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The Sounds of Anxiety:
A Quantitative Study of Music Therapy and Anxiety

A DISSERTATION
(Submitted by)

REBECCA ZARATE

In partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

LESLEY UNIVERSITY
May 2012

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Lesley University
Graduate School of Arts & Social Sciences
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DISSERTATION APPROVAL FORM

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Approvals

In the judgment of the following signatories, this Dissertation meets the academic standards that have been established for the Doctor of Philosophy degree.

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Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate School of Arts and Social Sciences.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

_____
Dissertation Director

I hereby accept the recommendation of the Dissertation Committee and its Chairperson.

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Dean, Graduate School of Arts and Social Sciences

STATEMENT BY AUTHOR

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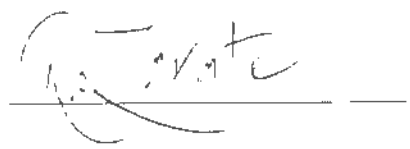
SIGNED: 

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ABSTRACT

Anxiety can be a minor and brief experience for some; for others it can be a life long debilitating struggle. In the United States, many people are not treated for anxiety but experience it on a daily basis. Current theory suggests that anxiety is an emotional and affective response to perceived danger that can lead to isolative, erratic, and avoidant behaviors. Anxiety is also recognized as a unique individual set of experiences that are difficult to explain and treat. This study explored individual responses to music therapy clinical improvisation and anxiety symptoms. The researcher determined if co-created improvised music between therapist and client was effective in the treatment of anxiety. Repeated measures involving 16 participants were conducted. The age range of the participants was 20 to 35 years old, and the demographics of the participants were 56% female, 44% male, 50% Caucasian, 6% East Indian, 6% Latin American, 13% African American, 6% West Indian, and 19% Asian. The study used a multiple single subject design (SSD). Data were collected with the Beck Anxiety Inventory (BAI). Data were collected weekly for 12 consecutive weeks in one - hour weekly music therapy sessions. Clinical improvisation techniques included instrumental and vocal methodologies. Data were analyzed and presented through visual representation and in aggregate form to supplement to the SSD analysis. The BAI items with the highest baseline frequencies were unable to relax, nervous, heart pounding, terrified or afraid, and fear of the worst happening, indicating that the BAI was useful for identifying anxiety symptoms for generalized anxiety, social phobia, and panic related anxiety. The results confirmed that after clinical instrumental and vocal improvisation, participants' anxiety symptoms significantly decreased by Week 6 of treatment. Results also revealed significant stability

of decreased symptoms from initial baseline to end of treatment. The 12 weeks of music psychotherapy treatment significantly decreased anxiety with maintenance of symptom improvement. The clinical model that developed from this study is discussed and suggestions and recommendations for further research are offered.

CHAPTER 1

Introduction

According to data from the World Health Organization (WHO, 2004), anxiety has become the most prevalent mental health issue in the world with the United States leading with the highest percentage of anxious people. Furthermore, anxiety is ranked as the number one mental health problem among American women and a close second to substance abuse among men (Chambala, 2008).

Anxiety affects many people in the community. For some, anxiety is a minor and brief experience; for others, anxiety can be a life-long debilitating struggle. Anxiety is a blanket term for a complicated bundle of symptoms. There is a large body of research that has helped clinicians identify specific symptoms and disorders. There are a handful of studies in the music therapy field that address anxiety, yet none of these studies addresses the problem of its presence and disruption in experimental empirical studies in the community. There is a tacit assumption that anxiety in the collective community is a product of stress (DeNora, 2004; Tone, 2009). The variety of symptomatology associated with anxiety makes it extremely difficult to identify and draw a line between healthy and unhealthy response systems to situational fear and danger because of the overall understanding of anxiety as an acceptable construct in society. Anxiety is an intrinsic part of modern American social psyche, and there have been on-going explorations and discussions about whether anxiety is a social construct or biological factor (e.g., state versus trait theories) since the 1700s. Modern social science ideas support the theory that anxiety is socially constructed and biological in nature (Beck, 2010).

Resources for anxiety that are readily available to the public appear in the immense self-help literature, on the World Wide Web with personal stories of anxiety, and in television advertisements for antianxiety medications, doctors, and therapists offices. Other reliable sources are the American Psychiatric Association's (2000) *DSM-IV-TR*, empirical research, and clinical studies. With all the knowledge that has been gained, an understanding has been reached in the United States over the last 30 years that anxiety is an emotional and affective response to a specific circumstance that is feared to be dangerous (Pacheco-Unguetti, Acosta, Marques, & Lupianez, 2011). The emotional and affective response to danger supports the theory that an emotional state can be incurred from certain external and environmental impacts. In these circumstances, the environmental stressor and sense of danger may or may not be real. This is the underlying major feature that defines anxiety. In addition, there are theories that support predispositions to conditions based on genetics and subsequently, trait via state qualities (Ridley, 2003).

Empirical studies have shown that physiological symptoms of sweaty palms, dizziness, and chest pain can be by-products of the sense of nervousness that is created from anxiety. According to the pioneers Beck, Emery, and Greenberg (1985, 2005) an important operational device unique for anxiety is the presence of themes. Examples of such themes would be, "heightened arousal," "moving through space" or "certain [fears] or phobias" (p. 289). To elaborate, a person whose anxiety profile fits the moving through space theme may avoid climbing up ladders because there is a fear of falling off and hurting somebody else or of dying or of something else that is meaningful to the individual. In an effort to further understand such themes, certain key behaviors related to

anxiety have been coined, such as *experiential avoidance* or *cognitive avoidance*. An example of experiential avoidance would be a person who makes up excuses as to why he or she could not approach a person of authority because of a fear of being ridiculed and embarrassed. Consequently, the behavior to defend against such fear would be to avoid that person all together. The intrapersonal impact of experiential avoidance causes depletion of self-esteem. According to Beck (2010) the social impact of anxiety leads to confusing emotional environments in relationships, and the Who (2004) reported how the results can be devastating and may include divorce or loss of employment.

The presence of other illnesses can accompany anxiety, otherwise known as *comorbidity*. Examples of this can run the gamut of diagnoses from personality disorders, such as borderline personality, body dysmorphic disorder, and eating disorder to mood disorders, including bipolar disorder and depression (American Psychiatric Association, 2000).

Capturing the subjective perspective of those who experience anxiety beyond normal range is important in informing current and future practice in music therapy. According to Pearson (2008) the experience of anxiety can feel "unbearably vivid yet insanely abstract" (p. 11). The simultaneous experiences of living with the dichotomy of vivid and abstract qualities may have promising results in music therapy improvisational approaches such as affect consciousness (Ruud, 2010). The lived experience of anxiety was the basis for the current investigation because of the number of individuals who suffer from this, are not in any kind of treatment, or have been in treatment that has not successfully decreased anxiety long-term.

Social History of Anxiety: Impact on Present Day Culture

According to Tone (2009), anxiety has only been identified as a psychiatric illness that requires professional care in recent years, and yet she also points out that historically, anxiety has been recognized in society since the 1700s. There is a body of literature that discusses the collective social response to stressful situations in the United States. For example, the topic on the presence of anxiety in the post Second World War era and the relationship in the social history literature between work stress and anxiety is being discussed. Sociologists, anthropologists, musicologists and ethnomusicologists provide the necessary context for investigating anxiety's prevalence in post-modern culture and have made a scholarly contribution to society's historical experience and current perspective on anxiety (DeNora, 2004; Stein, 2004; Tone, 2009).

The American Dream, Industrial Revolution, and Anxiety

According to Tone (2009), the industrial revolution saw a shift in paradigm in which men and women were striving for the American dream, and rewards for hard work were more popular than in prewar periods; the cliché female homemaker and the stressed out over-worked husband were glorified and revered. Tone (2009) also stated that these new social constructs were considered as the emblem of struggle, and from this struggle, the addiction to tranquilizers emerged. In his book, Stein (2004) addressed the collective idea of value and adequacy through defense mechanisms from a psychoanalytic anthropology perspective. He described the presence of fear of inadequacy as a "vicious cycle of anxiety and defense" (p. 14).

Information established from this study highlights that anxiety's etiology is interactional and future-based (American Psychiatric Association, 2000), and there are certain measures that capture the character, intensity, and level of anxiety symptoms, such as use of categories of minimal, mild, moderate, and severe (Beck & Steer, 1993). The use of these kinds of criteria can inform clinicians and researchers on a) the overall prevalence of anxiety, and b) the specific items or symptoms that are of concern for the individual who struggles with anxiety.

According to the WHO (2004), anxiety has become a serious international threat to global health, productivity, and sensibility. Based on this information, it is important to gain further understanding of the complicated experience of anxiety. An investigation of the potential effects of nontraditional approaches on anxious people will be presented and discussed.

Research Purpose and Question

The overarching purpose of this study was to explore the topic of music therapy and anxiety. The study addressed the following research question:

1. Can improvised music that is co-created by the therapist and client be a tool for the treatment of anxiety?

Guiding Assumptions

Music psychotherapy improvisational methods may be helpful in a way that does not interfere with the busy urban activities of daily living (A.D.L). Kenny (2006) called music the mythic artery from which we all connect. In her theory of the field of play, Kenny articulates what occurs in a clinical musical event as a whole systems approach

that was influenced by Laszlo (1972) and the psychology of Wilber (1982) and is weighted on experience-based knowledge. The phenomenological appearance or reshaping of things or objects that occur within an improvisational field between therapist and client is the major premise of Kenny's theory. In her description of musical improvisation, Kenny states that "When the door opens everything in the field changes. A field is a dynamic container in which the action of the variables is largely based on their own interaction and relationships" (2006, p. 78). Another theorist who shares similar ideas on improvisation is Even Ruud. In his book, Ruud (2010) referred to music as potentially fitting the role of self-object. He commented that it could happen "when we turn to music to regulate our moods, indulge in memories, or recollect events and persons" (p. 2348). Such phenomena as discussed by both theorists can be viewed as occurring in a flux of various moments within a single improvisation. Within these moments, a potential to explore and restructure autobiographical narratives can happen, yet the transformations do not happen by chance. There is a context of the field of improvisation that requires discipline knowledge and resources (Nordoff-Robbins, 2007).

According to Lee (2006), "The technical musical precision of the therapist is what allows the client to experience their intrinsic creativity, which is not dependent on illness or pathology. Every tone, chord, and rhythmic structure must have a defining role within the overall architecture of the improvisation and session as a whole" (p. 5838). The researcher was interested in expanding theoretical ideas further into the dialogue on the aesthetics of musical creativity in music therapy and anxiety. The researcher's theoretical and methodological framework of boundary perspective music therapy (BPMT) focuses on the appearance of phenomena in improvisations with a focus on transitions and quality

of presence in the therapeutic relationship (Fleetwood, 2010). More recently, my theory has evolved into multisensory perspectives, including deeper inquiry into the mind's affective life and the architecture of the imagination. The recent theories and ideas of Droege (2003), Kenny (2006), Kossak (2009), Fiumara (2001), Nichols (2006), and Ruud (2010) have been the inspiration of an emerging theory of *continuum of creativity*. The continuum of creativity consists of three ideas. First, there is the idea that an inherent, implicit relational knowing exists in every person, which provides the source of will to communicate with another person or thing. Second, the architecture of the mind's affective life is primarily based upon the activation of imagination (Chodorow, 1997; Nichols, 2006). The current working definition of imagination used in this research is described as a complex, multisensory mechanism, which simultaneously activates a myriad of emotional, cognitive, and physiological systems that informs an individual of being in the world. Such informing could be connected with the phenomenon called creativity. In this regard, it is the starting line of what is named in this research study as a 'continuum of creativity.' Finally, the third idea is about the concept of consciousness. Consciousness is understood in this research study as a complex, fluid state, and its role is to support the vitality of imagination in the intentional or unintentional experience to find connections (Rothschild, 2000). The three ideas form the structure of the theoretical approach used in this study to the researcher's foundational operational principles of creative arts therapies. It is also representative of a deeper ontological inquiry that Aldridge and Fachner (2006) suggested regarding the imagination as a provider of reinforcement for positive changes in the global consciousness. If the imagination can reinforce global consciousness, it can inform the collective community's understanding

of anxiety in mental health as well by activating the continuum of creativity in music making and creative process. It is presupposed here that an individual's narrative of anxiety can be changed for the better and that a restructured autobiographical narrative will prevail. In addition, it is hoped that an awakened and expanded ability to cope with anxiety symptoms will sustain the individual within his or her community.

CHAPTER 2

Literature Review

According to the *DSM-IV-TR*, anxiety is a future-oriented affective and emotional response to a perceived dangerous or threatening situation that is triggered by an environmental stressor (2000). The word *anxiety* comes from the Latin words *anxietatum* or *ango*, meaning distress or trouble. The Merriam-Webster dictionary defines anxiety as "a) a painful or apprehensive uneasiness of mind usually over an impending or anticipated ill, b) fearful concern or interest, c) a cause of anxiety." The dictionary also defines anxiety as "an abnormal and overwhelming sense of apprehension and fear often marked by physiological signs (as sweating, tension, and increased pulse), by doubt concerning the reality and nature of the threat, and by self-doubt about one's capacity to cope with it" (http://www.merriamwebster.com/dictionary/anxiety).

The overarching topics addressed in this review are as follows: defining anxiety, clinical studies of anxiety expressions and social impact, the social architecture of anxiety, collective community coping strategies, music and anxiety, function and quality of music, performance anxiety, music therapy, therapeutic relationship, and clinical improvisation.

The intensity of anxiety experiences range from a single, nonintrusive disruption in affective equilibrium to chronic and debilitating panic disorders. Of the data collected in 2004 from the world mental health survey, the WHO reported that of the 6580 of Americans residing in the United States who responded to the survey, 1,895 reported experiencing a major episode of anxiety. Pearson (2008) also referred to the WHO study in her book and suggested that not all societies suffer equally. In particular she highlighted Mexican counterparts. From the same survey, findings revealed that of the 5,782 Mexicans who responded, only 292 people reported experiencing an anxiety episode. That is a difference of between 28% and 6.6% in reports, which helps shed light on the prevalence of anxiety in the United States. This may be because it is common for people to use the terms anxiety and daily stress interchangeably; yet, anxiety is a potentially debilitating illness that can lead to serious disorders such as anxiety disorder, panic disorder, major depression, and other diagnosable mental, emotional, and physical health symptoms (American Psychiatric Association, 2000). Certain studies have shown that anxiety has a significant negative economic impact for individuals and society as a whole (Salzman, 2001). Although anxiety is prevalent in the modern language of today, it is difficult to define or quantify it as a single state because it often co-occurs with other psychosocial disorders such as depression, substance use disorders, somatoform disorders, and eating disorders (American Psychiatric Association, 2000).

The literature reflects that there has been much dialogue over attempts to investigate similarities and differences as a way to adequately distinguish anxiety from other disorders. Beck, Emery, and Greenberg (1985, 2005) postulated that there are certain themes that distinguish anxiety from depression. In anxiety there is an

overarching theme of threat; in depression there is an overarching theme of loss. Furthermore, Clark, Watson, and Mineka (1994) also found that people experienced a loss of pleasure in depression and heightened arousal in anxiety. This information shows the importance of defining anxiety as distinct from other disorders for diagnostic and treatment purposes.

Defining Anxiety

Anxiety is currently clinically defined as the "apprehensive anticipation of future danger or misfortune accompanied by feeling of dysphoria or somatic symptoms of tension. The focus of anticipated danger could be internal or external" (American Psychiatric Association, 2000, p. 820).

The general landscape of information from the 1970s through to the mid 1990s shows a high prevalence of cognitive behavioral studies and approaches to treatment. This reflects the clinical climate of the time as well as the fact that little else was available in terms of empirical research on which to base any evidence-based treatment. It is important, therefore, to provide a brief description of the pioneers who began the investigations in the field of anxiety.

In his model, Lang (1971) presented what became known as the three-part response channels: (a) cognitive, (b) behavioral, and (c) physiological. Table 1 displays the three-part response model. The emergence of the model brought forth various theoretical and research discussions on whether or not the three items were in fact correlated.

Table 1

Lang's Anxiety Three-Part Response Channels

Cognitive	Behavioral	Physiological
Anxious predictions assumptions beliefs and information processing biases	Avoidance, compulsions, distractions, overprotective behaviors	Physical sensations, palpitations, dizziness, and sweating

Two studies showed evidence that the response items from Lang's model were not highly correlated but highly interrelated (Rachman, 1990; Rachman & Hodgson, 1974). In their investigation, Lehrer and Woolfolk in 1982 pointed out the importance of measuring the response items separately. The studies by Rachman and Hodgson (1974), Rachman (1990), and Lehrer and Woolfolk (1982) kindled a scholarly dialogue that led to theories that emphasized the importance of context, multi-systemic, and individual experience.

In the early to mid 1990s, Antony and Barlow (1996) and Clark and Watson (1991) provided new working definitions of anxiety. They established two core elements that were unique to anxiety. One was that the emotion associated with anxiety is fear, and the second was that anxiety is a future-oriented cognitive and emotional process. They found that this process included a highly charged negative affect, difficulty concentrating, a tendency to worry, and a heightened sense of no control over a situation. The fear factor included an alarm reaction and an intense motivation to escape from perceived danger. In addition, accompanying physiological symptoms of heart racing, sweating, and shaking

were found to be more predominant in those suffering from anxiety. These landmark studies added to the growing body of literature about anxiety and launched the exploration and treatment of anxiety into a new realm.

Given the growing evidence of the importance in the subjective experience and unique symptoms of anxiety, the American Psychiatric Association (APA, 2000) created 12 separate disorders and two occurrence–based descriptions based on anxiety symptoms of fear in the *DSM IV-TR*. All of them are included under the main diagnosis of anxiety disorder (American Psychiatric Association, 2000, pp. 429-484). By doing so, the APA provided the clinical community with a varied palette of combinations of presenting behaviors, cognitive processes, and emotional responses with which to work. On the other hand, the APA potentially increased confusion in the diagnosis and treatment planning process.

The following distinctions of anxiety disorder have been taken from the American Psychiatric Association (2004). The key features of anxiety disorders are panic, fear, and phobias. Panic attacks are typically experienced as a sudden onset of intense apprehension, fear, or terror, and often associated with impending doom. There is also a fear of losing control or going crazy, shortness of breath, palpitation, chest pain, or discomfort. Agoraphobia is described in the *DSM IV* as anxiety about or avoidance of places or situations where escape may be difficult or embarrassing. Panic disorder without agoraphobia is notable when recurrent, unexpected panic attacks are experienced and is associated with persistent concern. The *DSM IV* states that panic disorder with agoraphobia associates fear and avoidance of situations in which escape might be difficult or embarrassing or in which help might not be available in the event of a panic

attack or panic like sensations. In addition, the *DSM IV* describes that agoraphobia without history of panic disorder requires clinically significant results from tests that show a significant fear of heights, animals, blood, injections, flying, and enclosed places. Social phobia, otherwise known as social anxiety disorder, is linked to the presence of clinically significant anxiety, fear, and avoidance related to social and performance situations. It is also associated with fear of embarrassment in social situations. Obsessive compulsive disorder is defined by the *DSM IV* as including the presence of obsessions, such as thoughts, urges, or images that are distressing and intrusive. In addition, there may be compulsions with or without obsessions that are repetitive behaviors that are performed as a means to reduce anxiety or to prevent danger. Post traumatic stress disorder and acute stress disorder are grouped together in the *DSM IV* definition because they show similar features. These features include re-experiencing a traumatic event accompanied by symptoms of increased arousal and avoidance of situations and thoughts that remind the person of the event. Generalized anxiety disorder is identified as the persistent, excessive, and uncontrollable worry for at least 6 months that is associated with a number of additional symptoms such as irritability, muscle tension, and difficulties sleeping or concentrating. Anxiety disorder due to a general medical condition is defined as when symptoms occur from a direct result of a general medical condition, such as panic attacks caused by hyperthyroidism. Substance induced anxiety disorder is when symptoms of anxiety occur as a direct consequence of a substance, such as cocaine. Finally, anxiety disorder not otherwise specified is a disorder defined as predominant

anxiety or phobic avoidance not meeting the criteria for specific anxiety disorder or for which there is inadequate or contradictory information (American Psychiatric Association, 2000, p. 429).

