentle instruction. The instructor also offers the opportunity for participants to share their experiences and endeavors to create a supportive, collaborative environment (Shapiro & Carlson, 2017). The MBSR protocol was developed by mindfulness pioneer Jon Kabat-Zinn who paved the way for the therapeutic application of mindfulness in the west through the development of the mindfulness based stress reduction protocol (Siegel & Germer, 2009). His introduction to mindfulness was based on the teachings of Buddhist monks, notably the Vietnamese teacher and activist Thích Nhất Hanh.

Similar to MBSR, mindfulness-based cognitive therapy (MBCT), synthesizes mindfulness practice with cognitive behavioral therapy techniques. Cognitive behavioral

therapy (CBT) is a widespread mode of psychotherapy whereby the therapist works with the client to help them understand how their thoughts relate to their actions. Mindfulness enhances this process by helping the client to become aware of their thoughts and thought processes. MBCT was developed to address relapse in people with depression and borrows a significant amount from MBSR. Some practices from MBSR which are also done in MBCT include: the raisin exercise, body scan, sitting meditation, walking meditation, and yoga. Similar to MBSR, MBCT is also conducted in an 8-week session, though typically with fewer participants. In contrast to MBSR, MBCT is conducted by a licensed professional that is qualified to practice psychotherapy (Baer, 2014). Research indicates that MBCT is highly effective at managing depression co-morbid with chronic pain (de Jong et al., 2016).

Towards a Mindfulness-Based Music Therapy: A Review of the Current Literature

In Buddhist practice, some differentiate between various methods of practice. Without going into the specific historical and religious connotations to these differences, they are helpful because they represent a real difference in mindset and intention. Similarly, Siegel, Germer, and Olendzki noted the importance of differentiating between types of mindfulness based implementations in psychotherapy on a spectrum, ranging from implicit to explicit (2009). It will be helpful here to explore the various ways music therapy and psychotherapy have been examined in the current literature sorted within this construct ranging from implicit to explicit.

Implicit practice is the base and foundation of the spectrum. The application of mindfulness practice which would be on the side of implicit practice is an approach which focuses on self-betterment and relief primarily for the therapist through meditation

practice. This could be equated to a mindful practice for one's own personal development (Siegel et al., 2009). In terms of music therapy, one might call this 'mindful music therapy' in that the practitioner is using mindfulness for themselves while practicing as a therapist but is not about incorporating mindfulness techniques into their interventions. There are implicit benefits to the therapist's work by practicing mindfulness in this way. The therapist can implement mindfulness practice by meditating prior to sessions or throughout the day in order to maintain a mindful, non-judgmental state. While this is the most basic level of mindfulness practice, incorporating it into music therapy certainly advances the level of practice. Healthcare practitioners are especially at risk for stress (Shapiro & Carlson, 2017) and there are increasingly frequent instances of research which focus on the positive effects of mindfulness practice for healthcare practitioners (Shapiro & Carlson, 2017).

One of the first and most cited studies which addresses stress for healthcare practitioners was a randomized trial by Shapiro et al. (2005). The study examined the effect of a standard 8-week MBSR program on healthcare professionals actively engaged in clinical practice against a wait-list control (Shapiro et al., 2005). Results indicated that MBSR group experienced reduced perceived stress and burnout in addition to increased life satisfaction and self-compassion compared to wait-list control (Shapiro et al., 2005). The finding that mindfulness training increases self-compassion in currently practicing healthcare professionals is especially important. Shapiro & Carlson noted that research indicates self-compassion to be a predictor of patient compassion, as well as an essential aspect of effective therapy (2017).

A different yet interesting paper was a pilot study deploying an online mindfulness intervention to reduce caregiver burden (Tkatch et al., 2017). The authors designed an 8-week intervention that was a combination of MBSR and psychoeducation with an emphasis on self-care. Results indicated via pre- and post-test that the interventions significantly improved mental health and significantly reduced perceived stress, anxiety, loneliness, and caregiver burden (Tkatch et al., 2017). There is some differentiation between caregivers and healthcare professionals in that caregiver implies an informal, unpaid, untrained person that is usually a family member. However, because caregivers often face similar struggles as healthcare professionals (compassion fatigue, stress, burnout) this study may indicate promising prospects for online deployment of mindfulness based interventions for therapists.

An article which provides a perspective on mindfulness practice by caregivers in a hospice setting is, "Mindfulness in Hospice Care: Practicing Meditation in Action" offers qualitative analysis of participants who work in hospice care and their work of mindfulness practice in this space (Bruce & Davies, 2005). In this study, Bruce and Davies interviewed, interacted with, and worked alongside caregivers and community volunteers at a 'Zen hospice' where meditation is regularly practiced among caregivers (2005). The caregiver participants described their care of patients as a crucial aspect to their own mindfulness practice. For example, one participant noted the benefit of practicing mindful awareness when performing simple yet intimate tasks, such as bathing patients, walking through the facility, or giving massage. Setting an intention is also of significant importance to the practitioner—through consciously setting an intention before entering work or interacting with patients, the practitioner may clear their mind of

superfluous thoughts, motivations, and intentions and focus on their true goal, which is to relieve suffering (Bruce & Davies, 2005).

A mixed-methods study by Keane examined how mindfulness practice and mindfulness study affected psychotherapeutic work (2014). Keane recruited a number of therapists to participate based on a meditation practice of at least twice per week.