Etiology of Anxiety

There are several different theories of how and why anxiety develops. Two in particular have been prevalent in producing new thinking in this area. These theories are social learning theory and state-trait anxiety theory.

Social learning theory (SLT) is based on the premise that individuals learn new behavior from observing their social environment. Albert Bandura (1977) is associated with formulating this theory. The state-trait anxiety theory is based on the premise that state anxiety could be a short-term internal experience to a threatening situation, whereas a trait anxiety implicates part of an individual's personality and genetic structure in response to threatening situations.

Three of the most richly resourced and referenced books on defining anxiety published within the last three years are by Antony and Stein (2009), DiTomasso and Grosch (2007), and Otto and Hofmann (2010). In these books, the most popular approaches and foundational theories of state and trait anxieties are mentioned, such as exposure treatments that are empirically-based and rest under the umbrella of social learning theory.

The literature in the last 10 years includes research conducted in the area of connecting anxiety to relationships. Formulated originally by John Bowlby in 1969, attachment theory influenced clinical and theoretical approaches in the field of developmental and social psychology. Bowlby postulated two key components of

attachment theory, anxious and disorganized attachment in children. Bowlby called the adult version of the same component fearful-avoidant attachment. Examples in working with individuals who experience fear and avoidance or anxiety in relationships appear in the literature from a couple perspective (Previti & Amato, 2004) and a transgenerational perspective (Hesse & Main, 2000) and highlight two important psychodynamic and biological mechanisms. Firstly, the couple therapy perspective highlighted by Previti and Amato (2004) acknowledges adult fearful avoidant attachment as a developmental disorder borne out of primary caregiver experiences occurring in childhood. A conversation that is beyond the scope of this study, yet important to mention, concerns the on-going dialogue on the topic of anxiety and adult attachment. For example, adult separation anxiety and adult fearful-avoidant anxiety are worthy of note as being potential contributing factors for people with anxiety. Secondly, the transgenerational perspective of Hesse and Main (2000) and Lieberman, Padron,Van Horn, and Harris (2005) acknowledge that both environment and genetic factors are involved in shaping generational familial patterns with anxious and benevolent behavior. More pertinent to this study is the topic of epigenetics and intergenerational transmission (Keller, 2010). All of these studies imply that anxiety is an interpersonal phenomenon of learned patterns. There may also be certain changes in genetic structures based on the general concept of intergenerational transmission (Hesse & Main, 2000; Keller, 2010; Ridley, 2003).

Upon a closer look into more contemporary theories, Beck (2010) addressed the unique processes that compound issues of the interpersonal environment and impact of anxiety disorders. The contents of the chapters from Beck's book are noteworthy and highlight

the important topics of understanding social impact of anxiety disorders. They include the relational theories of friendship formation, cyclical interaction patterns between parents and children, biological influences, and social experiences. Beck (2010) also increases awareness of the impact of early bullying as a contributor to adult social anxiety along with using the more contemporary concept of state via trait theories. Beck (2010) also points out the three seminal interpersonal theories and their main principles that are helpful with this topic; they are attachment theory (Bowlby, 1969), interpersonal circumplex theory (Kiesler, 1996), and the relational theories of friendship formation (Reis & Shaver, 1988). All focus on (a) developmental approach and early social processes, (b) self-schemas built around others' reactions to individual, and (c) stored information about significant others.

Some of the newer and less researched approaches are cognitive and biopsychological. In the cognitive group, there is one theory that appears frequently in juried searches called the *attentional control theory*. This theory has been tested in a growing number of studies by Coombes, Higgins, Gamble, Cauraugh, and Janelle (2009), and Eysenck, Derakshan, Santos, and Calvo (2007; 2009). The studies revealed that state and trait anxiety reduces attention. This is similar to social learning theory which predicts the reaction to a task is slower when anxiety is present (Powers, Vervliet, & Smits, 2010; Rescoria & Wagner, 1972). The idea that a person's ability to carry out simple tasks is debilitated due to high levels of anxiety suggests potentially bigger problems in society at large. According to the WHO (2004), anxiety has become a global economic concern. Furthermore, if there is a connection between intergenerational patterns of fear response triggering events, the need for swift intervention supports the WHO highlighting the

seriousness of this situation. The growing awareness of violence and global discord is reflected in related theories. One of these theories is called the terror management control theory, and it provides a specific contextual approach to acts of terrorism. It has gained notable publicity since the attacks in New York City, Washington, and Pennsylvania in 2001. Certain authors, such as Bozo, Tunka, and Slimsek (2009), have begun studies to develop this and to explore other possible connections between death anxiety and age, using this model.

In contrast, the fields of biopsychology, neuroscience, experimental psychiatry (Buckarov & Knyazev, 2011; Lange, Heuer, Langner, Keijers, Becker, & Rinck, 2011) and psychological medicine (Palm, Elliott, McKie, Deakin, & Anderson, 2010) have begun to uncover the basic mechanistic features of the brain that activate and regulate certain elements connected to anxiety. In their study, Palm et al. (2010) explored the relationship between blood oxygen level dependent (BOLD) and the prefrontal cortex. Their findings suggest that potentially altered balances may occur in emotional and cognitive processes in externally and internally directed responses to facial expressions in individuals who reported GAD. This information has informed the growing body of studies in these fields to find connections between the function of anxiety, the brain, and stress.

The purpose of discussing the vast range of anxiety theories is to highlight the similarities and differences between them all. It also provides a timeline of what has been established and researched extensively and some of the newer theories and studies of anxiety from a current global perspective.

Anxiety as a Multisensory Experience

Given the array of options for treatment presented in the literature, there is minimal discussion of the importance of the visceral and multisensory memory and its relationship to anxiety. The trauma literature, however, does show acknowledgement of the multisensory environment (Lieberman, Padron, Van Horn, & Harris, 2005; Pender, Brandt, Mahfouz, & Tylim, 2007), The literature on anxiety reflects an interest on the effect of behavioral changes on symptoms but has not addressed other ways of working with the etiology of stress, whether from genetic or environmental sources, that leads to anxious behaviors. It is apparent in the overall climate of scholarly discussion that a movement towards learning more about the brain's functioning in times of stress and anxiety has begun though.

Regarding the potential for change on a multisensory level, this body of knowledge may allow the discovery of how anxiety is experienced on cognitive, behavioral, emotional, social, biological, and spiritual levels. The pertinent literature encompasses the musical, clinical, medical, and philosophical scholarly discussions of Estrella and Forinash (2007), Fiumara (2001), Smith (2008), and Vuust and Kringelbach (2010).

Comorbidity

To date, knowledge about comorbidity in anxiety disorders has not been clear; however, certain authors such as Klerman (1990) have explored this topic. There is a mounting body of evidence in contemporary clinical research showing interest in this

area. Generating data that support the importance of recognizing anxiety as a potential root of a condition and not as secondary to another axis I diagnosis seems to be the current direction in clinical thinking.

The disorders that often co-occur with anxiety disorders are other anxiety, personality, and mood disorders (Dreessen & Arntz, 1998). More recent authors have inquired into the relationship between social anxiety and the suppression of anger in perceived rejection (Breen & Kashdan, 2011), body dysmorphic concerns and rejection sensitivity (Fang et al., 2011), attention alterations (Pacheco–Unguetti et al., 2011), anorexia nervosa (Thornton, Dellava, Root, Lichtenstein, & Bulik, 2011), and bipolar disorder (Okan & Caykoylu, 2011).

Current Assessment of Anxiety

There are currently numerous measures and models in the literature that are available to assess the variety and breadth of anxiety disorders; however, the first element in the process of assessment is the diagnostic criteria. Based on findings from the literature, measures to assess and screen further are selected. In their book, Martin and Orsillo (2001) reported there are 38 internally and externally valid measures designed to assess and screen generalized anxiety from a cognitive, emotional, and behavioral perspective. Most of these are self-report measures with a range of 10 to 90 point instruments to choose from. Two of the most established tests are the Beck Anxiety Inventory (Beck & Steer, 1993) and the Anxiety State-Trait Inventory (Spielberger, Gorshuch, & Lushene, 1970). The most recent addition to the list is the Anxiety Attitude and Belief Scale (Brown, Craske, Tata, Rassovsky, & Tsao, 2000), which assesses psychological vulnerability to anxiety symptoms. All examples show a movement

towards the consideration of one major element, which is the subjective experience. It is evident from these examples that there has been an increase in multi-dimensional designs that attempt to capture the unique and individual experience of anxiety.

There are numerous measures for the assessment of anxiety. In their book, Antony, Orsillo, and Roemer (2001) provided an extensive review of available tests and measures for anxiety. A measure from this source includes the Looming Maladaptive Style Questionnaire – Revised, in which vignettes are used to explore anxious reactions of participants. Use of certain qualities of state, trait, and perception are the focus of the Endler Multidimensional Anxiety Scale, and the Mood Anxiety Symptom Questionnaire is an established measure that references a combination of mood states with anxiety symptoms to cross check for presence of co-morbidity. These measures provide a helpful overview of certain physiological, situational, perceived, and emotional symptoms that predict more specific anxiety symptoms that meet the typical diagnosis requirements for generalized anxiety disorder.

As established, depression is a prevalent co-occurring disorder found in individuals with anxiety. Depression has been highly correlated with episodes of anxiety (American Psychiatric Association, 2000; Dreessen & Arntz, 1998), suggesting a concerning potential for the overlapping of symptoms. According to the *DSM-IV* (2000), there are unique qualities to GAD that make it easy to distinguish it from other types of anxiety. For example, the *DSM-IV* (2000) describes individuals who experience GAD as being able to function in every day activities and having an absence of phobic avoidance. In addition, DiTomasso and Gosch (2007) discuss that emotional avoidance is a major factor in the assessment of GAD because it manifests through excessive worry about

more than one thing. The fear of negative outcomes highlights the intense subjective (Beck, 2010; Beck, Emery, & Greenberg, 2005) and psychobiological essence of this disorder (American Psychiatric Association, 2000; Anthony & Barlow, 1996; Buckarov & Knyazev; Clark & Watson, 1991; Palm et. al., 2010). Furthermore, according to DiTomasso & Gosch (2007) a sound assessment aids the treatment planning process for anxiety. It is now necessary to examine treatments that are being offered for anxiety.

Treatment of Anxiety

According to Goisman, Steketee, Warshaw, Cuneo, and Keller (1993) and Goisman, Warshaw, and Keller (1999), most people with identified anxiety disorders fail to obtain evidence-based psychotherapies for their condition. Possibly compounding the issue is the high prevalence of co-morbidity of either another anxiety disorder or depression (*DSM-IV,* 2000). Depression is the leading cause of disability in the United States. The mean age of onset for major depression is 32 years old (National Institute for Mental Health, 2008).

The current popular evidence-based treatment approaches for anxiety are psychopharmacology and cognitive behavioral therapy (CBT). The typical medications used in psychopharmacology are antidepressants, known as SSRIs, SNRIs, bupropion (an atypical antidepressant), tricyclics, and MAOIs. Antianxiety medications called benzodiazepines are also used to treat depression. In some cases, beta-blockers are also prescribed.

Cognitive Behavioral Therapy (CBT)

CBT was developed by Aaron T. Beck and has evolved over time (Beck, Emery, & Greenberg, 1985, 2005). In their book, Beck, Emery and Greenberg describe the basic

premise of CBT as the identification of current working core thoughts, beliefs, and behavior patterns that are contributing to anxiety symptoms (2005). CBT is designed to help find alternative, healthier means of functioning in these three core areas. It is a blended approach that combines behavioral therapy and cognitive therapy. The blended approach has been used of the past 50 years, and empirical studies indicate it is effective for dealing with anxiety (Beck, Emery, & Greenberg, 1985, 2005; DiTomasso & Gosch, 2007). One method that has shown to be effective with anxiety is exposure therapy. This is when a person exposes him or herself to the anxiety provoking triggers in order to decrease his or her response over time. Often CBT and medications will be used conjunctively to treat anxiety. Recent studies have suggested, however, that this well-known manual based approach may be too specific to treat anxiety because of the growing awareness of the interaction of anxiety with co-morbidity and co-occurring conditions (Ledley, Huppert, Foa, Davidson, Keefe, & Potts, 2005; Weertman, Arntz, Schouten, & Dreessen, 2005; Westen, Novotny, & Thompson-Brenner (2004a).

Other Treatment Approaches

Although CBT and psychopharmacology are the predominant approaches to treating anxiety, it appears that there is not a one size fits all approach in the overall professional thinking towards working with the symptoms. DiTomasso and Gosch (2007) found a way to synthesize the vast array of clinical approaches available in the treatment of anxiety in their descriptions of the following: psychodynamic psychotherapy (PPT), person-centered therapy (PCT), interpersonal psychotherapy (IPT), supportive-expressive therapy (SEP), Adlerian therapy (AT), contextual family therapy (CFT), context centered therapy (CCT), and acceptance and commitment therapy (ACT). There are many more,

but it is apparent that all of the above consist of core elements of assessment, treatment formulation, and treatment processes. In their writing, DiTomasso and Gosch (2007) offer key components in the discussion about holistic considerations of treating anxiety. It is important to compare and contrast these components to uncover common themes in both practice and theory.

Treatment Outcomes in Clinical Research

In this review, the complicated and diverse realm of anxiety disorders is emphasized. The knowledge that has been gathered indicates that clinical experimental research is of great importance because of the applications for addressing the multi-systemic experience of anxiety. It seems that a change in paradigm is occurring and moving toward a 'real-life' perspective and a flexible, dynamic approach toward research. In the area of meta-analysis, Olatunji, Cisler, and Tolin (2010) mentioned this in their article, decribing how they carried out a meta-analysis of the influence of comorbidity on treatment outcome. Olatunji et al. (2010) uncovered certain clinical issues during their research. For example, there is evidence showing that in some cases in post treatment, comorbidity is associated with higher levels of anxiety. The literature also shows that certain combinations of an anxiety disorder and a co-occurring condition, such as a personality disorder, have poorer positive outcomes. The findings from studies such as this one exemplify the complicated and immense impact anxiety has on individuals and the community. This study also sheds light on the need for a different kind of clinical approach to the treatment of anxiety along with specific aftercare, sustainability models of treatment.

Clinical Studies of Anxiety Expressions and Social Impact

Experimental single-case research and methodologies capture data that illuminate the individual character of what is being explored and the individual response to the independent variable being tested (Cruz & Berrol, 2012). Certain designs such as the single subject design (SSD) lend more flexibility than other more traditionally accepted models. In 1990, McCormick pointed out that these kinds of studies provide the scientific community with information about the potential significance of new treatment and the nuances of human experience that are an essential part of the design. In addition, more recent studies in experimental research and psychiatry have explored anxiety expressions in society. One of these from the United Kingdom highlighted how women diagnosed with GAD showed attenuated emotional responses when exposed to images of sad faces (Palm et al., 2010). In Russia, Buckarov, and Knyazev (2011) explored the interaction of anger with anxiety using facial expressions tests. They found that low anxiety controls were positively related to the extent of the facial expression. From the Netherlands, Lange et al. (2011) also recognized facial expressions as important social cues in their study of 43 participants (82.6% female). The sample was split into two groups; participants were 22 social anxiety participants and 21 nonsocially anxious controls (NAC). The authors examined the effect of facial cues in participants identified with social anxiety (SA). Lang et al. (2011) found a correlation between eye movement and ratings for facial expressions in the SA group. The angrier the face, the more negative the rating, yet gaze duration became a component in the general results. The gaze increased when the facial expression was more positive and decreased with angry faces.

The Social Architecture of Anxiety

The literature presented thus far has highlighted the important areas that are being discussed and that are available for the treatment of anxiety. Although fairly broad in terms of history and etiology, the literature in this area does not represent the experience of anxiety from a social and cultural perspective. Although certain authors, such as Rollo May (1996), Karen Horney (1992), Andrea Tone (2009), and Howard F. Stein (2004), infused their psychological and medical knowledge with social theory, the clinical field has remained separate from the social and cultural field in its handling of anxiety. Based on the body of literature within the social and cultural area, there is rich information about the importance of the collective experience and anxiety that can not be ignored.

Anxiety in Current Culture

Current Viewpoints of Anxiety in Culture and Community.

More frequently, studies reflect a growing interest in exploring anxiety through the aforementioned disorders. According to the WHO (2009), 82% of Americans reported living in urban areas. These communities are more diverse than other parts of the country. Diversity in the current explorations of anxiety is demonstrated in psychology studies carried out with college students (Abbassi, 1999), dealing with acculturation and ethno-cultural issues (Bissiri 1999; Vandervoort, Divers, & Madrid 1999), organizational health care (Hinshelwood & Skogstad 2000), diagnostic patterns of anxiety, globalization and cross-cultural issues (De Coteau, Hope, & Anderson, 2003; Horowitz, 2006; Mak 2001; Rego, 2009; Salman, Diamond, Jusino, Sanchez-LaCay, & Liebowitz, 1997; Salzman, 2001; Takriti & Ahmad, 2000), neuroscience, and urban violence (Bressan et al., 2009). The aforementioned studies demonstrate an increased

interest in investigating possible connections between anxiety and culture, further highlighting the role of environmental influence and impact on the potential for misdiagnosis and consequently, the mistreatment of anxiety disorders.

The authors of the *Oxford Handbook of Anxiety and Related Disorders* (2009) took a clinical and anthropological approach in the chapter on anxiety and culture. Although not reporting original research, the chapter provides a current perspective that aims at conceptualizing the intersection of anxiety and culture through a multi-modal clinical and anthropological combination (Asmal & Stein, 2009). The ideas of Howard F. Stein (2003), a seminal author in psychoanalytic anthropology, added the perspective on how unconscious desires to soothe collective anxieties prevailed through the creation of the "evil" other or shadow part of the personality. Such information suggests a lack of cultural guidelines in the current criteria for assessing anxiety (American Psychiatric Association, 2000).

Whereas the clinical field has remained focused on pathology in its criteria, other disciplines are also involved in the conversation. Two of these are the fields of sociology and psychology. Since the 1970s, certain social psychologists, such as Rollo May (1996) and Karen Horney (1992), have commented and theorized about anxiety as a social phenomenon stemming from modernism sensibilities. Both Horney (1992) and May (1996) drew their ideas from the contemporary sociologists who questioned the relationship humanity has with anxiety. Particular social themes that Horney addresses are social hostility and anxiety, anxiety as a cultural experience, economics of modern society and competitive individualism, and structures in cultural processes and their

relationship to the structure of neurosis. May (1996) addressed the maintenance of self as a personality and the notion of threat and fear as main characteristics that challenge personal and collective adequacy and value.

A construct that adds to the discussion on how anxiety is embedded in community and culture is prevalent in the sociology literature and is called "risk consciousness." It appears to be generally understood as a definition of cause or expression of anxiety (Wilkinson, 2001). Wilkinson theorized that it is risk consciousness that perpetuates anxiety in society (p. 9). Stein (2004) also presented a similar view but by addressing the unconscious motivations of certain behaviors that seem to create a collective anxiety and behaviors that deliberately create hostility towards others.