Qualitative responses from the study indicated therapists felt benefits associated with their mindfulness practice in a number of areas, including: increased attention, self-awareness, and affect tolerance. Conversely, some therapists reported challenges associated with practicing psychotherapy with heightened awareness. For some participants, increased self-awareness translated into increased emotional sensitivity to the point of discomfort. Other participants described past traumas resurfacing more freely during the study (Keane, 2014). The presence of challenges for the therapists in the study indicates the importance of guidance from a trained mindfulness practitioner. As the therapist encounters such challenges, they also gain insight in how to address these challenges when implementing mindfulness techniques into their own practice.

Fortney, Luchterhand, Zakletskaia, Zgierska, and Rakel conducted an empirical study of the effect of an abbreviated mindfulness intervention on job satisfaction, quality of life, and compassion in primary care clinicians (2013). In this study, the abbreviated mindfulness intervention is a shortened version of the MBSR protocol. The study resulted in significant differences in all measured variables with the exception of the 14-Item Resiliency Scale (RS-14). The most dramatic improvements over time were seen in the Depression Anxiety Stress Scales (DASS-21) where reduction of depression, anxiety, and stress continued over the course of 9 months after the intervention (Fortney et al., 2013).

Mindfulness-informed therapy. Another level of practice within Siegel et al.'s model of mindfulness in psychotherapy that is further up on the spectrum utilized mindfulness research and scholarship to inform interventions which may target a variety of areas (2009). This corresponds to a music therapy practice which incorporates mindfulness into interventions in order to increase their effectiveness or to introduce the induction of a mindfulness state in order to achieve therapeutic goals. Siegel et al. note that "the therapist's understanding of psychopathology and the causes of human suffering change as a result of observing his or her own mind in meditation practice" (2009, p.26). For example, a therapist may gain insight from their practice into the components of experience in a way which allows them to address this topic with a client either through direct interventions or helping a client to perceive these components. If a short mindfulness state is induced with a client, the goal in such an experience may be the development or education in mindfulness skill that correspond to common therapeutic goals. These typical goals could be identification of emotions, identification of negative self-talk, or even the temporary relaxation that a mindfulness state can often afford.

A qualitative study published in the Australian Journal of Music Therapy addressed some ways that four music therapists were incorporating mindfulness-informed music therapy or speculating on the usefulness of mindfulness-informed music therapy (Medcalf, 2017). Although no specific interventions were mentioned, several common themes that arose between the participants were specified and discussed in the study. These themes were then distilled into five distinct "Global Meaning Units" (GMUs) which serve as subsections for discussion. These subsections that arose in the paper were "the integration of music and mindfulness, client empowerment, benefits of practitioners'

personal relationship with mindfulness, positive client outcomes, and the parameters of a mindfulness approach" (Medcalf, 2017, p. 54). Of particular interest to the development and understanding of mindfulness informed music therapy is the GMU of the integration of music and mindfulness. A prominent theme in the integration of music and mindfulness was the potential for music to engage attention and serve as an initial focus or 'hook' for mindfulness practice (Medcalf, 2017). Additionally, the potential for music making *as* mindfulness intervention was mentioned in this GMU. Improvisation in particular was identified as a mindfulness-supporting activity by one therapist:

I look at improvisation for instance, and non-judgement is quite important ...It's all about acceptance, that you can accept things as they are and in the moment as they unfold, so music does all that. You may want it [the music] to be different but then if you have a mindful attitude you can go yeah, 'I recognize that I want it to be different but it's ok' and you keep going ... So, in that sense, the actual act of making music is almost like a mindfulness act (Medcalf, 2017, p. 57).

Participants echoed what has been said in the literature regarding the usefulness of mindfulness for the therapist, particularly in encouraging self-compassion and compassion for the client (Medcalf, 2017).

Although it is encouraging to see ideas on how mindfulness informed music therapy are being practices and may emerge, it would be helpful to see more specific examples of its implementation. For example, in GMU 4 "Positive Client Outcomes" the therapists seem to discuss positive results based on some form of mindfulness training. How is this training structured? What exactly would the prompting of mindfulness

attitudes during mindfulness informed interventions look like? How would the therapist broach the concept of mindfulness? Is mindfulness sometimes left undiscussed?

Mindfulness-based therapy. Finally, a third level of practice that is furthest toward the explicit end of the spectrum seeks to utilize an understanding of mindfulness scholarship and literature, as well as one's own mindfulness training and understanding to develop a practice with the intention to develop mindfulness in others. In Siegel et al's model of mindfulness in psychotherapy, this category is on the explicit side of the spectrum (2009). This is what could be described as a "Mindfulness-Based Music Therapy." Professor Teresa Lesiuk of the University of Miami and has conducted research in this area. One article "The Development of a Mindfulness-Based Music Therapy Program for Women Receiving Adjuvant Chemotherapy for Breast Cancer," by Lesiuk (2015) is a pilot study which explores the implementation of such a program with a group of women receiving chemotherapy for breast cancer. In the author's implementation of mindfulness into a four-week MBMT program, they chose mindfulness attitudes to be the focus of each week's session. The mindfulness attitudes chosen were, non-judging, beginner's mind, suspending judgment, and acceptance and letting go (p. 3). The author then chose music therapy interventions which were intended to enhance or develop these attitudes. Non-judging corresponded to music listening and writing, beginner's mind corresponded to playing familiar songs with novel instruments, suspending judgment corresponded to a rhythmic music playing activity, and acceptance and letting go corresponded to music-assisted relaxation and scripted guided imagery. This study is novel in explicitly introducing mindfulness into music therapy, and it incorporates the highly studied and effective MBSR program.