The religious and spiritual rituals that may appear to manifest as symptoms of obsessive-compulsive disorder (OCD) (American Psychiatric Association, 2000) serve as an example of the presence of differences between Eastern and Western medical models. For example, in some cultures certain letters and grammatical tools are perceived as symbols of negative higher powers, and these are also symptoms that meet the clinical criteria for OCD (American Psychiatric Association, 2000; DiTomasso & Gosch, 2007). In comparison, one study has suggested that there is a connection between compulsive behavior and the extreme religious behavior that is also known as "religiosity" and such behavior is shaped from a psychosocial perspective on a multicultural level (Yorulmaz, Gencoz, & Woody, 2009). The information presented illuminates the need for caution in the treatment of anxiety in a growing culturally diverse country like the United States and in the age of globalization and convergence. It is a reminder of the potential increasing the dichotomy between traditional Western medical models and others that offer diverse

means of treatment for anxiety. If the literature reflected this diversity, it could help to redefine how anxiety is viewed in relation to culture in diagnostic assessment and treatment based forums.

Performance Anxiety: A Social Struggle with Power

According to Kirchner (2003), there is a relationship between performance anxiety and age of onset as well as between the presence of physiological signs of anxiety and increase in negative thoughts and feelings. For example, in her study, Kirchner (2003) shed light on how performers' symptoms would become compounded and increasingly worse when negative thought systems became the focus; moreover, the symptoms overrode the ability to perform satisfactorily. In addition, her study showed that moderate levels of anxiety were present in performances that were rated satisfying. The study pointed towards an implication about levels of anxiety and state or trait. An important feature of this investigation is that it revealed the perpetual nature of the interpersonal environment of anxiety; moreover, it shed light on the underpinning dynamics of perceived power intrinsic to this particular characteristic.

The literature on performance anxiety has two main bodies of content: musical performance and sports performance. Both are emerging from the field of psychology. One study compared and contrasted the two (Armbrecht, 2011). There was some mention of music therapy in the study; however, it was apparent that there is little knowledge in the field of music psychology of the potential benefits of using music psychotherapy as a treatment of choice for anxiety. Nevertheless, Armbrecht found self-confidence to be significant in managing anxiety levels and that physiological signs of anxiety were similar in performance anxiety to panic related anxiety. In their study with advanced

musicians' perceptions of performance anxiety, Papageorgi, Creech, Graham (2011) found that anxiety is perceived as negative and at the same time beneficial within certain tolerable limits. They also found that solo performances produce more anxiety than group and that there is a direct link between the individual perception of level of severity, performance experience, and 'general susceptibility to anxiety' (Papageorgi et al., 2011, p. 1). These authors, along with Kirchner, Bloom, and Skutnick-Henley (2008), present performance anxiety as a form of social phobia. They indicated the three most influential studies that found important characteristics of social phobia. Those studies are as follows: Cox and Kennardy (1993), Osborne and Franklin (2002), Steptoe and Fidler (1987). Cox and Kennardy (1993) studied a sample of 32 adult music students. The students' self-reported anxiety showed that social phobia was the main determinant of the level of performance anxiety in solo settings. Osborne and Franklin (2002) explored the possibilities of performance anxiety as a subtype of social phobia. They analyzed the cognitive processes of 53 females and 31 males aged 16 to 66 years. Osborne and Franklin's (2002) findings revealed similarities in the reports of cognitive distortions between social phobia and performance anxiety. In addition, these researchers found that social phobic models may provide information for cognitive conceptualizations of music performance anxiety because of the similarities that were revealed. Thirdly, Steptoe and Fidler (1987) explored the key perceptions of lack of control, reactions of important others, fear of negative evaluation judgmental attitudes, social situations, fear of crowds and as they describe, catastrophizing thoughts as critical components to compare between social phobia and performance anxiety. The performance anxiety literature provides information about the prevalence of performance anxiety in other arenas, such as the

business world. Presenting in the work place, speaking within a new circle of friends or colleagues, or raising a hand in the classroom are all social situations in which this kind of research may be relevant, and using music from the other side of the experience as the mediator of intensity of the anxiety may be helpful here. Kirchner, Bloom, and Skutnick-Henley (2008) commented that "high levels of anxiety tend to impair performance by diverting attention away from the task and toward oneself in the form of worrisome or task-irrelevant thoughts" (p. 60). The ability to maintain focus on the task, self confidence, self trust, and collaboration would seem to be the core elements presented in this body of literature that could potentially serve as treatment goals in community clinical model of work with music therapy and anxiety.

Collective Community Coping Strategies

This section will explore and highlight some of the main authors, studies, and theories that are currently being discussed in relation to collective coping with aspects of living such as feelings of vulnerability and inadequacy. One idea is that society is more risk conscious in contemporary culture, which impacts the social dynamics of modern society (Wilkinson, 2001). Another author who explored this was Stein (2004). He developed the idea further through the psychoanalytic anthropology lens by asserting that since the air attacks in New York and Washington in 2001, the 9/11 legacy left a "free floating anxiety" (p. 8) that permeates the consciousness of America. He further stated this incident has left the culture in a "vicious cycle of anxiety and defense" (p. 14). In her psychoanalytical theory of personality, Karen Horney (1992) identified the environment as a critical factor in personality development. Her writing also touches on the notion of social hostility that permeated through the interpersonal environment with the emergence

of competitive individualism. Social hostility and basic anxiety also provide an overarching mechanism to understand the anxiety phenomena further. In brief, Stein (2004) theorized that the 9/11 attacks were psychological de-masculinization of iconic American symbols and a double projective identification situation that was ultimately representative of rage towards parents. Stein continued to state that the reaction to the attacks was one of humiliation and rage. The rage resulted in another cycle of projections towards a split part of the collective psyche. The anxiety literature in social and cultural context points toward the overarching theme of focus on other. Regardless of the theory, the idea of focus on the other seems to be the running theme and something that needs to be given attention in the investigation of anxiety.

Based on the above literature, anxiety represents a dynamic force based on the concepts of self, fear, helplessness, adequacy, and value. In the study produced by Keller (2010) the interplay of these occurrences on a molecular, genetic level was highlighted. Keller discussed current thought in the field of 'epigenetics,' the belief being that essentially we cannot separate one from the other. The discussion is no longer nature versus nurture but refers to Ridley's (2003) theory of nature via nurture. If this rings true, then the act of interplay within a single music therapy session will be effective in mediating conceptual distinctions for people experiencing anxiety. Based on the literature it can be concluded that the social architecture of anxiety is hidden within threads of personality theory, economics, and epigenetics.

Music and Anxiety

The famous quote from the play "The Mourning Bride" by William Congreve claims, "Music hath charms to soothe a savage breast, to soften rocks, or bend a knotted oak" (Congreve, 1697, 2008). This, often misinterpreted quote ('breast' being replaced by 'beast') exemplifies the power of music to break down barriers and create metamorphosis or change the structure of things that are thought to be immutable. Through time, the replacement of the word breast to beast implies that music soothes rather than re-structures as the quote intends. The same stance can be applied in approaching the topic of music and anxiety. Anxiety has many shapes, forms, and structures, and soothing certain symptoms is only one part of a complicated whole. There are other voices of anxiety that require a platform for expression. There are ample examples of quotes that are imprinted into the collective psyche on the power of music that may not be interpreted as originally intended, losing the essence of the quality. It is important to understand current thinking on what systems are activated in the human response to music from a scientific perspective. The following section addresses important findings on this subject.

The Interplay of Music, Brain, and Anxiety

Vuust and Kringelbach (2010) discussed the most recent studies available connecting music and the brain. They included theories about the variety of emotional responses and expectations people have to certain qualities of music. Qualities mentioned were rhythm, tempo, and stem cell events that connect music to physical and emotional arousal. According to Vuust and Kringelbach, music is possibly an integral part of human

evolution and survival. They discuss how the frontal lobe area of the human brain has adapted to music to function beyond cognitive activity (as previously understood) and now acts as an auditory mirror of our experienced emotional state.

Two concepts that may inform a developing theory on the treatment of anxiety with music are the concepts of musical expectation and musical prediction. Both highlight the constant flux of auditory structures during the music experience and that the brain response is dependent on the structure of the music (Vuust & Kringelbach, 2010). The information gathered by Vuust and Kringelbach (2010) provides some basic knowledge with can be used to assess the neuroscience literature of today.

Vuust and Kringelbach proposed that there are certain qualities of physical and emotional arousal and a flux of simultaneous auditory mirrors that occur in the brain when making music with another. Such qualities may add to the level of intimacy that occurs and may also be responsible for activating the imagination.

Other researchers have found connections between music, imagination, and perception. For example, the relationship between body orientation and imagination was explored by Kandel, Schwartz, and Jessell (2000). They investigated certain activations in the brain (posterior parietal cortex) that showed that individuals possibly use the imagination to orient their bodies to an actual figure. This information suggests that those structures in the brain are used for both imagined and real world experiences (p. 394). In their book, Schroeder and Matheson (2006) also provide theoretical context for the ideas and theories of how the architecture of the imagination is designed and operationalized. In addition, in their investigation on hearing in the mind's ear, Zatorre, Halpern, Perry, Meyer,& Evans (1996) found that when participants who were identified as vocalists

listened to a song they were preparing for an audition, similar regions of the auditory cortex area of the brain where activated as when they were imagining practicing the same song (p. 29). This evidence points directly towards the imagination as a multisensory mechanism. It also supports the idea that imagination can be potentially harnessed as a psychodynamic tool in therapy to call upon an experience (past, present, or future) with the therapist as co-creating witness. These are attributes of the uniqueness of the creation of intimacy that are of interest within the study of decreasing anxiety through music. One theme that is noticeable, and on which Zatorre et al. (1996) also commented, is the predominance in the field of neuroscience of research on music listening in contrast to the effects of music-making.

Researchers in the fields of musicology and music therapy have long been interested in the relationship between the brain and music, and many theories, ideas, and experiments have resulted from the interest. There are established and approved approaches for working with anxiety in both fields; the most common are called *clinical neuromusicology* and *neurologic music therapy*. A music therapist who has written about music listening, neuroscience, and relaxation is Robert E. Krout (2007). His writing represented a change of tide in the perception of using music therapeutically as a wellness tool. Krout's perspective is based on the premise that the combination of music and relaxation is processed in the brain where it has such a malleable effect that it can be used for a variety of purposes, including coping with anxiety. With this in mind, it is necessary to reflect on the aforementioned concepts in terms of working with typically functioning adults who are experiencing anxiety and who do not want to take medication or use cognitive behavioral methods to treat their anxiety.

Function and Quality of Music

Music Expectation: Response to Music

According to Vuust and Kringelbach (2010), there is an operational mechanism in the brain that they have conceptualized as music expectation. These theorists believe that the function of the brain predicts what is coming next in the music (e.g., whether music violates, delays, or confirms expectations). Such expectations are dependent on an individual's perceptions of what violates, delays, or confirms an expectation. Although the concept is based on the listener's experience of an induced emotional state via the music, the implications for using this knowledge in clinical improvisation or music-making and anxiety theory seem promising, in particular with regard to formulating interventions that aim to regulate affect through steering the client into a state of heart beat regulation., Vuurst and Kringelbach (2010) mention that the sensation of predictability was apparent when the structure of the listened music was repetitive with holding cadences thus creating a sense of confirmation of expectation (p. 258). The concept and function of music expectation poses the idea of applying it in the treatment of anxiety in music therapy. If operationalized in practice, there could be other significant and difficult to treat symptoms positively affected, such as inability to relax, fear of the worst happening, or nervousness. The flexible quality of music would allow for the music therapist to apply and translate the three-dimensional response system (violate, delay, or confirm an expectation) into a clinical intervention.

One seminal author in music therapy who has been influential in contributing to the body of music and neuroscience literature is Dr. Conncetta Tomaino whose early career was spent with neurologist Oliver Sacks working on projects involving people

suffering from brain trauma, Parkinson's disease, Alzheimer's disease, stroke, or unique neurological diseases such as*encephalitis lethargica*. Sacks (1973) wrote a book called *Awakenings* that addresses these issues. The literature shows that Tomaino has continued to pioneer this work through her scholarly collaborations with other researchers (Campbell, 2001; Potok, 2002).These experiments not only shed light on how music bridges short circuited areas of the brain, but that it can be a powerful source in bringing isolated people back into the community.

Music and Community

Music is a global resource that can be harnessed by people living in their communities to create sustainability in the village, town, or city where they live. A recent compendium released by the United Nations, Music as a Global Resource (MAGR, 2011) contained reports of a number of different studies and projects that used music in education, as art, and as therapy. Those studies and projects collected revealed positive outcomes in quality of life issues in various communities throughout the world. This is the current conversation that is taking place within the United Nations as evidenced by the emergence of the global group project and compendium (MAGR, 2011). The sentiment of social agency and music in the community is also apparent within the formal study of musicology. Traditionally, musicology has been the study of how music is constructed and represented. There are, however, emerging theories that show a shift in paradigm from the traditionally based structural analysis of music constructs, to an action-oriented direction of individual and collective social agency (DeNora, 2004; Ruud, 2010).

Music Therapy

Music Therapy and Anxiety

A review of the music therapy literature by means of the Ebscohost database, using the keywords *music therapy AND anxiety AND adults* yielded similar results to the nonmusic therapy literature in that a wide variety of case presentations, empirical research, and theoretical models addressing anxiety were evident. Of the 29 articles retrieved, 15 mentioned anxiety in the title along with one or two other symptoms such as depression or insomnia. Three actually identified anxiety as the only symptom to be addressed in the study (Kim, 2008; Lata & Dwivedi, 2001; Smith, 2008). The remaining 11 did not have the word *anxiety* in the title but addressed symptoms, mainly state and trait measures, within the content of the studies. These results showed how prevalent anxiety is within the area of research in music therapy. This also illustrates how the field is conceptualizing anxiety almost as an add-on as opposed to a very real debilitating illness that arises before any situation that may be perceived as dangerous or harming. To exemplify this further, several themes surfaced from this review. The largest body of literature yielded results in the subfield of music therapy and medicine: terminal illness (Clark et al., 2006; Ferrer, 2007; Grocke, 2008), transplants, and music listening (Akombo, 2007); pregnancy and delivery (Chang, Chen, & Huang, 2008); root canal operations (Lai et al., 2008), pre-operative anxiety (Miluk-Kolasa, Klodecka-Rozka, & Stupnicki, 2002); Alzheimer's (Guetin et al., 2009); intimate partner violence (Hernandez-Rui, 2005; Teague, Hahna, & McKinney, 2006); students (Wu, 2002), and inpatient psychiatry (Choi, Lee, & Lim,2008). All addressed either group work or individual inpatient issues during or after treatment for other diagnoses and disorders. A

search on *music therapy AND anxiety* in the Nordic Journal of Music Therapy (NJMT) revealed one study that addressed music therapy in the treatment of neurobehavioural disorders (Hitchen, Magee, & Soeterik, 2010). More recently, Gadberry (2011) experimented with steady beat and state anxiety. In her study, she tested two groups; one group was exposed to a steady bass bar beat and one group was not. The results showed that the impact on the steady beat reduced state anxiety. Although she acknowledged there were quite a few variables that could have influenced the validity, this was a modern experimental quantitative study that will help to inform clinical music psychotherapy as an evidence-based practice in the treatment of anxiety.

Voice and Music Therapy

There is a body of literature that has been progressively building since the mid 1990s involving clinical case studies and theory (Bunt, 1994; Newham, 1998). More recently, there has been an emergence of specific improvisation techniques, methodology, and theoretical development. This can be seen in the recent literature from Austin (2008), Magee and Davidson (2004), and Warnock (2011) as well as Baker and Uhlig (2011).

Music Therapy and Performance Anxiety

Upon review of the music therapy literature there appeared to be keen interest in performance anxiety from musical and occupational perspectives. What was noticeable in the peer reviewed journals is a distinct gap in the literature between psychology clinical research and music therapy clinical research. Only one article from psychology bridged the two and used music therapy research within the reference material (Osborne & Kenny, 2008). The major studies in clinical music therapy research are in the *Journal of*

Music Therapy and lean towards behavioral psychology in design and approach to address cognitive responses. For example, Orman (2004) experimented with virtual reality and graded exposure to elicit physiological and psychological changes in performing musicians. Kim (2008) explored how improvisation-assisted desensitization and music-assisted progressive muscle relaxation and imagery aid in musical elements and their effects on anxiety (Silverman, 2010). Elliot, Polman, and McGregor (2011) explored characteristics of relaxing music as a means of controlling anxiety levels. They stated, "Music for anxiety research has generally adopted one of two approaches, a participant-centered approach in which the participant selects the music or the experimenter –centered approach in which music is selected by the experimenter" (p. 267). The authors pointed out that this has driven a bias and has not focused on musical elements or constructs that actually make music 'relaxing.' Medium complexity in the music was a pertinent element in their results. Their findings suggest that relatively constant music with few dramatic changes in volume, melody, and key, but with some structural changes, is effective. This type of research was useful for the present study because of certain sessions requiring more direct interventions to address various symptoms of anxiety. This shed light not just on the issue of the effectiveness of the use of relaxing music to relieve symptoms, but also provided information as to what kind of musical elements cause irritating arousal. Furthermore, this knowledge provides information as to which psychodynamic interventions are appropriate to give voice to the feelings underneath the anxious energy. Another study that contributed to the body of literature with genre and song choice and anxiety levels was conducted by DeLoach (2003).

The experiences of performance were investigated from the perspective of sense of relaxation or sense of flow by Kirchner et al. (2008). They used a survey design to gain more knowledge about the following performers' experiences while performing. The items included in the survey were reported levels of the following: (a) relaxed/feel-good/enjoyment, (b) emotional expression, (c) loss of awareness of time/pain/sound, (d) reaching goals/getting the right feel effortlessly, (e) being absorbed/immersed/focused, (f) transcention/dissociation and (g) not having to think.

The author who has contributed a significant body of knowledge to the field of performance wellness is Dr. Louise Montello (2002, 2005, 2010). Based on her research with musicians who experience performance anxiety, Montello (date) has her applied findings to create an integrative music therapy model that is known as performance wellness. Within this model, the theory and methodology of essential musical intelligence (EMI) (the innate ability to use music as a self-reflecting, transformational tool) is applied. In her study, Montello (2010) provided a newer concept that further shaped her approach to performance related disorders. Montello (2010) merged psychological and psychosocial constructs of the polarizing effects of a narcissistic injury in personality structure and performance related pressures to create what is called, "the polarizing perfectionist" (p. 112). The performance wellness model aimed to transform the polarizing elements in the musical themes through a variety of improvisational techniques, such as musical self-statements and group music improvisation.

Music Listening as a Music Therapy Method: Receptive Music Therapy

Authors Grocke and Wigram (2007) define receptive music therapy as encompassing "techniques in which the client is a recipient of the music experience, as

distinct from being an active music maker" (p.15). The authors recognize the Bonny method of guided imagery and music (BMGIM) as the most internationally known model of receptive music therapy.

A small body of literature has emerged since 2007 addressing the impact of music listening on anxiety. One study experimented with music listening and neurophysiological responses to music (Krout, 2007). Another experiment examining the effect of a short, one-session live music therapy session on anxiety in the workplace produced significant results (Smith, 2008). In addition, Kim (2008) explored the effect of live music-making on performance anxiety in musicians. All three authors suggested using music therapy intervention to teach people how to cope with real-world situations. There were no studies addressing preventive tools for anxious individuals living in the community attending therapy in private practice.