Mindfulness and Pain: Empirical Research

Similar to the examination of empirically studied hospice music therapy interventions, an inventory was taken of empirically studied mindfulness interventions. The table in appendix B represents interventions that have been studied specifically for pain management and the effect of mindfulness on pain and the perception of pain.

Across the board, all mindfulness studies regarding pain management and pain perception seem to indicate that mindfulness reduces the effect of pain catastrophizing, or the effect that can happen where pain can seem to spiral out of control (Rosenzweig, 2010; Brown, 2013; Schütze et al., 2014; Petter, 2014; Feuille & Pargament, 2015; Poulin et al., 2016). This could also be described simply as suffering about suffering. Through mindfulness training, there is a separation which may take place between the sensation, and the feeling about the sensation (Carmody, 2015).

It has been established that mindfulness interventions fall on a spectrum, and most of these mindfulness interventions lie on the explicit end of the spectrum because of the mindfulness training that is usually required to attain the benefit from these interventions. However, the studies by Schütze et al. and Poulin et al. indicated that trait mindfulness correlated with lower pain catastrophizing (2014; 2016). Additionally, the study by Petter indicated that induction of a mindfulness state could result in acute reduction of pain catastrophizing (2014). As this thesis evolved, it expanded to include not only these interventions which reduce pain catastrophizing through mindfulness training and interventions, but also the previous interventions which might lead the music therapist to this level of practice. These interventions were included to be represented as points on the

spectrum of mindfulness interventions and strengthen the overall case for the efficacy of mindfulness interventions.

Laying a Foundation: A Conceptual Framework for Future Development

Although there is some precedent for a mindfulness based music therapy, Lesiuk's study related to MBMT was a pilot study and focused on the development of an MBMT protocol with cancer patients (2015). Since this framework is being developed for people receiving end-of-life care, further work needs to be done regarding theoretical choices and a few important aspects on how mindfulness could be implemented into a MBMT protocol in the future. Some of the aspects that haven't been addressed are the importance of training in the deployment of mindfulness based interventions (MBIs), the potential for adverse effects in mindfulness-based protocols and interventions, and the development of mindfulness knowledge and theory in a music therapist or music therapy student. This thesis does not aim to establish a protocol or make recommendations for hospice music therapists to practice, but rather establish the groundwork on which a relationship between the fields of mindfulness and music therapy can grow, and potential ways they may work together in hospice settings in the future. Any interventions mentioned are purely speculative. It may be the case that the constructs and conceptual framework for this relationship have some implications for the way mindfulness and music therapy relate to other populations as well.

In developing this conceptual framework, one of the most important factors is to understand the difference between a conceptual framework and a protocol. A protocol typically implies a specific procedure or list of actions to be performed in order to produce a desired outcome. Within the context of mindfulness, MBSR could be described

as a protocol. The structure of the program occurs in a specific order, and the way instruction is given is very specific and precise. There is a definite benefit to this structure—programs can be deployed on a large scale with relative consistency between facilitators. Because of this, there is increased likelihood of consistency of outcomes across multiple programs. Additionally, a conceptual framework is a larger space inside which clinicians and researchers can operate. A conceptual framework provides a way to understand theory and practice. Protocols may develop inside of a framework, or trained clinicians may operate within their scope of practice, inside of a conceptual framework.

The range of levels of practice, ranging from implicit to explicit that is defined by Siegel et al. (2009) are helpful in organizing levels of practice, including how they may look in a mindfulness-informed music therapy framework. These levels are helpful not only in speculating how a practice might look, but also establishing how much mindfulness training may be necessary in each level. Generally, as the level of practice increases from implicit to explicit, this also increases the level of training required in the application of mindfulness based interventions.

The first of these levels was that of 'implicit practice,' that is the practicing of mindfulness by the therapist for self-care and to improve the quality of their work. Some of the benefits of a therapist practicing mindfulness could include increased compassion and empathy for patients, reduced perceived fatigue and compassion fatigue from therapist, and improved sense of well-being (Shapiro et al., 2005; Bruce, 2005; Fortney et al., 2013; Keane, 2014). The importance of the health of caregivers cannot be overstated as it has a rippling effect on everyone the therapist interacts with. It could even be said that the practice of mindfulness by the therapist is the foundation upon which following

practices must build. This idea of forming a foundation upon which other practices are built is mirrored in the development of a music therapist; for example, every music therapist's journey begins with the practice of a musical instrument and the development of their own musical style. It follows, therefore, that this is the starting point for music therapists who wish to utilize mindfulness-based interventions.