An expansion of the search included other creative arts therapies (CAT) and expressive therapy (ET) approaches The *Arts in Psychotherapy* journal database was used with the keywords *anxiety AND adults*. Results yielded 385 articles. Of this number, only 9 addressed anxiety and adults in the title. The remaining articles had the word in the citation description.

The same search was conducted using the Ebscohost database to control for variables in retrieved articles. The keywords *art therapy AND anxiety* were used, yielding similar findings to the other two searches. A total of 42 articles were retrieved, and 23 of that number had anxiety and adults in the titles. *Drama therapy AND anxiety* revealed a comparatively lower number of 23 with only two addressing the key words. Dance movement therapy yielded two articles. One of these addressed potential long-term

recovery results, and based on the study's findings, the researchers found the approach worked better with adults than with children. Poetry therapy and ET yielded no results in this specific search.

The overall evidence gained from these searches showed that the field of CAT has predominant modalities in the body of literature. The modalities are music therapy (MT) and art therapy (AT). The available MT and AT literature offers such a wide breadth and variety of research on anxiety that it is difficult to clarify which studies are addressing specific anxiety symptoms and what part of the intervention in the study is effecting the clients' anxiety. There is ambiguity as to what anxiety is, where it comes from, and how to treat it in the CAT literature and more significantly, in the MT literature. Certain studies reflect a movement towards defining anxiety from the perspective of stress in the work-place (Smith, 2008) but based on the literature, the field is far from presenting a comprehensive knowledge on the treatment of anxiety that is based on empirical evidence. Although fairly new to the scholarly dialogue, there is discussion about the relationship between neuroscience, music, and anxiety that may support MT theoretical development in this area.

Music Therapy, Therapeutic Relationship, and Anxiety

According to Beck (2010), Keller (2010), and Ridley (2003), anxiety is an interpersonal phenomenon that is activated through a learned conscious or intergenerational fear response pattern to perceived danger. The review thus far has revealed that it is necessary to create a sense of internal and external safety for a person experiencing anxiety as an important factor in treating the disease. It is, therefore, important to explore the literature further, regarding the musical dialogue that occurs in

any given session, in particular, concerning the connections between anxiety arousal sequences and music therapy arousal and intervention sequences.

Scheiby (2005) illustrated the uniqueness of the music therapeutic relationship as a more, "mutual relationship than the typical relationship in verbal psychotherapy. Because the music therapist also plays music in the work [and] in order for transformation to take place, the music therapist and the client must go on a musical journey together" (p .10). Baker and Wigram (2005) stated that "The process of creating, notating, and/or recording lyrics and music by the client or clients and therapist within a therapeutic relationship [is used] to address psychosocial, emotional, cognitive, and communication needs of the client" (p. 67). From a multicultural perspective, Shapiro (2005) stated that, "Appreciating, learning about participating in another person's musical culture, and encouraging them to share it with others can be influential in forming therapeutic relationships, especially with people who cannot speak the dominant language" (p. 29). Oldfield (2006) also placed importance on the intrinsic interactive qualities within the therapeutic alliance in music therapy.

Clinical Improvisation: Flexibility for Individual Change

The theory and practice of clinical improvisation is an important method used in music therapy as part of treatment process towards attainment of treatment goals. It includes instrumental and vocal approaches and techniques. The major approaches are Nordoff-Robbins (NR) analytical music therapy (AMT), the Bonny method of guided imagery (BMGIM), and the Austin method of vocal psychotherapy (AVP). There are certain techniques that are used within clinical improvisation. These techniques can be formulated out of influences from the major approaches in the music therapy.

How the Music Therapy was Structured

In the current study, every individual music therapy session was conducted with a psychodynamically informed approach. The understanding of music psychotherapy was that it is the specific psychodynamic orientation applied to the design and practice of clinical music therapy. This approach draws from several psychological principles. Those principles are as follows: self as a construct of consciousness, the existence of conscious and unconscious phenomenon, and the analysis of intrapersonal and interpersonal relationships as means to gain further understanding of human experiences that have caused concern (Ruud, 2010; Wilber, 1979). Clinical improvisation is a major methodology in the approach to this study. Of the theoretical frameworks available, Nordoff and Robbins (2007) present a model in musical mobility called the tempo-dynamics schema (TDS). The TDS offers a comprehensive theoretical explanation in the area of what the authors define as *clinical musicianship*. According to Nordoff and Robbins, the major constructs of music in the improvisation arena are defined as fast, slow, loud, and soft, otherwise known as *the four quadrants*. Within the quadrants, the authors define further musical components as the *inner dynamics*. The *inner dynamics* are observed and then applied by the music therapist through various techniques to enhance the, "spectrum of experience and differentiations of experience [that are] put forward in the schema" (2007, p. 319).

According to Bruscia (1987) and Wigram (2004) there are certain techniques that are used within the method of clinical improvisation. These techniques include matching, reflecting, grounding, dialoguing, accompanying, extemporizing, transitioning, thematic development, role-playing, music listening, vocal holding, and free associative singing.

The technique of matching means the therapist plays the same music components in style and quality as the client. This can include some but not all of the components the client plays, such as rhythmic patterns (Pavlicevic, 1997). It is generally used in the beginning stages of therapy to create safety and quality of presence. Mirroring is when the therapist, typically at another instrument (for example, a piano while the client may be on percussion), plays an almost identical musical pattern that the client played. It is an empathic technique that is used to enable alignment with a client and can be used to initiate a sense of self and other in the therapeutic process. Empathic improvisation (Alvin, 1975) originally was designed to use musical components as soon as the client entered the room that would hold the mood state without any agenda of changing it. Currently, it is used within sessions that include verbal communication and music as well as all musical expression.

Reflecting is another supportive technique used to initiate safety in the environment. It is the application of musical components that are different from those produced by the client but are intentionally used to understand and reflect back to the client his or her mood state that the therapist is getting information about via the music (Bruscia, 1987).

Grounding, according to Bruscia (1987) and Wigram (2004) is a technique that is used to maintain an awareness of self and other within the improvisation. It can be useful at times when a client may have a quality of drifting off and losing a sense of presence. It is also known as an anchoring technique. Grounding, holding, and containing techniques are considered within the same group. The main technique is the use of repetition, and

grounding can be achieved through certain musical components of rhythm, tone, or harmony. An example would be the use of steady octaves, fifths in the lower registers of instruments such as pianos, tuned percussion, and strings. The use of repetitive rhythmic patterns that accompany a client's music would be another.

Dialoguing is used to communicate and enhance the interactive quality of making music together. There are two ways to dialogue; one is taking turns as in verbal communication. The other way is for the therapist and the client to play simultaneously.

Accompanying is a technique that supports a client's music by providing an underlying structure that places the client in the role of soloist. This supportive technique can be rhythmic, harmonic, or melodic.

Extemporizing is the use of music that already exists and is used as a base on which to improvise. An example is creating new words to a pre-written melody of a song. Framing is a design concept of improvisation that involves structuring and directive techniques. A frame can include a specific genre, such as classical, Latin, or jazz. Based on a chosen genre, certain constructs can be incorporated into the framework. For example, tonal or atonal shapes and patterns or walking bass lines can be used if the chosen genre is Jazz.

According to Wigram (2004) transitioning is an advanced technique that incorporates all musical components. For example, the use of tension and release could be used with a lingering dominant seventh chord resolving into a root, third inversion chord. This basic component could then be expanded and built upon with other rhythmic or tonal qualities based on the client's positive, neutral, or negative reaction. Its purpose is to maintain the therapeutic link and clinical context in treatment discourse through the

music interaction. It requires a focused attention to the flow of consciousness in the play between therapist and client. Transitioning is initiated by the therapist or client and at either time, is a key component of informing the therapist of the emotional and psychological environment.

Thematic development is also defined by Wigram (2004) as an advanced technique that is used to support and amplify a client's musical voice by matching, mirroring, accompanying, or reflecting on something that he or she has played, such as a lullaby-like melody. The client may begin something, and the therapist may amplify the melody as well as provide a holding and containing environment with predictable ostinato style pattern in the left hand of the piano. Rhythm, tone, pitch, tempo, melody, and many more musical components can be employed in use of this technique. Other well known advanced techniques are role-playing (Priestly, 1975; 1994; 1995), vocal holding, and free associative singing (Austin, 2004; 2010).

Repairing the Autobiographical Anxiety Narrative with Clinical Improvisation

According to Kossak (2009), attunement is theorized to be the fundamental ingredient required for healing to occur in the therapeutic alliance. When this attunement is shared through sound, it is amplified, and the uniqueness of playing music together matches the constant flux of the stem cells in the brain to work in syncopation within real time. Kossak postulated that it is where the physical transforms into the emotional state, and the therapeutic relationship allows for a change in perception of such states. The implications for this are interesting when considering the limitations of language and the potential for bridging culture with music for a global healing of anxiety. Kenny (2006)

called music the mythic artery from which all people connect. Her theory of the field of play articulates the simultaneous occurrence that happens in a clinical musical event.

Summary

In this review the researcher aimed to shed light on the vast scholarly literature on anxiety and presented the current identification, treatments, and theories of anxiety. The researcher also explored the current literature within the CAT field and more specifically, within the music therapy field. The researcher investigated how anxiety is viewed in the literature and assumptions within the studies available. These searches revealed a sense of ambiguity within the music therapy field about what anxiety is and what it truly means for individuals suffering from the disease. The literature contains little empirical research on the specific treatment of anxiety and highlights the necessity to identify it. A few researchers addressed the impact of anxiety in the workplace, and fewer researched MT as a less timely and cost effective means of working with it from a relaxation and listening perspective. The review showed no studies addressing the use of clinical improvisation in private practice for working individuals in the community who experience chronic anxiety. The importance of interpersonal connections to the etiology of anxiety was explored and also revealed potential for development in a music therapy and anxiety theory of practice.

The review shed light on the current dialogue in the neuroscience field, comparing the potential for transmission restructuring during music therapy improvisation with specifically anxiety arousal sequences in mind.

The uniqueness of the therapeutic alliance in music therapy treatment was discussed, showing a rich dialogue about this and highlighting a number of seminal

works that are recognized as foundational theory of music therapy practice. These include the mythic artery, vocal psychotherapy, therapeutic relationship, and attunement.

Although there is an obvious and quite urgent need to address the level of anxiety on a global arena, further dialogue and studies need to be explored in synthesizing the above theories and evidence into a future framework for treating anxiety through music therapy. Finally, based on the evidence revealed in the review, the potential for such a theory to cross the borders of language and heal interpersonal anxiety narratives for people living in the community through music psychotherapy is hopeful and promising.

CHAPTER 3

Method

This study used a multiple single subject design (SSD) ($N = 16$) to investigate individual music psychotherapy treatment of anxiety for a 12-week period. The study investigated quantitative variables with repeated measures. The duration of the study was 2 years and 5 months, from September 2009 to February 2012. A pilot study took place from September 2009 to September 2010. A follow-up study took place in February 2011 to February 2012 and was approved by the Institutional Review Board of Lesley University's Human Subjects in Research Committee. The multiple single subject design was chosen because the purpose of this study was to investigate the issue of anxiety in individuals from the community and the treatment efficacy of music psychotherapy for such individuals. In order to complete an adequate investigation, an individually based clinical model was necessary. The multiple SSD was an appropriate fit because of certain applicable features, such as comparison across conditions (whether or not clinical categories of anxiety decreased over time), high internal validity (the participant was his or her own control), and visual inspection of data (graphs to show any decreased or stabilized trends in anxiety clinical scores from the interventions used). It allowed for observations of individual responses to the treatment, which were an important part of this study (Aldridge, 1994; Hilliard, 1993). Overall, the multiple SSD design allowed for the researcher to establish causation between clinical anxiety categories and music psychotherapy intervention without compromising the flexible nature of clinical music improvisation interventions.

Participants

The participants included were from an accidental sample *(N* = 5) and a community sample (*N* = 11). The reason for this choice was to capture the prevalence of anxiety for people in the community. The criteria for selection were as follows: (a) age range from 18 to 80 and (b) anxiety symptoms for 6 months or more. The purpose of the study was disclosed to participants at the beginning of the study, and an informed consent form was administered and signed by all agreeing participants.

Measurements

Quantitative

Participants were screened once a week for anxiety symptoms using the 1993 edition of the Beck Anxiety Inventory (BAI, Beck & Steer, 1993). It was designed to discriminate anxiety from other potential overlapping disorders such as depression (see Appendix A). The researcher chose this measurement over other available self-report tests for anxiety such as the state-trait anxiety measure (STAI, Speilberger, Gorsuch, & Lushene, 1970) and the self-rating anxiety measure (SRAS, Zung, 1971) because of a number of different factors. These factors included the measurement's internal consistency (*a* = 92), the test-retest reliability over 1-week (*r* = .75), the discriminating factors between the general anxiety disorders group and the major mood disorders group (in particular major depression and dysthymic disorders), and the methodology applied to construct the test from the outset by using a sequential and multistage approach (Beck, Epstein, Brown, & Steer, 1988). Other researchers have also found this measure reliable in the community population (Osman, Barrios, Aukes, & Osman, 1993; Saemundsson et

al. 2011). The BAI is constructed of 21 items, each addressing very specific symptoms related to anxiety (e.g., nervousness, an inability to relax, one's heart pounding, fear of the worst happening, or fear of death) ranked on a 4–point Likert scale ranging from 0 (*not at all*) to 3 (*severely- it bothered me a lot*); the BAI summative total score ranges from 0 to 63. Once the scores were collected, the data were organized into clinical categories and analyzed further. The categories were organized into four different scores based on the guidelines from the 1993 version: 0-7 = minimal, 8-15 = mild, 16-25 = moderate, and 26-63 = severe. The subsequent results are presented and discussed.

Data Analysis

The data were analyzed by placing all participants' scores into the relevant clinical categories from raw scores. The new scores were graphed to visually represent weekly changes from baseline to last session attended. The data were also analyzed in aggregate form as a supplement to the SSD analysis.

Procedure

Participants underwent individual music psychotherapy sessions for 1 hour, once a week for 12 consecutive weeks. The researcher, who is a board certified music therapist (MT-BC) an advanced vocal psychotherapist (AVPT) and licensed creative arts therapist (LCAT), conducted the sessions. The sessions were conducted in two locations; a private clinic and a private music school in the NYC metropolitan area. Each session followed the sequence outlined below:

1. Pre-session administration of the BAI
2. 15 - minute verbal check-in

3. Five-minute warm up and grounding exercise using breathing and vocal techniques

4. 30-minute improvisation

5. 5-minute closure to end, which was verbal or music based.

Equipment. Piano, guitar, voice, frame drums, tuned, un-tuned percussion, and digital listening devices were used in sessions. The piano and guitar provided the harmonic – based instruments, which the researcher used for improvisations. The other instruments provided melodic and rhythmic components in the improvisations.

Settings

Locations. The study was conducted in a private clinic and a private music school in the New York City metropolitan area, both serving adults who experience anxiety. The demographic of the client population at both locations is diverse and multicultural, including African-American, Latino, Caucasian, East and West Indian, and first generation mixed race individuals. Both locations were built from the philosophy of providing music psychotherapy mental health care to people who are functioning and have chronic symptoms of social adjustment issues that might go un-noticed in a busy, everyday urban lifestyle. According to Austin (2004), there is very little research on music psychotherapy as a treatment approach for functioning people in the community who are in need of mental health help. The room used for the study was specifically set up for music psychotherapy and creative processing, and it included art materials, fabrics, figurines, puppets, and books to provide sensory stimulation for the imagination. The specific tools used for music psychotherapy include staple instruments, such as a full length keyboard, guitar, variety of percussion instruments

(including tone bars, singing bowls, and xylophones), electronic tools (such as bass, studio equipment, computer, microphones, personal music devices such as ipods), compact disks, and digital music recorder.

Music Psychotherapy Intervention

Clinical music improvisation. The method of music therapy intervention used in this study was vocal and instrumental clinical music improvisation from a psychodynamic and humanistic perspective. The rationale for using this is that it is a potential tool for addressing anxiety because of the specific interactive quality of playing music together.

Vocal psychotherapy: Vocal holding, and free associative singing. The methods used within the framework of improvisation were the Austin (2008) method of vocal holding and free associative singing. Both are forms of communication using the voice, in this case, as a tool to activate the psyche and restructure the psychic wounds and distortions that were responsible for the anxiety.

Music listening, receptive music therapy. This was a method that employed the use of prerecorded music. The material was usually music that the client identified with from a specific artist or band. This music was explored, discussed, and analyzed by the researcher and participant during sessions. This method has a growing presence within the out-patient music therapy research community. Within this study, the prerecorded music was used in one case simultaneously with improvising on instruments.

Task directive. For each of the 12 sessions, a check in period was conducted at the beginning along with the administering of the BAI. The clinical music therapy intervention would occur next, based on the context from check in and scores on the

anxiety inventory for certain symptoms, such as high scores for unable to relax. The researcher would then ask the participant to choose which item or symptom he or she would like to address. This would be the item that was given voice through selected instruments or songs. This choice was offered as an opportunity for the client to increase familiarity with the symptom and create interaction with it via music and to gain a sense of control over the anxiety symptom. One example of this would be an exploration of expressing the sound quality of the symptom or an exploration of soothing the anxiety symptom. The client picked instruments that he or she felt matched the goal of the improvisation task: to mirror and express the anxiety symptom or to soothe and calm the symptom. Instruments selected consisted of groups of non-tuned percussion and tuned percussion, melodic, and harmonic instruments. The non-tuned percussion instruments were djembe, dumbek, frame drums, maracas, bells, guiro, and tambourine.

The tuned percussion and melodic group included soprano metallophone, alto metallophone, contra-bass tone bar, alto G-tone bar, soprano glockenspiel, panpipes, flutes, and voice. The harmonic group included acoustic guitar, acoustic piano, and an electronic full sized keyboard. The selected instruments were placed in the middle of the room between the researcher's chair and the client's couch.

The instruction was to use specific grounding techniques to set up and promote focus, a transitional environment, and intimacy. Breathing, imagery, and mindfulness (such as body awareness of physical or sensational feelings) were techniques used. This would take 2 to 5 minutes depending on the client's ability to transition and focus on the task.

The next instruction was for the client to begin to play or vocalize first, and the researcher would follow, implementing a variety of techniques to support, mirror, match, and

create musical interaction between both parties in the improvisation. The reason the researcher began to play after the client played was so that the researcher did not interfere with the client's emotional state at the time of entering into the improvisational space. The clients were instructed to play for a maximum of 30 minutes or until the therapist signified that it was time to close the improvisation. The reason for this directive was to ensure the therapist had control over the improvisation in the role of facilitator and as a gatekeeper for emotional and psychological safety.

The researcher encouraged participants to create music freely based on how he or she perceived his or her symptom as a means of getting to know it better. It was also a method used that would elicit a musical psychodynamic environment.

How Sessions Were Conducted

The music psychotherapy method of clinical improvisation occurred after the check in phase was completed. The therapist utilized the check in phase, information from prior sessions, and the theoretical model motivation understanding sensitivity integration containment (MUSIC) (Wigram, 2004, p. 42) to conduct the music improvisation section of each session. Techniques of matching, mirroring, and reflecting, grounding, empathic improvisation, dialoguing, grounding, listening/receptive, transitioning, role-playing, framing, thematic form development, and extemporizing were chosen as interventions.

How the Researcher Tracked what Happened in Each Session

The researcher was also the therapist, which brought up intrinsic concerns for integrity of the research design. The researcher initially made efforts to recruit other

similarly trained music therapists, which did not transpire due to two factors: lack of adequate financial resources and time constraints.