If the range of implicit to explicit practice is understood as a spectrum, there may be another level of practice in between implicit (for the therapist) and middle (mindfulness-based interventions) which utilized concepts from mindfulness without necessarily being mindfulness based. Interventions in this level would not include the induction of a mindfulness state or the training of mindfulness as a practice. In this way, some concepts and components of mindfulness could be employed by a trained clinician that has begun their own mindfulness practice. This delineation could be described as mindfulness informed and could involve abstract concepts without the risks and potential adverse effects associated with the induction of a mindfulness state. For example, one of the most important aspects to end of life for patients in hospice is the ability to maintain autonomy for as long as possible, which also corresponds to a feeling of a sense of purpose. Depending on their level of functionality, music therapist could encourage a hospice patient to utilize musical expression to set an intention for their day as a potential intervention. This could allow for the autonomy that many patients desire while understanding the limitations of many hospice patients. This is similar to methods that a therapist or caregiver might employ for themselves in the most implicit level of practice. Once a therapist has practiced this for some time, they may be prepared to guide others in this.

The next, more explicit level of recommended mindfulness based intervention is that which aims to induce a mindfulness state or encourage beneficial mindfulness attitudes. Beginning at this level, it is necessary to include assessment procedures endemic to mindfulness based interventions as the application of MBIs may lead to adverse effects. Notably, those who are experiencing intense emotional reactions may have these exacerbated when attention is brought inwards. Additionally, pain in specific parts of the body may be brought to the forefront during a mindfulness exercise. While this may not indicate a positive presence of mindfulness or mindfulness interventions in hospice, because of the nature of hospice music therapy there may be room for these interventions to co-exist. For example, a music therapist with necessary competency in mindfulness based interventions could identify when a patient is having an adverse reaction and return attention to preferred music at this point. One mindfulness attitude which may be beneficial to cultivate in hospice is that of acceptance or non-judgment. Targeted interventions which promote acceptance and non-judgment may ease the anxiety and pain associated with the anticipatory grief that is common in hospice patients. Another possible benefit to mindfulness interventions which support acceptance is that the therapist need not seem overly instructive or overbearing by simply encouraging the concept of acceptance through skillful intervention design. Finally, the therapist may utilize combined music and mindfulness experience to induce a short mindfulness state. One way to incorporate such an experience is to have a patient play a drum in time with their heartbeat. The therapist may need to help facilitate finding the correct tempo, but this encourages core mindfulness aspects of interoceptive awareness into a concrete, musical focus. After a heartbeat tempo is found, there may also be room to construct

expressive music around it. It is important that initial attempts with the patient are individual and relatively short. If the patient reports any amount of discomfort or agitation, it is recommended that such interventions are discontinued. However, if the patient is interested in learning more and the therapist is able to teach, that may be an avenue they could explore together.

In the explicit side of the spectrum, where the clinician is teaching mindfulness practice as clinical intervention, the highest level of mindfulness specific training would be required. A scenario that is purely the teaching of mindfulness would also not necessarily be practiced by a music therapist as it would be outside their scope of practice simply because of the absence of music. It would be possible for a music therapist to also be a trained mindfulness facilitator, but these would most likely be two separate practices. However, if we are looking at something that is just below this in the implicit to explicit spectrum, this mode of practice would be similar to what was described in Lesiuk's pilot study (2015). However, this study differs from the type of work that would primarily be done in hospice. First of all, they are both focused on group protocol and interventions, whereas hospice is typically individual. Additionally, it's difficult to compare the work done in Lesiuk's (2015) study to the development of a conceptual framework for hospice music therapy, as the populations handled are slightly different. Lesiuk's study worked with women who were receiving chemotherapy for breast cancer, but were expected to recover (2015). Patients receiving hospice care have a different set of goals associated with their treatment that revolves primarily around comfort (Vendlinski & Kolcaba, 1997). Any program such as MBSR which follows a specific trajectory over a set period of time requires further research before it can be adopted

within the context of a music therapy protocol. This is because a hospice patient's remaining life-span is not necessarily certain, and treatment protocols which may get better before they get worse would be unfortunate if a patient passed away before seeing any actual benefits.

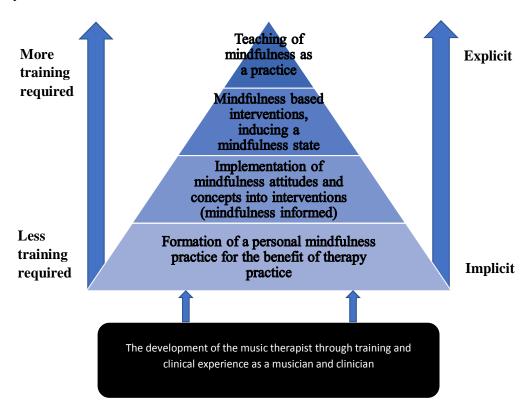


Figure 1. Graphical representation of conceptual development of a music therapist into a mindfulness-based clinician.

CHAPTER 5

DISCUSSION AND QUESTIONS

The theoretical research in both mindfulness and music therapy indicates a promising future for integrating the two into a combined theory. However, there may also be challenges and limitations associated with implementing mindfulness-based practice into music therapy. For example, a central aspect to music therapy is often the production of sound and many standard mindfulness-based interventions involve practice with stillness and silence. It is unclear whether the silence is necessary to achieve many of the associated benefits of programs such as MBSR. However, there are ways that music production and listening can be mindful experiences given the music therapist has sufficient training and depth of mindfulness practice to draw out such experiences. There may also be much to draw from in the areas of the body's biological rhythms and how music therapy can be used as a focus for awareness of these rhythms.