The researcher was aware of the ethical issues that would potentially affect the therapeutic discourse. Measures were put in place to provide as much control as possible. One of these was to control the self-reporting of participants' symptoms every week. During the administration of the BAI, the researcher conducted the process and went through the list of symptoms and marked off the checklist as the participant answered. The use of only one measure was preferred so as not to obstruct the therapeutic engagement process. The researcher scheduled participants on different days or on the same day with at least 15 minutes for the researcher to prepare for sessions. The researcher wrote clinical notes and analyzed music observations and experiences after sessions by using art based projective techniques (Austin, 2008; McNiff, 1998).

The researcher also used recordings of sessions at the half-way point of the study (six weeks) to listen back to the improvisations. According to Turry (2001), it is important to look at the "intrapsychic processes and the musical relationship" as a way of gathering information about the therapy process (p. 358).

These recordings acted as a tool to monitor for any musical transference or counter-transference themes that may not have been identified in the session by the therapist. An improvisational profile and an adapted version of the improvisation territory created by Ansdell (1991) were used for those recorded sessions. The adaptation included consideration of significant psychosocial events, emotional and unconscious transference, and counter transference territory as well as the original physical territory of the improvisation environment (see APPENDIX B) (Fleetwood, 2010). By doing so, this

process provided at least one control to gauge and oversee as objectively as possible the safety of the therapeutic process. The therapist was then able to use any uncovered clinical findings to guide the treatment discourse, allowing for changes when necessary.

Transforming Clinical Work into Research Findings

Because the researcher was completing 16 enrolled case studies within a multiple single subject design, it was important for her to synthesize the information from all of the study sessions. The researcher attempted to do this as clearly as possible to exemplify the participants' major qualities and changes from treatment. The researcher reviewed the clinical material (notes and recordings) and made a brief summary for each participant that captured the quality of his or her character and process. The individual summaries were then considered and analyzed together as group data. The clinical information that emerged shed light on the overall pattern and significant findings of changes in clinical categories. It also contributed to the knowledge of the overarching thematic material of expressing or soothing anxiety.

CHAPTER 4

Results

Quantitative Results

This chapter presents the quantitative results using descriptive and inferential statistics. The participants in the study attended weekly individual music psychotherapy sessions. Five participants (A through F) took part in the study between September 2009 and September 2010. Eleven participants (G through Q) took part in the study between February 2011 and February 2012. Prior to the taking part in the study, all participants provided informed consent. The researcher applied for and was granted approval from the human subjects committee from her affiliated university (Lesley University) and from the research locations (Creative Arts Therapies Center, New York City and Hoboken School of Music, Hoboken, New Jersey).

All participants identified with at least three symptoms of anxiety and met the criteria for generalized anxiety disorder based on the criteria from the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV; American Psychiatric Association, 2000). The treatment goals focused on decreasing anxiety symptoms and increasing a sense of perceived comfort from management of such symptoms. The goal was to improve ability to identify, express, learn, and integrate behaviors to manage and cope with anxiety at minimal to mild levels using psychodynamically informed methods of music therapy clinical improvisation.

The research hypothesis for this study was that clinical music psychotherapy improvisation would be effective in decreasing anxiety. In addition, the researcher highlighted that the BAI revealed scores for general anxiety and social phobia symptoms.

The null hypothesis was that there would be no difference in anxiety scores. Descriptive and inferential statistics were used to test the research hypotheses.

Descriptive Statistics

The age range of the participants in the sample was 20 to 35 years of age. The mean age was 28.3 years. Fifty-six percent of the participants were female and 44% were male. Fifty percent were Caucasian, 6% East Indian, 6% Latin American, 13% African American, 6% West Indian, and 19% Asian. Of the participants, 37.5% were employed full-time while 37.5% were students and 25% were unemployed. Eighty-one percent had health insurance coverage, and 19% did not have health insurance. The participants comprised both accidental and community samples. The accidental sample (n = 5) was recruited from the researcher's private practice. The community sample (n = 11) found out about the study from posters and flyers that were placed in and around local areas such as clinics, centers, or from a search on-line where the study was also advertised. All participants are referred to by pseudonyms. Five of the 16 participants did not complete the study. Participant D dropped out after the in-take session due to time commitments and the data were not used. Participant F was unable to attend the 12th session because of a family emergency but the data were used. Participant L relocated and dropped out after Week 8 and the data were used. Participant 0 moved back to her country of origin after Week 8 and the data were also used. Participant Q dropped out after Week 7 and the data were also used. Table 2 shows the demographic data.

Table 2

Participants Group Demographic Data

Characteristic	Age in years	Gender	Ethnicity	Weeks attended
Participant A	34	Female	Caucasian	12
Participant B	35	Female	West Indian	12
Participant C	27	Female	Caucasian	12
Participant E	27	Male	African American	12
Participant F	25	Male	Caucasian	11
Participant G	34	Male	Caucasian	12
Participant H	33	Female	Caucasian	12
Participant I	27	Female	African American	12
Participant J	26	Female	Asian	12
Participant K	27	Male	East Indian	8
Participant L	33	Male	Caucasian	12
Participant M	20	Female	Caucasian	12
Participant N	26	Male	Latin-American	12
Participant O	26	Female	Asian	8
Participant P	28	Female	Asian	12
Participant Q	26	Male	Caucasian	7

Table 3

Number of Sessions Attended

Sessions attended	Frequency	Percent	Valid Percent	Cumulative Percent
8	2	12.5	12.5	12.5
10	1	6.3	6.3	18.8
11	2	12.5	12.5	31.3
12	11	68.8	68.8	100.0
Total	16	100.0	100.0	

SSD Analysis

Table 4

Anxiety Clinical Category Scores

Range	Key	Anxiety Level
0–7	1	Minimum
8–15	2	mild
16–25	3	Moderate
26–63	4	Severe

Brief Individual Participant Descriptions

Participant A. Tulia was a 34-year-old female of Italian and Irish descent. She was a full time graduate student. Socially, she reported that her anxiety symptoms were activated during moments of conflict in the classroom. She had a history of feeling singled out and stigmatized in school by teachers. The graph shows Tulia's symptoms spike during Session 8 in which her symptoms were rated severe for (a) unable to relax, (b) fear of the worst happening, and (c) nervous. This was due to a crisis that occurred during her studies. Improvisation techniques were employed in this session to stabilize the symptoms. Overall, the improvisation technique that the participant reported helpful was grounding using vocalizations. The researcher would begin the improvisation process using the transitioning tool of framing and focused breathing within a moderate tempo. Once the improvisation environment was in place, vocal work was introduced and progressed to the researcher inviting the participant to sing a vowel sound or a word that helped her focus in the moment. The therapist would employ grounding techniques with the voice that would move and change the musical interaction with a repetitive vocal pattern in the same note and quality of tone as the participant but with a distinct rhythm, for example four even quarter note *ooohs* as the participant sang over it. The quality of the participant's vocal presentation in improvisations changed from quiet and barely

audible to clearer and audible by the end of the study. The graph shows that from after this week, Tulia's anxiety category scores decreased. Tulia's anxiety category did not change from minimal (7) to minimal (0) by her last session.

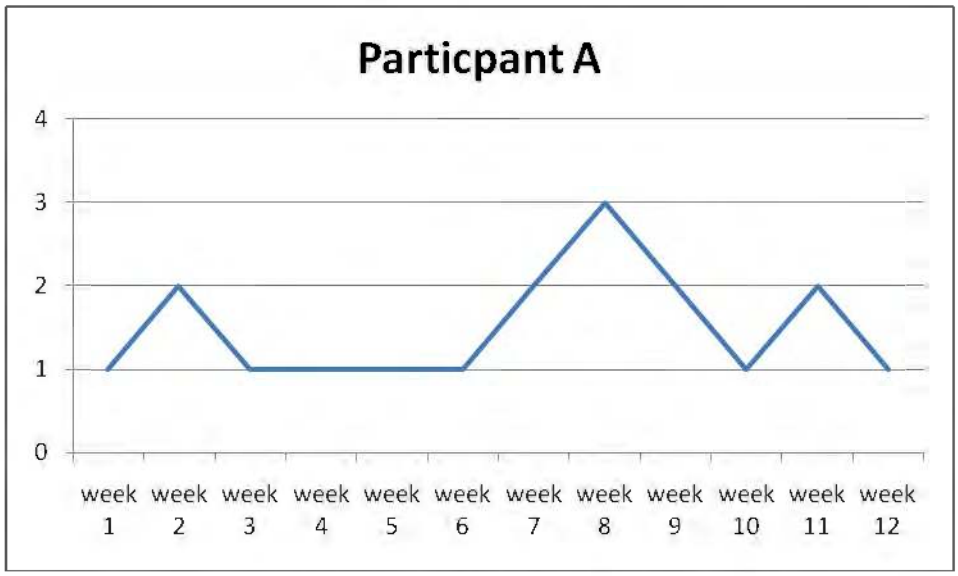


Figure 1. Weekly Clinical Category Scores Participant A.

Participant B. Deborah was a 35-year-old female who was first generation West Indian American. She was temporarily employed, which caused her frequent stress due to the uncertainty. She reported having certain anxiety symptoms as a result of poor self-esteem and self-worth in her professional life. Deborah reported that she had a musical history and played in a number of school bands. Deborah also reported that playing the piano with the researcher helped her feel a sense of safety in improvisations. A theme that was present within the study manifested as softly spoken, low tones, with a whimper-like quality to her speaking voice. This was also reflected in her musical melodies, which would be joined together with hardly audible melodic lines and use of the sustain peddle, which had a merge effect on the notes. When this theme was present in sessions, the participant reported that it represented her feelings of victimization and defeat. The

participant reported responding positively when improvisations focused on specific interpersonal professional conflicts that caused an inability to relax. Techniques used to address this were dialoguing to create a musical conversation and thematic development to enhance the projections in the music. The researcher employed techniques of containing and grounding within the frame to provide safety and predictability in the improvisation environment. Deborah reported that her professional sense of identity felt stronger by the end of the study. By this time, her musical themes had developed clearer, spritely rhythms, and there was a louder melodic sound quality in the piano improvisations.

The graph exemplifies how Deborah's scores decreased most dramatically from Week 1 to Week 3. Deborah's scores changed category from severe (44) in Week 1 to mild (15) in the last week attended.

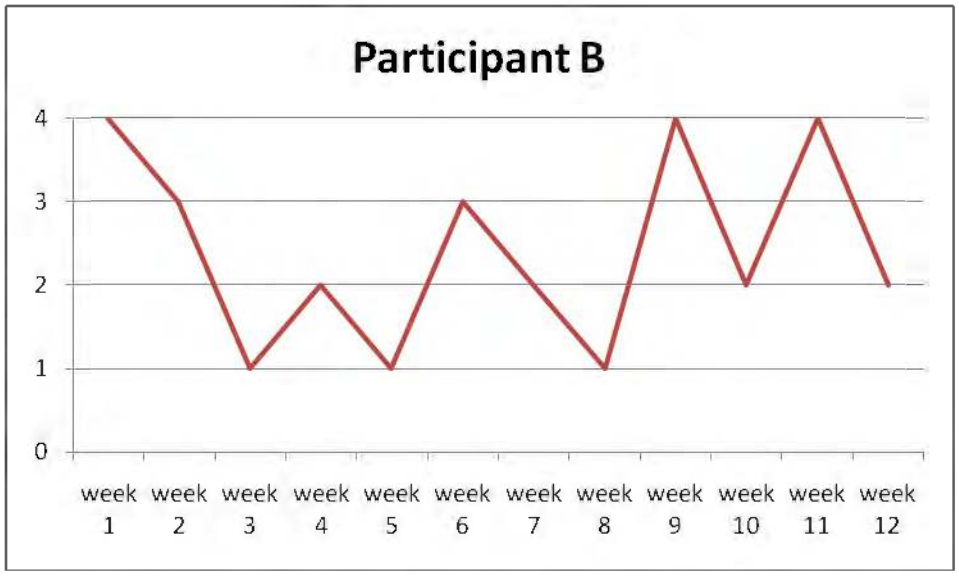


Figure 2. Weekly Clinical Category Scores Participant B.

Participant C. Sandra was a 22-year-old Caucasian female who was an unemployed actor. She attended weekly therapy sessions. Sandra reported experiencing constant worries

with simultaneous stomachaches during situations that made her feel anxious, and she was overly concerned with making the right decision. The interventions to which Sandra reported that she responded most positively involved a mixture of identifying certain prerecorded songs that were empowering or calming and using live improvised music to extend that feeling. Sandra reported that vocalizing and playing drums along to a specific prerecorded song in sessions empowered and focused her when she was feeling anxiety symptoms. She also reported that she was able to reconnect to the session when she listened to the song in other contexts that would activate anxiety symptoms. The techniques utilized to create this improvisational environment were grounding and extemporizing. The participant initially presented in the improvisations with vocal sighs and groans while she drummed slow, interrupted, yet solid sounding strikes on the djembe. The researcher utilized mirroring and reflecting techniques to amplify this quality for the participant. This quality changed through the course of the study with a faster tempo and pulse to her music. The researcher continued to utilize mirroring and reflecting and also introduced thematic development to expand emerging themes. Her singing quality changed in the same way, and the overall music had flow and was less interrupted.

Figure 3 shows that in Week 6, there was a seven point increase and then steady signs of decrease and stabilization of scores. From Week 6 to Week 8 there was another pattern of decreasing symptoms. From Week 8 to Week 12, scores showed a stabilizing trend and remained within the mild to minimal categories. By the end of the study, Sandra's scores changed category from Week 1 moderate (23) to mild (9).

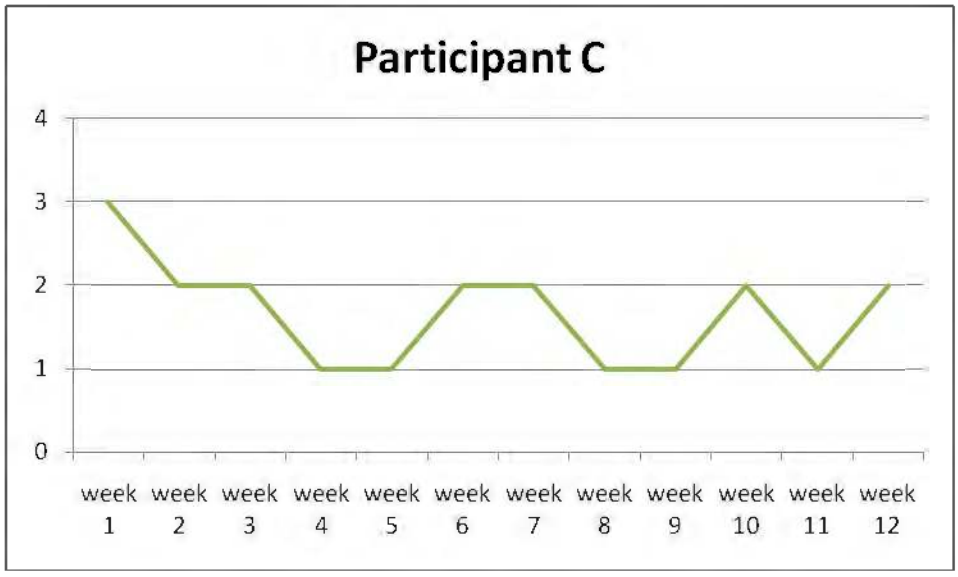


Figure 3. Weekly Clinical Category Scores Participant C.

Participant D. Ian took part in the intake session and then dropped out of the study. His scores were not used in the study.

Participant E. Trevor was a 27-year-old African American male. He reported enjoyment when using music as a way of exploring a certain identified anxiety experience that he had called 'antsy.' Trevor reported that this came up for him whenever he had a symptom of unable to relax, heart racing, and shock sensation. He reported that he experienced this in certain contexts in which he perceived losing his liberty to express and control his environment, particularly at work. The graph shows Trevor's anxiety scores spiking during Weeks 4 and 9. He reported being 'antsy' in these weeks. When this quality arose, Trevor wanted to explore using improvisation either expressing it as its energy, (Week 4) and the consequential feelings of that, or soothing it (Week 9) as another means of exploring and coping with the symptom. When Trevor expressed 'antsy' on the piano, the music had disjointed melodies with hesitant pauses that produced a short staccato based quality. Dialoging techniques were employed to amplify the musical voice that jumped and

hopped around the participant's end of the keyboard. When he explored antsy with other instruments, it would present as to and fro scratchy qualities on the cabassa and guiro. Trevor reported enjoying dialoguing with this theme because it helped him understand how this manifested in his ADL, such as in his verbal communications at work. When Trevor explored 'soothing' antsy feelings, he reported that playing the piano with the researcher provided a feeling of contentment. Grounding and dialogue techniques were employed to provide the containment and predictability as well as amplify the emerged soothing melodic voice that the participant had found by the end of the study.

The graph shows an overall decreasing pattern after these interventions. He was not able to come to his session in Week 5 and did not specifically name the intervention in Week 4 as a cause for the decrease. His category also changed from mild (13) to minimal (5) by the end of the study.

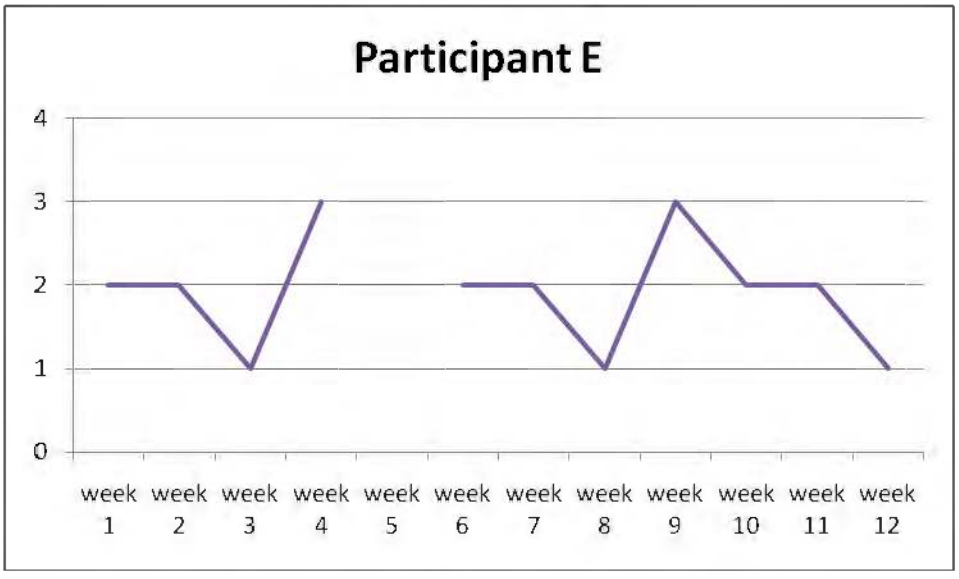


Figure 4. Weekly Clinical Category Scores Participant E.

Participant F. Bruce was a 25-year-old Caucasian male. He identified specific symptoms of being "unable to relax," "heart pounding," and "difficulty breathing," as main

areas of concern. He reported that these symptoms often impeded his sense of well-being in certain contexts in that they led to other symptoms of anxiety, such as an inability to focus and obsessive behaviors of counting and symmetry. He did not attend Week 12. The graph reflects a steady decrease in scores up to Week 10. During Week 11, Bruce reported experiencing symptoms such as being "unable to relax" without an identified context. An intervention was made using the instrumental improvisation, but no scores were gathered the following week to assess whether it helped or not. Bruce reported responding positively to instrumental and vocal improvisations, in particular, with use of outwardly focused vocalizations rather than deep breathing inward techniques when he felt out of breath. To begin with, the researcher implemented matching techniques. He reported utilizing this outside of the therapy room when he felt this particular symptom activated. Bruce also reported that when the researcher used certain interventions of grounding and mirroring with his music, they helped him stay focused and present. By his last session, Bruce reported that the symptoms were still present but that he had a greater sense of empowerment in his ability to identify when they appeared in his ADL and manage them with a combination of positive self-talk that was transformed from verbalizing to singing the positive affirmations loudly to produce stronger outward breaths.