One question to be addressed is the degree that mindfulness-informed and mindfulness-based interventions may be feasible when working with adults with AD and dementia. Churcher Clarke, Chan, Stott, Royan, and Spector conducted a pilot study to determine the feasibility of mindfulness interventions with a dementia population (2017). Initial results for the program devised by the authors were promising. Unfortunately, some extraneous variables (such as the playing of music) were included, which makes it difficult to determine if the outcomes were due to the mindfulness interventions or the music.

As trends in mental health adapt to include new treatment modalities in order to most effectively treat a broader spectrum of individual, music therapy as a practice

should also adapt to include relevant concepts and practices from other fields.

Developing a conceptual framework for mindfulness and its method of implementation would lead to an increased number of tools available for music therapists. In particular, music therapists working in hospice settings may benefit from the research. In order to further develop both mindfulness and any attempt at mindfulness-based music therapy, further research and quantitative study is recommended. Experimental tests of specific interventions may be tested, but even before these interventions can be accurately developed, correlative studies of the relevant dependent variables may be required to ascertain the potential effectiveness of such interventions. Qualitative research may also be required to attain insight into the larger picture of the effects of mindfulness-based and mindfulness-informed interventions.

Due to the apparent connection between mindfulness and body awareness, it may be interesting to study the connection between body awareness, or interoceptive awareness and body image/body satisfaction. Issues such as body image may have large implications for overall quality of life, an important need for hospice patients (Hilário, 2016). Mindfulness research seems to indicate based on neuro-imaging that increased interoceptive awareness results in decreased levels of self-evaluation (Farb, 2015). Another important correlation to be studied in the context of hospice work may be the relationship between body image and quality of life/feeling of self-worth. It may seem that this relationship would be self-explanatory, but many of these relationships are often ignored in psychological scholarship (Hilário, 2016). However, there is some research study by Hilário which takes a qualitative approach to understand the experiences and perceptions of people nearing end of life as they relate to body image (2016). The

findings indicate that weight, hair, and usefulness seem to play an important role in body image perception toward end of life. It also seems to be the case that a negative perception of these factors lowers quality of life, (Hilário 2016).

Given the importance of spiritual support in the hospice setting, it would also be valuable to examine the degree to which patients perceive mindfulness interventions to be spiritually supportive. There is a study which seems to indicate that music therapy is associated with increased perception of spiritual support by Wlodarczyk (2007). Due to the individualized nature of spirituality, and the adaptability of mindfulness, mindfulness or mindfulness-based interventions could be utilized to apply general prayer that is tailored to individual religious preferences.

Conclusion

Both music therapy and mindfulness are effective modalities of treatment in a variety of settings with a significant number or quantitative studies confirming their efficacy. Additionally, qualitative research in both fields provides insight on the components and mechanisms of each. Through the understanding of these components and mechanisms, a potential relationship has been discovered, and a conceptual framework has been devised, detailing a possible way that music therapists may interact with mindfulness practice. It may be that at some point in the future, music therapists will study mindfulness as an aspect of their foundational training. This would ultimately benefit the field and all clients who receive music therapy.

REFERENCES

- American Music Therapy Association. (2018). Retrieved April 11, 2018, from http://www.musictherapy.org/
- Ando, M., Morita, T., Okamoto, T., & Ninosaka, Y. (2008). One-week Short-Term Life Review interview can improve spiritual well-being of terminally ill cancer patients. *Psycho-Oncology*, *17*(9), 885-890.
- Arkowitz, H. (1992). Integrative theories of therapy. In D.K. Freedheim (Ed.), *History of psychotherapy: A century of change* (pp. 261-303). Washington, DC: American Psychological Association.
- Baer, R. A. (2014). Introduction to the core practices and exercises. In *Mindfulness-Based Treatment Approaches (Second Edition)* (pp. 3-25).
- Baer, R. A. (2006). Mindfulness Training as a Clinical Intervention: A Conceptual and Empirical Review. *Clinical Psychology: Science and Practice*, 10(2), 125-143. doi:10.1093/clipsy.bpg015
- Baer, R. A., & Lykins, E. L. M. (2011). Mindfulness and positive psychological functioning. *Designing positive psychology: Taking stock and moving forward*, 335-348
- Bartley, T. (2012). *Mindfulness-based cognitive therapy for cancer: gently turning towards*. Malden, MA: Wiley-Blackwell.
- Beng, T. S., Chin, L. E., Guan, N. C., Yee, A., Wu, C., Jane, L. E., & Meng, C. B. (2013). Mindfulness-Based Supportive Therapy (MBST): Proposing a Palliative Psychotherapy From a Conceptual Perspective to Address Suffering in Palliative Care. *American Journal of Hospice and Palliative Medicine*, 32(2), 144-160. doi:10.1177/1049909113508640
- Bien, T., & Didonna, F. (2008). Appendix A: Mindfulness Practice. *Clinical Handbook of Mindfulness*, 7, 477.
- Bishop, S., Lau, M., Shapiro, S., Carlson, L., Anderson, N., Carmody, J., . . . Devins, G. (2004). Mindfulness: A Proposed Operational Definition. *Clinical Psychology: Science and Practice*, 11(3), 230-241.
- Brown, C. A., & Jones, A. P. (2013). Psychobiological Correlates of Improved Mental Health in Patients With Musculoskeletal Pain After a Mindfulness-based Pain Management Program. The Clinical Journal of Pain, 29(3), 233-244.