Bruce's overall scores decreased from 19 at baseline to four in his last session attended (Week 11), showing a change from moderate to minimal anxiety.

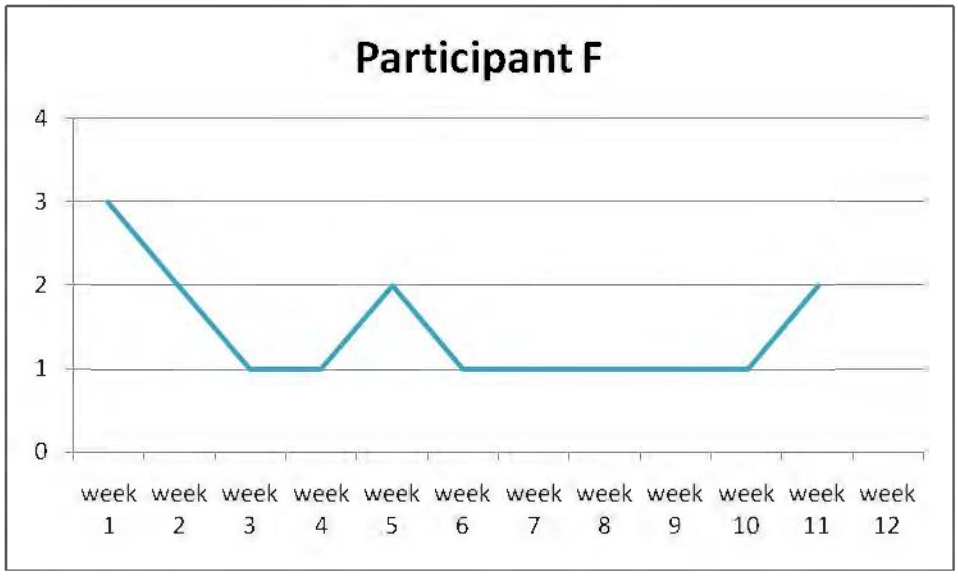


Figure 5. Weekly Clinical Category Scores Participant F.

Participant G. Arnold was a 34-year-old Caucasian American male. He was a full time graduate student of music therapy. It had been 10 years since he was in school. He had recently married and was a full time employed musician. He engaged easily and reported enjoyment of the experience of music therapy. He identified that his anxiety symptoms were related to certain social contexts in which he was expected to perform in some capacity, such as speaking in front of large groups. His preferred instrument in improvisations was the guitar. He expanded into using vocal holding and free associative singing for the first time in this study. Arnold reported that this approach helped him discover underlying issues with authority that caused anxiety symptoms. Techniques that were utilized in the vocal work were matching, mirroring, reflecting, and dialoguing. The researcher also utilized consistent use of transitioning and grounding techniques during times when musical tension was present.

There was a decrease in scores between Week 1 and Week 3, which did not occur again; however, as Figure 6 shows, scores did not grow beyond the moderate category range for the rest of the study, indicating a trend of stabilization of symptoms. Overall, Arnold's category changed from moderate anxiety scores to mild anxiety scores.

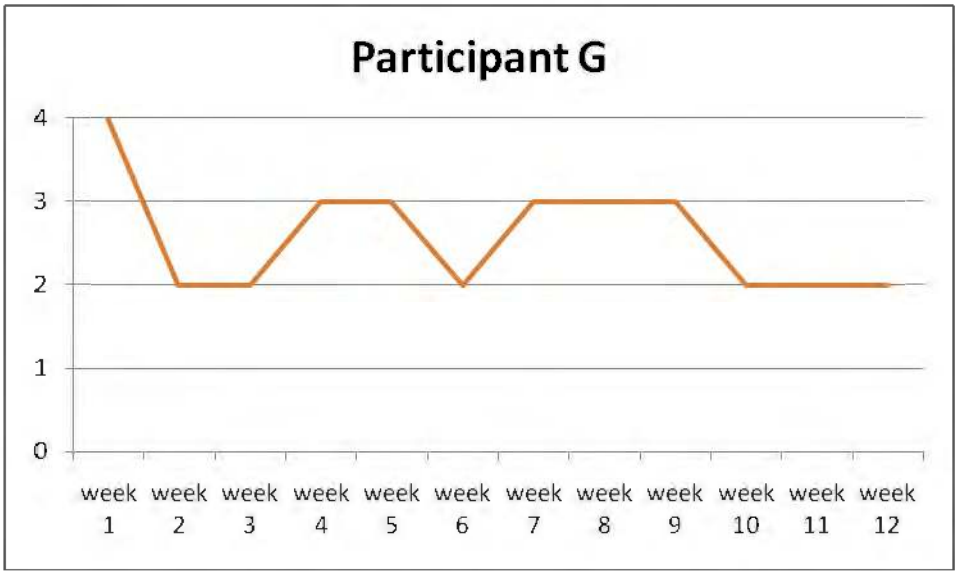


Figure 6. Weekly Clinical Category Scores Participant G.

Participant H. Andrea was a 33-year-old, Caucasian American female who was unemployed at the time of the study. She associated with other people and took part in programs that she felt contributed to providing a sense of wellness and stability in coping with anxiety symptoms. She initially scored 40 points, which was in the severe category range. Andrea reported a positive response to playing even strikes on the contra C tone bar with the researcher on a drum at the beginning of every session from Week 2 onwards. The researcher provided a grounding musical container by playing an accompaniment on either drum or piano during these times when the participant's rhythm, timbre, and quality were matched and mirrored within a predictable steady pulse. The participant reported that the structure of routine and predictability of doing this

exercise every session helped her with feeling a sense of safety and trust to explore anxiety symptoms in music. The participant consistently had multiple scores of 'severe' items. At Week 8 the participant reported that she had felt clarity and was able to set boundaries with others. From Week 7 to Week 12, Figure 7 reflects a steady decrease and stabilization of symptoms. By her last week, Andrea's scores were within the 'mild' anxiety category range.

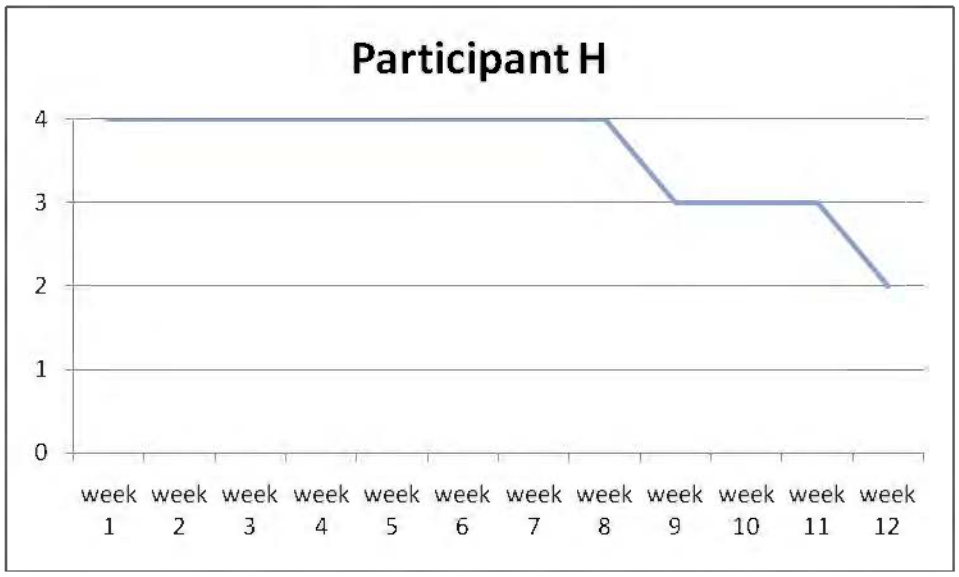


Figure 7. Weekly Clinical Category Scores Participant H.

Participant I. Belinda was a 27-year-old African American female who was the youngest of four siblings. She was a single mother with three children under age 9. She was unemployed at the time of the intake study and was volunteering at a local public museum; by the end of the study, she was being considered for a full time position. She identified an on-going fear of the worst in all of her everyday activities, experienced unresolved issues with the loss of a loved one, and was never able to relax. She reported extreme struggles with self-esteem. Figure 8 shows a continuous decrease in scores from Week 1 to Week 12. Belinda reported experiencing wanting to come out of isolation and

begin a new era for herself. She reported that she responded most positively to the methods of vocal holding and free associative singing. She was a gospel singer in church. At Week 6, Belinda's scores showed a change in severity. This was a session in which vocal improvisation techniques were used to address her fears of the worst happening, which she reported were related to the unexpected death of her mother. The content of this improvisation had a musical transference environment in that the participant paused after a few minutes of singing with the researcher on self-affirmation themes such as "I am good, I am great, I can do, I am strong," and so on. Belinda paused and said, "I would like to sing a song for you." As she sang the song a capella to begin with, the quality of her vocal production changed from flat to in tune and was bright and round in vocal timbre. It was different from her usual singing voice. The researcher accompanied her for a second repeat of the song, and the participant's affect became less restricted. The participant reported that this felt like a breakthrough for her. After that moment, the participant's music was consistently in tune. The highest total category for the remainder of the investigation was minimal.

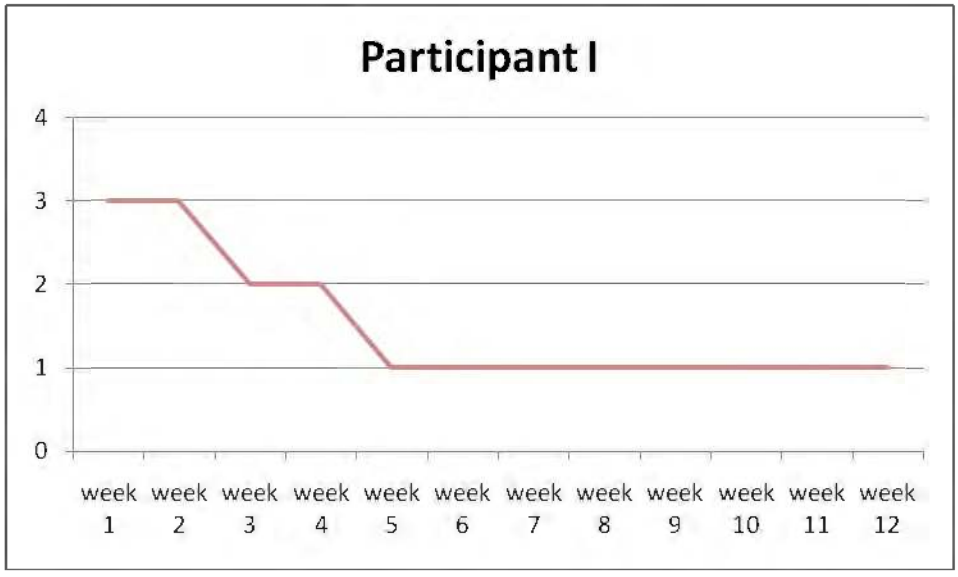


Figure 8. Weekly Clinical Category Scores Participant I.

Participant J. Cindy was a 26-year-old first generation Chinese female from New Zealand whose younger brother and parents were living in New Zealand. She was a graduate student in music therapy. She identified fears of fitting in, nervousness, and performance anxiety. Cindy reported enjoying music improvisations at the piano with the researcher. Cindy's music presented as fluid melodic themes with romantic style chordal progressions that ebbed and flowed between extensive dynamics from soft to loud. There were nuances within the overall structures of her music that interrupted the flow of her melodic runs. These would sound like an unfinished accented semitone at the end of a run or a small dynamic change that went against the flow of the intentional direction of her music. The major technique that the researcher utilized was reflecting. Cindy's music changed in that there was a stronger presence of evenness and completion of phrases by the end of the study.

Cindy described that she had experienced disconnections and blanking out in certain circumstances. She identified that she had two voices: one that sounded childlike and one that sounded adultlike. Figure 9 shows high scores of severe anxiety for the first 4 weeks of treatment. From Week 6 to the last session attended, Week 12 scores were within the minimal anxiety category. Overall Cindy's scores decreased from severe to minimal by Week 6.

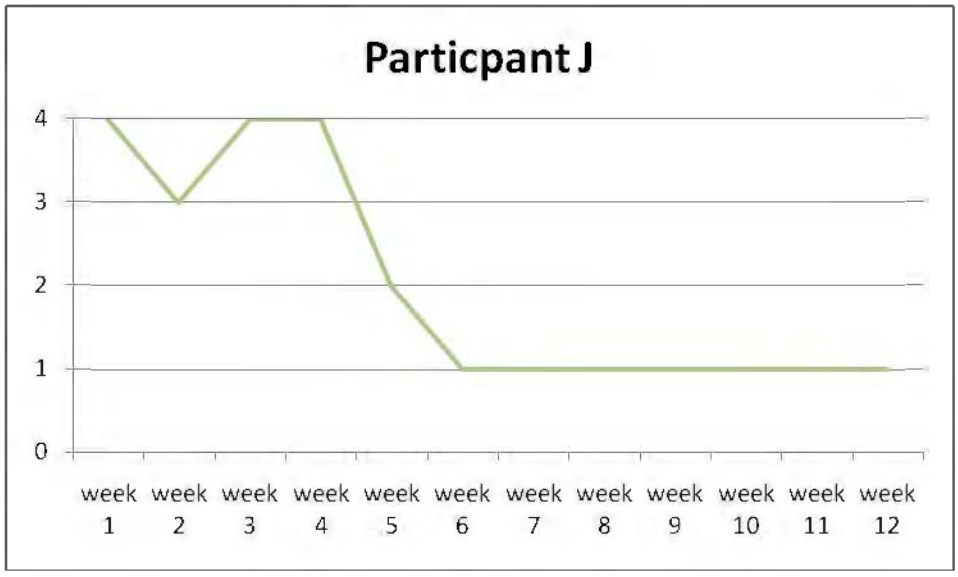


Figure 9. Weekly Clinical Category Scores Participant J.

Participant K. Kevin was a 27-year-old East Indian male who had been living and working in the United States for 4 ½ years. He was the older of two siblings and his parents were both alive and lived in East India. He reported having survived physical abuse as a child and had difficulty trusting or knowing how to trust people in his life. Kevin identified that he wanted to learn how to calm himself down when he became nervous in interpersonal situations. Figure 10 shows a pattern that oscillated between categories within the first 3 weeks of treatment. Week 4 showed a 20 point drop in scores and then remained at minimal scores until his last session attended in Week 8. He reported that playing the guitar with the researcher was calming for him. He also reported feeling more comfortable every week in trying out new melodies. The researcher employed basic techniques of matching, mirroring, and grounding consistently, which was intended to create a safe environment for Kevin to become acquainted with his musical themes and relearn how to take healthy risks with the new melodies as symbolic of this without the fear of being reprimanded. Kevin was unable to continue with the

study due to relocating for a new job. During the 8 weeks he attended, Kevin's category changed from moderate to minimal.

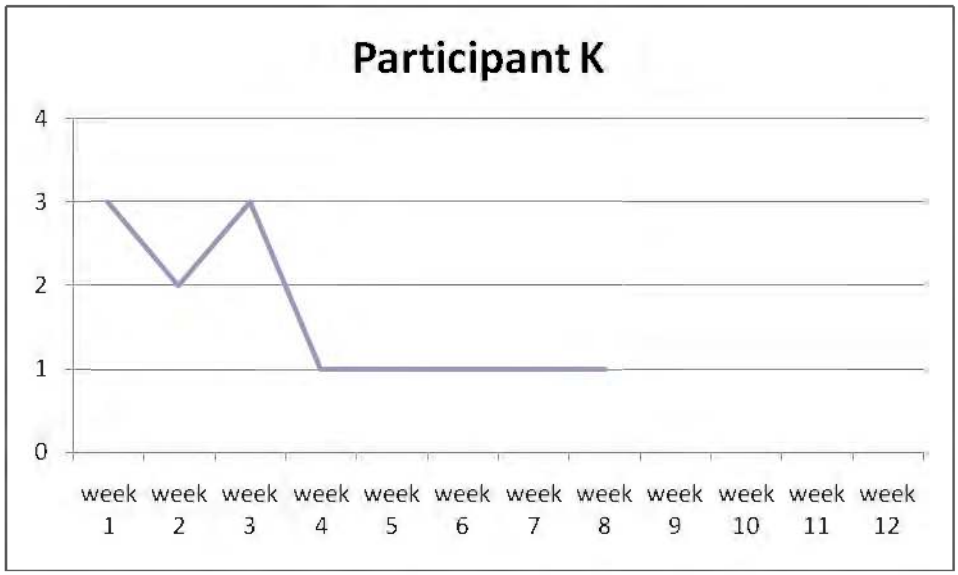


Figure 10. Weekly Clinical Category Scores Participant K.

Participant L. Clive was a 33-year-old Caucasian German man who had lived and worked in the United States for 2 years. He experienced panic attacks in stressful situations in which he was not sure of maintaining control, which was a theme and identified symptom for him. Over time, he reported noticing that music became more fluid and less restricted. The researcher utilized matching and grounding techniques consistently with either a djembe or the piano. At certain times, the researcher also used holding and transitioning techniques to work with dissonance and tension. There were no changes in category from intake to the last session, but within his individual items scores of "fear of losing control" and "unable to relax," there was a decrease in reported severity over time (see Figure 11).

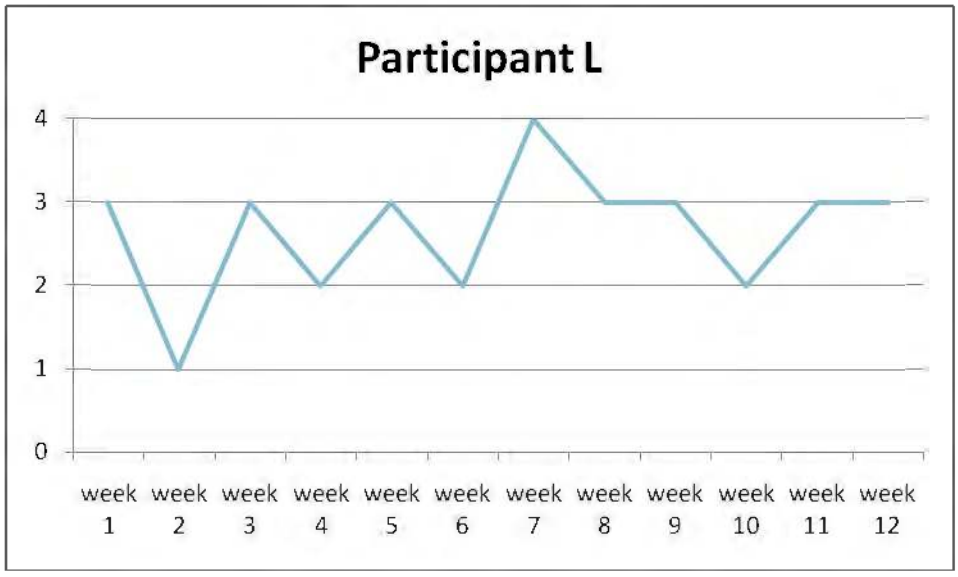


Figure 11. Weekly Clinical Category Scores Participant L.