- Bruce, A., & Davies, B. (2005). Mindfulness in Hospice Care: Practicing Meditation-in-Action. *Qualitative Health Research*, 15(10), 1329-1344.
- Bruce, N., Manber, R., Shapiro, S., Constantino, M., & Gelso, Charles J. (2010). PSYCHOTHERAPIST MINDFULNESS AND THE PSYCHOTHERAPY PROCESS. Psychotherapy: Theory, Research, Practice, Training, 47(1), 83-97.
- Burger, T. A. (2001). Pain and symptom management. In B. Poor & G. P. Poirrier (Eds.), *End of life nursing care* (pp. 139-174). London: Jones & Bartlett Publishers
- Burns, D. S., Perkins, S. M., Tong, Y., Hilliard, R. E., & Cripe, L. D. (2015). Music Therapy Is Associated With Family Perception of More Spiritual Support and Decreased Breathing Problems in Cancer Patients Receiving Hospice Care. *Journal of Pain and Symptom Management*, 50(2), 225-231. doi:10.1016/j.jpainsymman.2015.02.022
- Buzgova, R., Sikorova, L., & Jarosova, D. (2016). Assessing Patients' Palliative Care Needs in the Final Stages of Illness During Hospitalization. American Journal of Hospice and Palliative Medicine®, 33(2), 184-193.
- Carmody, J. (2015). Reconceptualizing mindfulness: The psychological principles of attending in mindfulness practice and their role in well-being. In K. W. Brown, J. D. Creswell, & R. M. Ryan (Eds.), *Handbook of mindfulness: Theory, research, and practice* (pp. 62-78). New York, NY, US: Guilford Press.
- Certification Board for Music Therapists. (2011). Retrieved April 11, 2018, from http://www.cbmt.org/
- Choi, Y. (2010). The Effect of Music and Progressive Muscle Relaxation on Anxiety, Fatigue, and Quality of Life in Family Caregivers of Hospice Patients. Journal of Music Therapy, 47(1), 53-69.
- Churcher Clarke, A., Chan, J. M. Y., Stott, J., Royan, L., and Spector, A. (2017) An adapted mindfulness intervention for people with dementia in care homes: feasibility pilot study. *Int J Geriatr Psychiatry*, 32: e123–e131. doi: 10.1002/gps.4669.
- Clements-Cortés, A. (2016). Development and efficacy of music therapy techniques within palliative care. *Complementary Therapies in Clinical Practice*, 23, 125-129. doi:10.1016/j.ctcp.2015.04.004
- CMS. (2012). Hospices. Retrieved February 15, 2018, from https://www.cms.gov/Medicare/Provider-Enrollment-and Certification/CertificationandComplianc/Hospices.html

- De Jong, M., Lazar, S. W., Hug, K., Mehling, W. E., Hölzel, B. K., Sack, A. T., . . . Gard, T. (2016). Effects of Mindfulness-Based Cognitive Therapy on Body Awareness in Patients with Chronic Pain and Comorbid Depression. *Frontiers in Psychology*, 7. doi:10.3389/fpsyg.2016.00967
- Eagle, M.N. & Wolitzky, D.L. (1992). Psychoanalytic theories of psychotherapy. In D.K. Freedheim (Ed.), *History of psychotherapy: A century of change* (pp. 109-158). Washington, DC: American Psychological Association.
- Farb, N., Daubenmier, J., Price, C., Gard, T., Kerr, C., Dunn, B., . . . Mehling, W. (2015). Interoception, contemplative practice, and health. Frontiers in Psychology, 6, 763.
- Ford, D.H. & Urban, H.B. (1998). *Contemporary models of psychotherapy: A comparative analysis*. New York: Wiley.
- Forstmann, M., Burgmer, P., & Mussweiler, T. (2012). "The mind is willing, but the flesh is weak": The effects of mind-body dualism on health behavior. *Psychological Science*, 23(10), 1239-45.
- Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. Annals of Family Medicine, 11(5), 412-20.
- Gallagher, L., Huston, M., Nelson, M., Walsh, J., & Steele, K. (2001). Music therapy in palliative medicine. *Supportive Care in Cancer*, 9(3), 156-161.
- Garfinkel, S. N., Seth, A. K., Barrett, A. B., Suzuki, K., & Critchley, H. D. (2015). Knowing your own heart: distinguishing interoceptive accuracy from interoceptive awareness. *Biological psychology*, *104*, 65-74.
- Gutgsell, K. J., Schluchter, M., Margevicius, S., DeGolia, P. A., McLaughlin, B., Harris, M., ... & Wiencek, C. (2013). Music therapy reduces pain in palliative care patients: a randomized controlled trial. *Journal of Pain and Symptom Management*, 45(5), 822-831.
- Hilliard, R. (2003). The Effects of Music Therapy on the Quality and Length of Life of People Diagnosed with Terminal Cancer. Journal of Music Therapy, 40(2), 113-137.
- Hilliard, R. (2004). A Post-Hoc Analysis of Music Therapy Services for Residents in Nursing Homes Receiving Hospice Care. Journal of Music Therapy, 41(4), 266-281.

- Hilliard, R. E. (2005). Music Therapy in Hospice and Palliative Care: a Review of the Empirical Data. *Evidence-Based Complementary and Alternative Medicine*, 2(2), 173-178. doi:10.1093/ecam/neh076
- Hilliard, R. E. (2005). *Hospice and palliative care music therapy: a guide to program development and clinical care*. Cherry Hill, NJ: Jeffrey Books.
- Hilário, A. (2016). Witnessing a body in decline: Men's and women's perceptions of an altered physical appearance. *Journal of Women & Aging*, 28(6), 498-509.
- History of Hospice Care. (n.d.). Retrieved from https://www.nhpco.org/history-hospice-care
- Innes, K. E., Selfe, T. K., Khalsa, D. S., & Kandati, S. (2016). A randomized controlled trial of two simple mind-body programs, Kirtan Kriya meditation and music listening, for adults with subjective cognitive decline: Feasibility and acceptability. *Complementary Therapies in Medicine*, 26, 98-107. doi:10.1016/j.ctim.2016.03.002
- Jong, M. D., Lazar, S. W., Hug, K., Mehling, W. E., Hölzel, B. K., Sack, A. T., . . . Gard, T. (2016). Effects of Mindfulness-Based Cognitive Therapy on Body Awareness in Patients with Chronic Pain and Comorbid Depression. *Frontiers in Psychology*, 7. doi:10.3389/fpsyg.2016.00967
- Kabat-Zinn, J., & University of Massachusetts Medical Center/Worcester. Stress Reduction Clinic. (2005). Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness (Delta trade pbk. reissue.. ed.). New York, N.Y.: Delta Trade Paperbacks.
- Kafka, Hoffmann, Calasso, Brock, Hoffmann, Michael, Calasso, Roberto, & Brock, Geoffrey. (2006). The Zürau Aphorisms. London: Harvill Secker.
- Keane, A. (2014). The Influence of Therapist Mindfulness Practice on Psychotherapeutic Work: A Mixed-Methods Study. Mindfulness, 5(6), 689-703.
- Krout, R. (2001). The effects of single-session music therapy interventions on the observed and self-reported levels of pain control, physical comfort, and relaxation of hospice patients. *American Journal of Hospice and Palliative Medicine*, 18(6), 383-390.
- Lesiuk, T. (2015). The Effect of Mindfulness-Based Music Therapy on Attention and Mood in Women Receiving Adjuvant Chemotherapy for Breast Cancer: A Pilot Study. *Oncology Nursing Forum*, 42(3), 276-282. doi:10.1188/15.onf.276-282

- Ley, M., Schine, Patric, & Hanisch, Tyke. (2017). The Effect of an Abbreviated Mindfulness Intervention on Burnout Reported by Hospice and Palliative Care Staff, ProQuest Dissertations and Theses.
- Linehan, M., & MyiLibrary. (2014). DBT skills training manual (Second ed.).
- Malinowski, P. (2013). Neural mechanisms of attentional control in mindfulness meditation. Frontiers in Neuroscience, 7(7), 8.
- Medcalf, Brooke. (2017). Exploring the music therapist's use of mindfulness informed techniques in practice. *Australian Journal of Music Therapy*, 28, 47-66.
- Meichenbaum, D.H. (1995). Cognitive-behavioral therapy in historical perspective. In B. Bongar & L.E. Beutler (Eds.), *Comprehensive textbook of psychotherapy:*Theory and practice (pp. 140-158). New York: Oxford University Press.
- Osse, B., Vernooij-Dassen, M., De Vree, B., Schade, E., & Grol, R. (2000). Assessment of the need for palliative care as perceived by individual cancer patients and their families A review of instruments for improving patient participation in palliative care. *Cancer*, 88(4), 900-911.
- Patterson, C.H., & Watkins, C.E., Jr, (1996). *Theories of psychotherapy* (5th ed.). New York: HarperCollins
- Rosenzweig, Greeson, Reibel, Green, Jasser, & Beasley. (2010). Mindfulness-based stress reduction for chronic pain conditions: Variation in treatment outcomes and role of home meditation practice. Journal of Psychosomatic Research, 68(1), 29-36.
- Schütze, Robert, Rees, Clare, Preece, Minette, & Schütze, Mark. (2010). Low mindfulness predicts pain catastrophizing in a fear-avoidance model of chronic pain. Pain, 148(1), 120-127.
- Selman, L., Williams, J., & Simms, V. (2011). A mixed-methods evaluation of complementary therapy services in palliative care: yoga and dance therapy. *European Journal of Cancer Care*, 21(1), 87-97. doi:10.1111/j.1365-2354.2011.01285.x
- Shapiro, S., Astin, J., Bishop, S., Cordova, M., & Carlson, John G. (2005). Mindfulness-Based Stress Reduction for Health Care Professionals: Results From a Randomized Trial. International Journal of Stress Management, 12(2), 164-176.
- Shapiro, S., & Carlson, L. (2017). The art and science of mindfulness: Integrating mindfulness into psychology and the helping professions (Second ed.).