Participant M. Gabbie was a 20-year-old Caucasian woman who was employed part-time and taking time off from college. She had been diagnosed with bipolar disorder and was on multiple medications. She scored in the moderate category for anxiety symptoms and identified that the experience of numbness was the symptom that she wanted help to control. By Week 3 Gabbie's reporting of numbness changed from moderate not pleasant at times, to mildly unpleasant, but it didn't bother her. Gabbie reported that her feelings of numbness in her fingers decreased after instrumental improvisations on the piano with the researcher. The instrument that the participant reported helpful was the piano for improvisations. The technique that the researcher used throughout the study was reflecting. Gabbie reported that she had begun to hear her frustrations with taking medications come through in her improvisations. Her music was melodic and expressive in quality. She reported consistently that the mood of her music felt nostalgic. Musical components to her melodies included long, even, melodic runs in slow to moderate tempo and dotted rhythms as small accents in between the evenness of

the melody. This did not change throughout the study, but Gabbie reported that the intensity and connection to the music increased. Her scores remained at mild by her last session, which was Week 12 (see Figure 12).

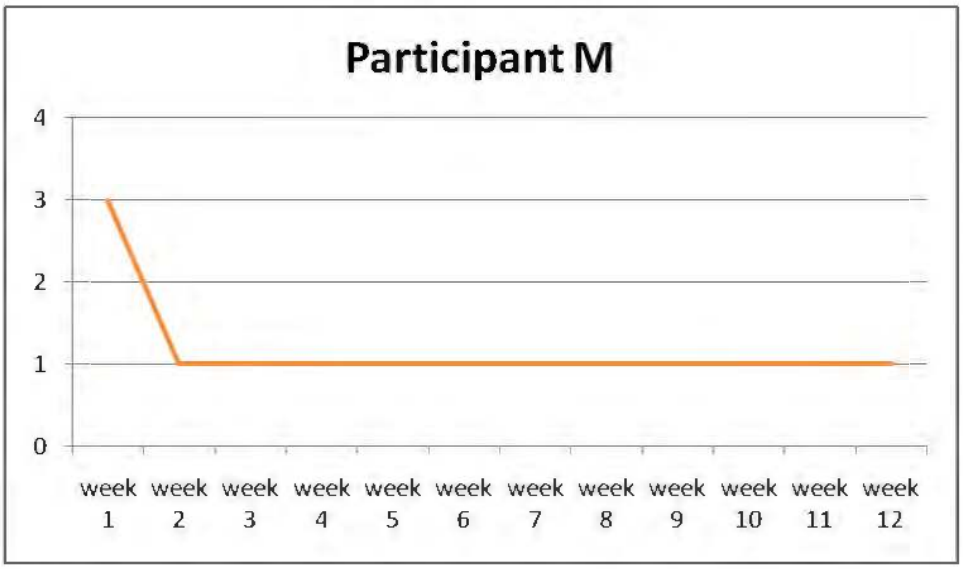


Figure 12. Weekly Clinical Category Scores Participant M.

Participant N. Charlie was a 26-year-old Latin-American man. He was a music therapy graduate student. He reported noticing that he had a fear of the worst happening and fear of losing control. Session 8 included the most important times of exploring this. He reported that his music was always connected to how to make the music have a dense and energetic orchestral feel with complicated syncopation patterns. The syncopation became the musical element that we worked with on guitar and piano to try and understand it in relation to how he tried to control situations. Over time, the syncopated rhythms changed in quality; the texture shifted from dense to more open. The researcher used certain intervals, such as perfect 5ths, and 4ths with matching, reflecting, grounding, and thematic development to work with transforming the syncopation music theme.

Charlie reported a personal crisis in week 8, which showed in the increase in scores. He reported that the instrumental improvisation interventions helped with understanding how and when his music expressed control, and how he could play with the tension and transform it. Overall, Charlie's category did not change over time.

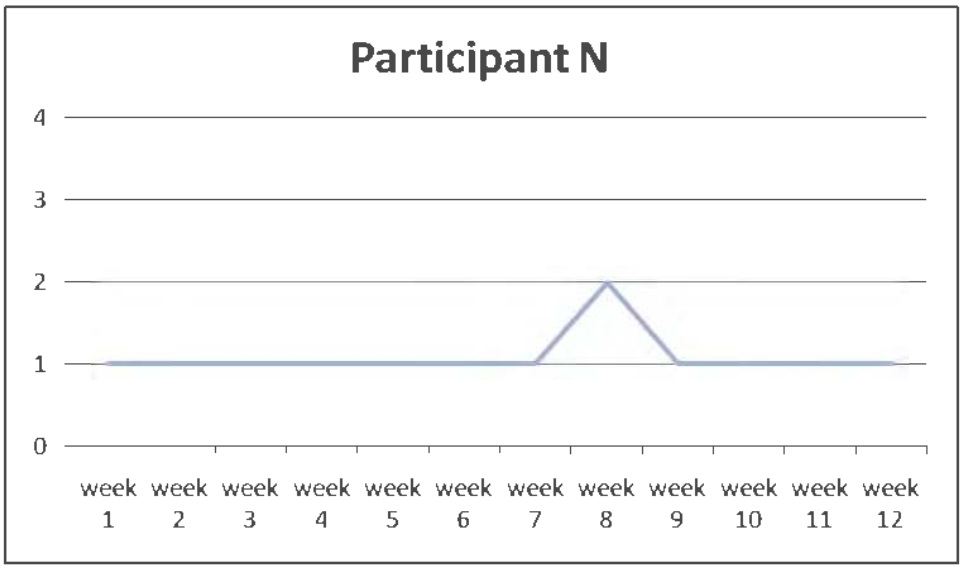


Figure 13. Weekly Clinical Category Scores Participant N.

Participant O. Mia was a 26-year-old Korean woman who was briefly studying in the United States and reported experiencing severe anxiety symptoms related to performance anxiety and feelings of inadequacy. Mia had to leave after Week 8 of the study to return to Korea. Figure 14 shows that the highest scores of the study for Mia were in Week 7. She reported an overwhelming sense of worry and fear about completion of a school project. She reported that doing both instrumental (drumming) and vocal (singing) helped her to feel safe. The researcher utilized matching, mirroring, grounding, reflecting, and dialoging techniques in the drumming and vocal improvisations. The participant's voice had two qualities that were always present. One was a powerful warm tone that she sang in her middle and lower registers. The other was a softer, brighter tone

that she sang in her upper register. She would move freely between both in every improvisation. The participant reported that singing without words and with vowel sounds helped her focus and feel calmer. The music did not transform in quality over time, but the participant reported that the act of playing together and hearing her music reflected along with knowing that the researcher was there helped her focus and feel calmer. Her category changed from severe to moderate by the last session attended.

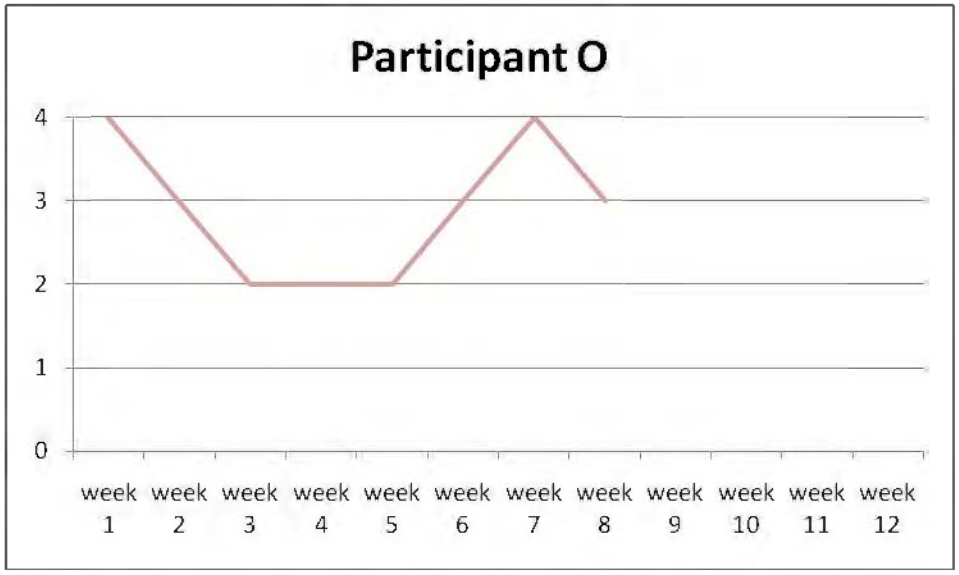


Figure 14. Weekly Clinical Category Scores Participant O.

Participant P. June was a 28-year-old first generation American of Filipino parents. She was the oldest sibling of three and was very close and connected to them. She was a graduate music therapy student studying part-time. She mentioned having major group anxiety but stated that one-on-one experiences were fine. The most frequent item that occurred for her was fear of the worst happening and the least frequent item was difficulty breathing. June reported that piano improvisation with the researcher helped her feel less uneasy. The researcher implemented techniques of holding and containing with

repetitive rhythmic and chord patterns when the participant played melodies to begin the improvisation. The quality of these melodies would consistently be short phrases that were quiet sounding with interrupted little breaks in the flow and line of the melody. Once the improvisation had transitioned into the midpoint, the participant's music changed into broader use of the keyboard with richer, warmer harmonies that had consistent patterns of tension and release that flowed within an even tempo. The researcher utilized dialoging in this section that also included mirroring and reflecting to amplify the change in quality. The participant reported that the improvisations on the piano stimulated her ability to focus on certain experiences in her week that had caused concern and to talk about them afterwards. She also reported that she had not heard herself play such confident and beautiful sounding music in front of another in this way before. She reported feeling a sense of being heard and that helped with her ability to focus and gave her confidence to express herself in front of another. Figure 15 shows that after missing one week (Session 4), the following week (Session 5) her scores were moderate and then decreased to minimal. Totals remained within the minimal category for the remainder of the study.

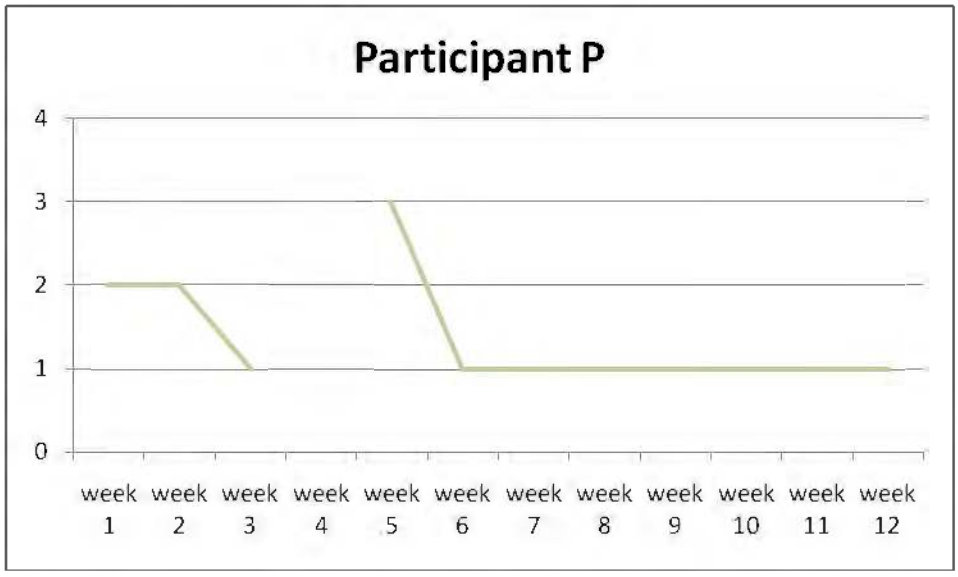


Figure 15. Weekly Clinical Category Scores Participant P.

Participant Q. Jerry was a 26-year-old Caucasian man who was unemployed and had an incomplete arts degree from a major college in the area. He was an only child to a single mother. Jerry reported having survived childhood traumas, including the death of his biological father, physical abuse from a relative, and bullying. He reported a steady increase in fearful behaviors to the point where he could not go outside without the presence of his mother. Jerry reported that he found it extremely difficult to play any kind of music with the researcher. He chose to play the guitar in sessions, and the researcher played the piano. Jerry's music was barely audible and had a disjointed flow to it. He played one or two chords interchangeably with intermittent small melodies integrated into his music. The researcher used grounding techniques to hold and contain without intimidating the participant with too much music and detail. The researcher played very simple chords that matched the participant's, which were held for the most part of a measure. This was done, to create a safe musical environment in which the participant

was not playing alone but was also not intrusive. The participant's music changed in dynamic from extremely soft to moderately loud by the last session attended.

Figure 16 shows that Jerry's category rating changed from moderate to minimal in one week. It remained minimal up to Session 7 when Jerry missed a session and did not return. He reported that he could not manage to come on his own to any more subsequent sessions as his mother was unable to bring him to any further sessions.

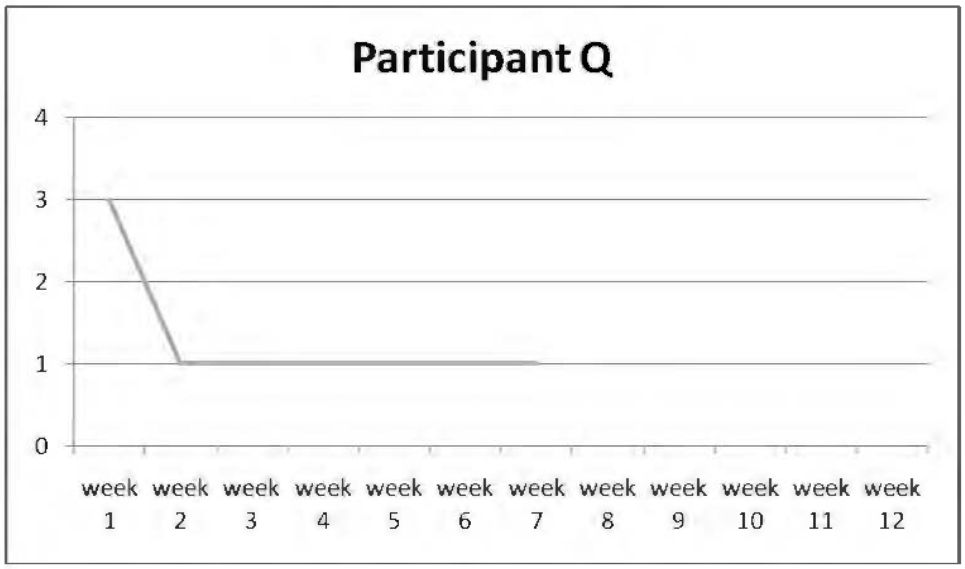


Figure 16. Weekly Clinical Category Scores Participant Q.

Group Analysis

Baseline Scores from the BAI

The results of the individual itemized baseline scores revealed that the symptoms such as being unable to relax, feeling nervous, having one's heart pounding or racing, feeling terrified or afraid, or fear of the worst happening occurred most frequently in the group. The lowest scoring individual items that had the most frequent occurrences were faint/lightheaded, fear of dying, hot/cold sweats, and feeling of choking. An important feature of these results is that the symptoms of panic attack were ranked lowest; those

symptoms of generalized anxiety disorder and phobia based anxiety were ranked the highest.

The highest scores for individual items in the sample showed that the type of symptoms that were most frequent were those of generalized anxiety disorder and social phobia. The lowest scores of the individual items were for panic attack criteria.

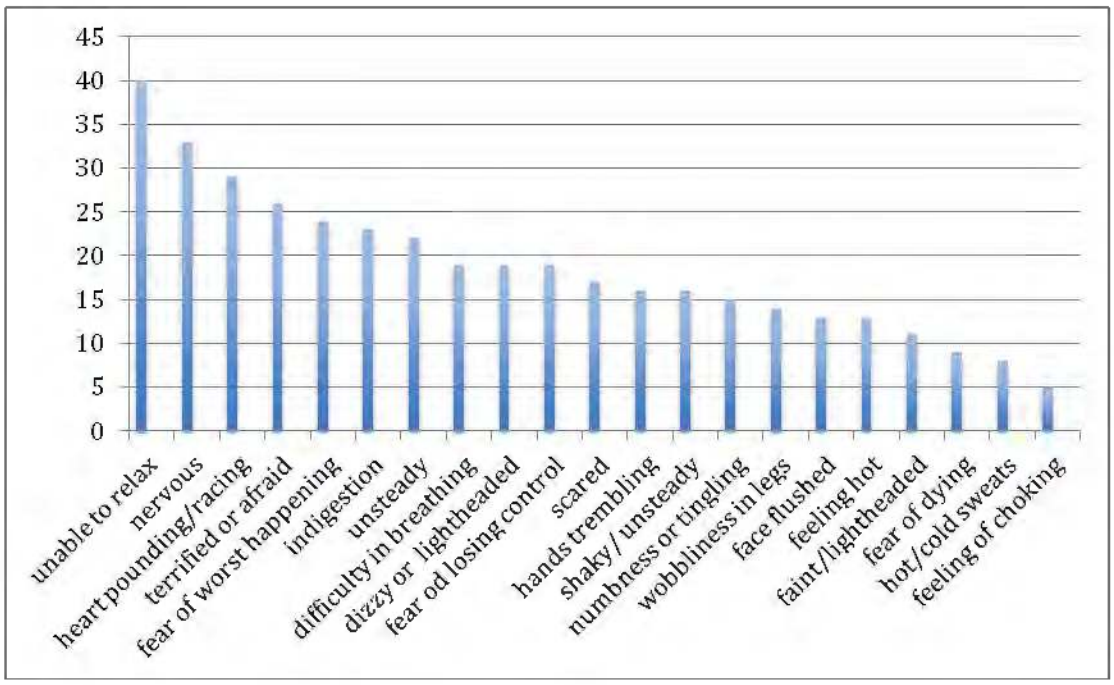


Figure 17. Frequency of item baseline intake scores.

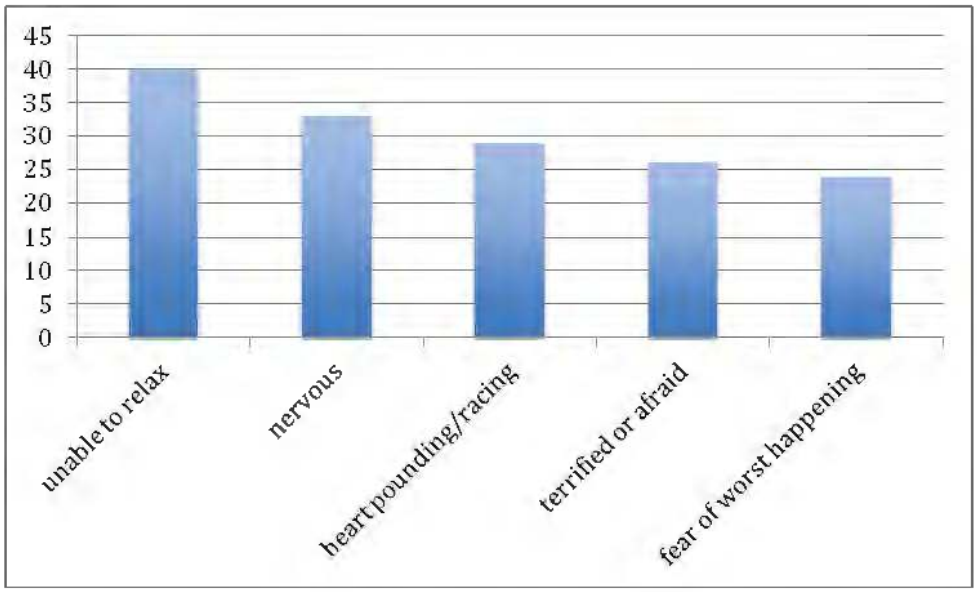


Figure 18. Frequency of lowest item baseline intake scores.