- Shapiro, S. L., & Jazaieri, H. (2015). Mindfulness-based stress reduction for healthy stressed adults. *Handbook of mindfulness: Theory, research, and practice*, 269-282.
- Siegel, R. D., & Germer, C. K. (2009). Mindfulness: What Is It? Where Did It Come From? In *Clinical Handbook of Mindfulness* (pp. 17-34). Springer Science Business Media, LLC.
- Tkatch, R., Bazarko, D., Musich, S., Wu, L., MacLeod, S., Keown, K., . . . Wicker, E. (2017). A Pilot Online Mindfulness Intervention to Decrease Caregiver Burden and Improve Psychological Well-Being. Journal of Evidence-Based Complementary & Alternative Medicine, 22(4), 736-743.
- Vendlinski, S., & Kolcaba, K. Y. (1997). Comfort care: A framework for hospice nursing. *American Journal of Hospice and Palliative Medicine*®, *14*(6), 271-276.
- Walker, J., & Adamek, M. (2008). Music therapy in hospice and palliative care. *An Introduction to Music Therapy: theory and practice, 3rd edn. Silver Spring, MD: American Music Therapy Association*, 343-64.
- Wallace, D., & Kenyon College. (2009). This is water: Some thoughts, delivered on a significant occasion, about living a compassionate life (1st ed.). New York: Little, Brown.
- Warth, M., Kessler, J., Koenig, J., Wormit, A. F., Hillecke, T. K., & Bardenheuer, H. J. (2014). Music therapy to promote psychological and physiological relaxation in palliative care patients: protocol of a randomized controlled trial. *BMC Palliative Care*, *13*(1). doi:10.1186/1472-684x-13-60
- Warth, M., Kessler, J., Hillecke, T. K., & Bardenheuer, H. J. (2016). Trajectories of Terminally Ill Patients Cardiovascular Response to Receptive Music Therapy in Palliative Care. *Journal of Pain and Symptom Management*, *52*(2), 196-204. doi:10.1016/j.jpainsymman.2016.01.008
- Weisman, A. D. (1988). Appropriate death and the hospice program. *The Hospice Journal*, 4(1), 65-77.
- Wlodarczyk, N. (2007). The Effect of Music Therapy on the Spirituality of Persons in an In-Patient Hospice Unit as Measured by Self-Report. Journal of Music Therapy, 44(2), 113-122.

APPENDIX A

EMPIRICALLY STUDIED HOSPICE MUSIC THERAPY INTERVENTIONS

Year	Author(s)	Intervention	Research	N	Dependent	Results
2001	Gallagher	various; listening, life review, lyric analysis	Design survey	106	Variables patient and caregiver perception s of music therapy over six months	high levels of reported patient satisfaction in those who received music therapy, increasing confidence of
						music therapy from hospice staff over time
2001	Krout	live music combined with relaxation and imagery experiences	pre/post test	90	self- reported pain control, physical comfort, relaxation	significant differences in all dependent variable areas
2003	Hilliard	live music designed to treat need areas including quality of life, grief, spirituality	clinical trial, randomiz ed	80	quality of life, length of life	significant differences in quality of life over control group, no difference in length of life or physical functioning
2004	Hilliard	"standard music therapy treatment of specific goals areas"	ex post facto	80	length of life	significant differences in length of life for those seen by music therapists
2007	Wlodarczy k	live performance of preferred music; sung and performed improvisation,	ABAB (alternati ng music and non- music visits);	10	Spiritual well-being via questionair e	Significant difference, improved well- being score on music visits

		patient- selected music for prayer and	counter- balance			
2010	Choi	worship three interventions and one control group: a)music listening b)progressive muscle relaxation (PMR) c) PMR and music	Randomi zed controlle d trial, pre and post-test	32	Anxiety, Fatigue, Quality of Life in Family Caregivers	Significant difference in fatigue and anxiety
2013	Gutgsell, Schluchter, Margeviciu s, DeGolia, McLaughlin , Harris, Mecklenbu rg, Wiencek	Therapist- guided autogenic relaxation and live music	Randomi zed controlle d trial, pre and post-test	200	Self- reported pain on Likert scale, Face, Legs, Activity, Cry, Consolabili ty Scale and the Functional Pain Scale	Significant difference in self-reported pain in music therapy group

APPENDIX B

EMPIRICALLY STUDIED MINDFULNESS INTERVENTIONS

Year	Author(s)	Intervention	Research Design	N	Dependent Variables	Results
2010	Rosenzweig	MBSR protocol	Pre-post tests	133	Chronic pain, measure by Short-form 36 health survey, symptom check-list 90	Significant difference for patients with arthritics, back pain, or comorbid pain conditions
2013	Brown, Jones	Eight-week mindfulness- based pain management program (based on MBSR)	Controlled trial, pre- post test	28	Pain, perception of pain, physical health	Improved perceived control of pain in MBPM group, no statistical analysis
2014	Schuetze R, Rees, Preece, Schuetze M	No intervention	Cross- sectional	126	Mindfulnes s, pain catastrophi zing, perceived control of pain	Low mindfulness indicates increased pain catastrophizi ng
2014	Petter, McGrath, Chambers, Dick	Mindful attention manipulation task	Controlled trial, Pre-post test	198	Mindfulnes s, pain intensity, pain catastrophi zing	Mindfulness task no effect on pain, mindfulness state predicted lower pain catastrophizi ng
2015	Feuille ; Pargament	2 week mindfulness practice, spiritualized and non- spiritualized	Pre-post test	107	Pain- related stress, relaxation	Reduced pain-related stress and increased mindfulness.

2016	Poulin,	No	Cross-	76	Neuropathi	difference in pain with spiritualized group but increased mindfulness in spiritualized group Mindfulness
2010	Romanow, Rahbari, Small, Smyth, Hatchard, Solomon, Song, Harris, Kowal, Nathan, Wilson	intervention	sectional	,,3	c pain, pain catastrophi zing, mindfulnes s	predicts reduces pain catastrophizi ng