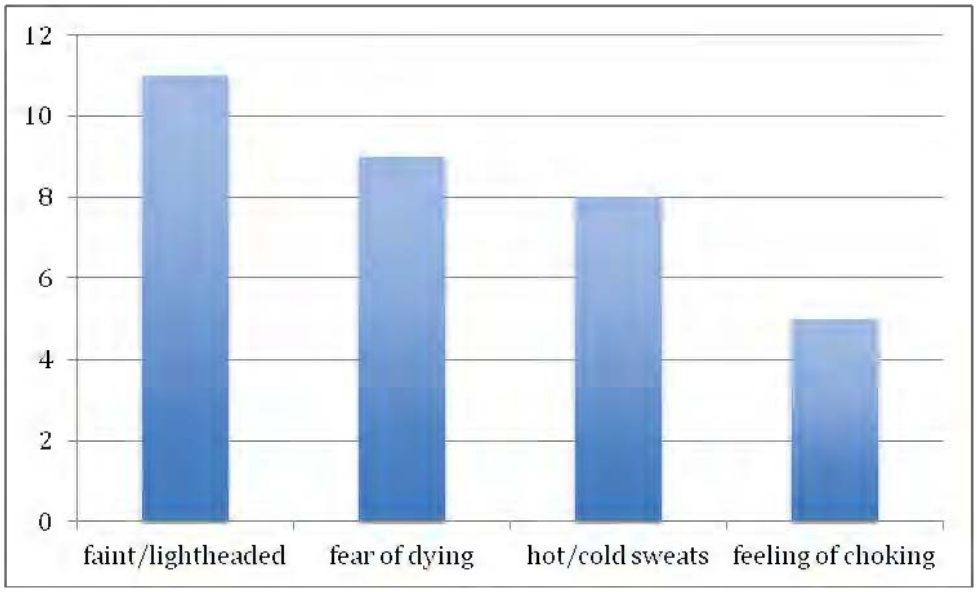


Figure 19. Frequency of lowest item baseline intake scores.

In the 12-week study, the following occurred: 68.8% participants completed; 12.5% attended 11 sessions; 6.3% attended 10 sessions; and 12.5% attended 8 sessions.

Results for Clinical Category Changes Between Baseline Intake, Session 6, and Last Session Attended

Results revealed significant changes in the clinical anxiety category between baseline and Week 6, and baseline and Week 12. There were no significant differences between Week 6 and last session attended. The null hypothesis was refuted. The table below highlights the group's steady pattern of change in clinical categories that occurred over the 12-week period (see Table 5).

Table 5

Pattern of Category Change over 12 Week Period

	Intake		Week 6		Last session	
Clinical Category	Frequency	Percent	Frequency	Percent	Frequency	Percent
Minimal	2	12.5	9	56.3	9	56.3
Mild	4	25	4	25	4	25
Moderate	5	31.3	2	12.5	3	18.8
Severe	5	31.3	1	6.3		
Total	16	100	16	100	16	100

These data indicate a promising pattern of change in standardized clinical categories across the sample by the decrease of severity being reported within the first 6 weeks of treatment to the increase of frequency of minimal scores by Session 6. The same frequency of minimal scores at the last session attended also indicate that the improvement in anxiety symptoms was being maintained in the latter half of the course of treatment. The other noteworthy finding is that the mild frequency scores did not change at the three different stages, highlighting that there was a constant level of mild anxiety

symptoms among the whole sample throughout the course of the study. This indicates that anxiety symptoms were always present. The most important thing to note is that although there were no eliminations of mild to moderate symptoms, the severe symptoms disappeared by the last session, which would suggest improved everyday functioning and management of anxiety symptoms. Severity is known to impede everyday functioning and sense of well-being.

Decreases in Mean Scores and Standard Deviations

The mean (and standard deviation) at intake was 2.81, (*SD* = 1.05) while the mean at Week 6 was 1.69 (*SD* = .95), and the mean at last session attended was 1.63 (*SD* = .81). The scores mirrored the decrease in severity scores within the first 6 weeks of treatment and then stabilizing patterns in the latter 6 weeks of treatment. Furthermore, it was also important to note that the standard deviation followed the same pattern of decrease. The narrowed gap with the mean indicated that the group became more responsive to treatment over time. Based on the information from Table 6, it was clear that an emerging pattern of decreased severity scores and increased responses to treatment occurred.

Table 6

Table Showing the Mean Scores

	Mean	*SD*	*N*
Intake	2.81	1.04	16
Week 6	1.68	0.94	16
Last session	1.62	0.80	16

Scores That Did Not Change Over Time

The results from the weekly totals from baseline scores and the last week attended show a decrease in severity and a change in clinical anxiety category for all participants except participants A, L, and N whose severity scores remained the same. All severity totals showed decreases in scores as well as at least one category change by Week 6.

Individual Item Response Changes

The results from the participants whose categories did not change show alterations within the individual item scores. For example, participant A showed decreases in severity scores for the items of unable to relax, heart pounding or racing, and shaky or unsteady. For participants L and N, the results showed more activity. For instance, participant L showed a decrease in a total of 9 severity items decrease (Items 1, 7, 14, 15, 16, 17, 18, and 19) and an increase in 3 (Items 9, 12, and 13) by the last session attended, which was the full 12 weeks. By Week 6 all of the same items, excluding Item 9, decreased to the same severity level reported in the last session. Participant N showed decreases in items 2, 4, 5, and 18. There were no increases in these items from intake to last session attended.

Inferential Statistics

A repeated measures ANOVA was conducted to examine change in anxiety categories over time. Clinical scores from baseline, Week 6, and the last session attended were used in the analysis. There was a significant effect for time (F (2, 30) = 14.91, $p <$ .001). Post hoc comparisons using the Tukey test (least significant difference) indicate a significant difference in mean scores for anxiety between intake and Week 6 (MD = 1.13, $p <$ .000). There was also a significant difference in mean scores between intake

and last session attended ($MD = 1.2$, $p < .001$), but there was no difference in mean scores between Week 6 and the last session attended. Taken together, these results suggest that music psychotherapy interventions had an effect on changing anxiety category.

The results of this investigation indicate that music psychotherapy is effective in decreasing anxiety symptoms within 6 weeks of treatment. They also indicate that the method is helpful in maintaining stability of symptoms for 6 weeks after treatment.

CHAPTER 5

Discussion

This multiple SSD clinical study, running from September 2009 to February 2012, explored the efficacy of music psychotherapy in treating anxiety. The researcher investigated quantitative variables with repeated measures. This investigation focused on participants who were living in the community and who were experiencing anxiety levels that were making them feel uneasy in their perspective of healthy ADL functioning. The participants were people who showed avoidance-based emotional and cognitive behaviors that impeded them in their everyday routines of professional and personal roles. The multiple SSD study focused on clinical music psychotherapy methodologies of instrumental and vocal improvisation that were used as the primary intervention to treat anxiety symptoms. The investigation used data from the baseline, Week 6, and last session attended to generate new information about whether or not music psychotherapy is a relevant treatment approach for anxiety. This chapter addresses the quantitative results of the study based on the related literature to provide an explanation and gain insight into the effectiveness of music psychotherapy in the treatment of anxiety. The importance of the changes in baseline anxiety scores, at six weeks of treatment, and at last session attended will be discussed. The emerging model for a clinical approach will be presented. Finally, conclusions from the findings, research implications, limitations, and recommendations for further clinical experiments are discussed.

Anxiety Level Changes

Findings indicate that clinical anxiety categories changed from baseline to Week 6 and from baseline to last session attended. The greatest change occurred within the first six weeks of the study. From the sixth to the last session, anxiety severity levels had stabilized. Findings also indicate that although certain participant's severity scores did not change over time, identified individual item scores did decrease, indicating symptom relief and maintenance.

Anxiety symptoms from the BAI were identified. The participants chose one to three of their most disturbing symptoms that rated in the top three of their weekly scores to work on in the sessions. Individual and group data were analyzed. Results from the study revealed the most frequent symptoms of the group as follows: an inability to relax, nervousness, one's heart pounding or racing, feeling terrified or afraid, and a fear of the worst happening. Over the course of the 12-week period, there were significant changes in clinical anxiety category between baseline and Week 6 and last session attended. The null hypothesis was refuted and interpretation and conclusions have been inferred. One of these is the developing short-term clinical model, which will be discussed further with respect to research and practical implications for future efforts.

The findings suggest that music psychotherapy clinical improvisation could be an effective short-term treatment for people who experience general anxiety. The study contributes to a small, yet growing body of evidence within the music therapy field, on the specific treatment of anxiety for individuals in the community. Furthermore, the study presents an exciting addition to the field of expressive therapies for anxiety that poses

potential for expanding into research with other modalities within the 12-week multiple SSD model.

There were certain limitations to the study, and one of those was the dual role of the researcher who was also the therapist. This might have affected the scores.. It is possible that this may have affected the study at times when some, but not all, participants reported feeling confused as to which score to report when they were unsure of the feeling of the symptom in question. During these moments, the researcher stayed focused on the symptom being addressed and repeated the criteria of the BAI. At the same time, the researcher attempted to maintain a conscious, intentional, and focused attention and awareness of expressing neutral body language that did not change throughout these specific interactions. The researcher had originally incorporated one other music therapist as part of the design for data collection. The researcher spent one year attempting to find a suitable music therapist for the data collection role. One music therapist was identified but was unable to continue with the study due to time constraints and commitments. One other music therapist was then identified who was also unable to commit to the study due to time constraints and financial requirements for which the researcher was unable to provide. In the absence of finding a music therapist, the researcher undertook the dual role.

The other limitation of the study was that there was no follow-up post treatment. If a four or eight week follow-up was conducted, important information about the sustainability of lowered anxiety scores may have been gained.

Need for Community Anxiety Treatment

Based on the current definition of anxiety, the baseline scores of this small sample of participants reflected the key features of painful uneasiness of mind, states of somatic or dysphoric arousal, phobias, and fearful overwhelming concern of an anticipated ill (American Psychiatric Association, 2000; Beck et al., 1985; 2005; Clark et al., 1994; Merriam-Webster, 2012; Pacheco-Unguetti et al., 2011). The research brought about important insights into the type of anxiety that is currently found within the community. This type of anxiety, however, is not the perception of anxiety disorder held by the general public, which tends to view anxiety in terms of panic attack symptoms, such as shortness of breath. The overwhelming presence of 'worrisome' and 'fearful' features that came out of the findings highlight how prevalent, yet how untreated, this particular example of anxiety is. The most frequent scores at baseline indicate this as they were for the categories of being unable to relax, feeling nervous, having one's heart pounding or racing, feeling terrified or afraid, or fear of the worst happening. In contrast, the scores for the categories faint or lightheaded, fear of death, hot or cold sweats, and a feeling of choking were the lowest at baseline. The experimental and community sample captured the variety of participants that represented the diverse community in and around the New York City area. The study sample can be counted as a small but relevant group that supports Chambala (2008), the WHO (2004) and Pearson's (2008) statements regarding anxiety being the most prevalent current mental health problem in the United States above other countries. In addition, the group data also support other research findings in the literature that shows anxiety affects diverse communities such as college students (Abbassi, 1999), acculturation and ethno-cultural issues (Bissiri 1999; Vandervoort et al.,

1999), and organizational health care (Hinshelwood & Skogstad 2000).In addition, a wide range of affects of anxiety on socio-cultural issues have been explored such as in, diagnosis patterns of anxiety, globalization, and cross-cultural issues (De Coteau, Hope, & Anderson, 2003; Horowitz, 2006; Mak 2001; Rego, 2009; Salman et al., 1997; Salzman, 2001; Takriti & Ahmad, 2000) and neuroscience and urban violence (Breen & Kashdan, 2011; Bressan et al., 2009). Another key observation of the group of participants is that they shared a similar feeling of failure that permeated their A.D.L. This supports what (Stein, 2004) considers the, "vicious cycle of anxiety and defense" (p.14). In addition, another important characteristic of this group is that in the past, help had not been sought out specifically for anxiety symptoms, yet all participants reported that these symptoms had been a constant part of their life, adversely affecting their satisfaction with life. This is in keeping with the results of Goisman et al. (1993) and Goisman and Keller (1999) in that people with anxiety disorder fail to seek evidence-based treatment for their condition. From a social perspective, this also aligns with the idea of anxiety held by Tone (2009) who suggested what is called a learned emblem of struggle. Although this was the most prevalent sensibility in the past, it may still be present in the community and in the collective perspective on anxiety today. The evidence from this study and the literature show that anxious people in the community are not seeking or getting adequate help but are attempting to manage symptoms by themselves on a daily basis. The existence of the mass of self-help literature on anxiety may be a consequence of this pattern.

Need for Focused Treatment

Naming and identifying key items in the experience of anxiety seemed to have positive effects on how individual participants responded to the treatment. Participants on the whole reported that tracking symptoms over time led to understanding when, where, and how anxiety operationalized affectively, physiologically, cognitively, and emotionally. Although not incorporated into the design, measuring or tracking the context of when symptoms occurred in unique, one-time only situations may have yielded important findings, in particular, in the cases of participants A, L, and N whose clinical categories did not change but specific symptom item scores decreased in reported intensity. In addition, clinical notes showed observations of decreased symptoms after interventions that addressed a specific one-time anxiety-provoking event during the week between sessions. Furthermore, the individual item changes also highlighted an important element in those decreases. Based on the findings, there is an apparent emerging pattern that shows working with specific items, such as unable to relax or fear of losing control, reduces the ambiguity and fears of anxiety and increases a sense of control with managing its symptoms. The co-occurrence of depression was not reported in the findings and was not addressed directly in the clinical sessions. A tool to measure mood could have been useful in deciphering the presence of depression within this sample to have a clearer idea of when depression symptoms co-occurred. Measuring the frequency of both within the same design could be a component to add for future explorations.

Anxiety is a Dynamic, Transient, and Multi-Systemic Experience

The results complimented the foundational theories from the 1970s that anxiety is a multi-systemic response system that includes cognitive, behavioral, and physiological

(Lang 1971; Lehrer & Woolfolk, 1982; Rachman & Hodgson, 1974; Rachman, 1990) features. An important finding corresponded with Antony and Barlow (1996) and Clark and Watson (1991) in that the emotion linked with anxiety is fear, and that it is a future oriented cognitive process. Furthermore, the results uncovered encouragement as a variable for a multi-sensory change in functioning and, thus, support the theoretical and empirical findings of Estrella and Forinash (2007), Fiumara (2001), Smith, 2008, and Vuust and Kringelbach (2010).

Of the 12 disorders within the anxiety category of the *DSM IV-TR,* the sample revealed a higher frequency of symptoms related to social anxiety and generalized anxiety than of symptoms of panic related or other anxiety disorders. This was also an important part of the research outcome because it was representative of the community members who are experiencing anxiety on an everyday basis. The findings, in comparison with the state and trait theories of Antony and Stein (2009), Bandura (1977), Bowlby, (1976), DiTomasso and Grosch (2007), and Otto and Hoffman (2010), indicate that the interpersonal process of the 12-week period was an important piece of the design. There was not any specific measure to identify whether there were significant state or trait categories in any of the participants that had an effect on outcomes, so it cannot be deduced that either had an effect; however, there was a constant theme of reported intrapersonal and interpersonal distortions and conflicts in individual participants. For example, there would be a fear response about a boss, friend, or partner and physical symptoms of heart pounding accompanying it, or the physical symptoms would appear first, and thoughts of negative outcomes from fear of danger or death would follow. Such

information suggests that anxiety is an interpersonal, dynamic, multi-layered response that can occur frequently with another or multiple symptoms at any given time.

Need for More Focus on the Interpersonal Function

The performance anxiety literature suggests that high levels of anxiety divert a person away from a task with task-irrelevant thoughts (Kirchner, Bloom, & Skutnick-Henley, 2008), and this was observed with participant J when she would describe the different voices persuading her to not do something or to be nice so as not to cause conflict. There was a high prevalence of "focus on the other," which supports the current literature of anxiety as an intersubjective experience. In addition, there was a lack of cultural guidelines for treatment (Beck, 2010; Bowlby, 1971; E. Hesse, & Main, 2000; Previti & Amato, 2004; Stein, 2003).

New Ideas about Anxiety and State Via Trait

The on-going argument about state and trait is that anxiety decreases ability to function in various domains, such as attention (Coombes, Higgins, Gamble, Cauraugh, & Janelle, 2009; Eysenck, Derakshan, Santos, & Calvo, 2007, 2009) and reaction to tasks. Findings suggest that as in the case of participants I, J, and H, as anxiety levels decreased, their productivity increased. This particular observation would be an important element to build in to future research to further validate a clinical short-term model.

Individually, participants H and I had individual item scores that referred to death anxiety, which supports the findings from the work of Bozo et al. (2009) that addresses the need for certain theories relating death anxiety and age.

As established from the outcomes of Buckarov and Kynazev (2011) and Lange, Heuer, Langner, Keijers, Becker, and Rinck (2011), it would be useful to explore

emerging experimental research on the relationships between the function of anxiety, the brain, and stress. Monitoring the BOLD and the frontal cortex of people making music in clinical improvisations could be a direction to take the research. This could also assist in the acquisition of knowledge regarding the relationship between music improvisation and psychological medicine (Palm, et al., 2010).

Need for Specificity in Assessment and Treatment

The BAI proved to be a valuable tool in measuring specific anxiety symptoms, which concurred with the research that supports it as a reliable measure (Beck & Steer, 1993; Osman et al., 1993; Saemundsson, et al., 2011). The specificity of the measure helped to keep the focus on anxiety symptoms, which was useful. This quality became an important part in the design of the emerging model as it aided in minimizing a reactive behavior of the globalizing of events during reports of anxiety from participants. It kept the ambiguity theme at a minimally noticed level for the first part of the study and possibly aided in quicker stabilization.

According to the literature, the disorders that co-occur with anxiety are other anxiety disorders. mood and personality disorders (Dreesen & Arntz, 1998), anger and rejection (Breen & Kashdan, 2011), body dysmorphic concerns and rejection sensitivity (Fang et al., 2011), attention alterations (Pacheco-Unguetti, 2011), anorexia nervosa (Thornton et al., 2011), and bipolar disorder (Okan et al., 2011). Based on the group data, all of the above were either presently occurring with the anxiety (such as in the case of participants C and M) or had been reported in intake as part of the psychiatric history.

The Subjective Experience

The subjective experience became the most important theme in the literature and from the findings. The individual unique experience of anxiety was important in that fearful reactions generally resulted in emotional avoidance. The emotional avoidance emerged in the data as excessive worry and the psychobiological experience of it. Given these findings, the application of music improvisation is a potentially valid treatment to consider as the research from the music field highlights music as a flexible and malleable intrapersonal and interpersonal creation (DeNora, 2004).

The findings revealed the flexibility of using clinical improvisation and steered away from traditionally recognized evidence based approaches of CBT and psychopharmacology. The freedom of using clinical improvisation that addressed targeted symptoms was an essential component in making this clinical experiment yield significant results (Bruscia, 1987; Wigram, 2004). The findings support the theories of Priestly (1994) and Scheiby (2005) in that the multiplicity of anxiety experiences in one given moment was held, processed, and resolved via the multiplicity of co-creating music. In support of an evolving opinion that manual based treatments of CBT may be obsolete, Olatunji et al. (2010) found that in some cases of treatment of co-morbidity, anxiety levels were higher after treatment. In this study, a follow-up four weeks after treatment could have revealed important information and limited the findings to data from observed sessions within the 12-week time frame.

The specific design of treatment for anxiety is an important component in treating the complex environment. A poor outcome in the treatment of anxiety is widely agreed upon. As McCormick (1990) pointed out, along with testing for significance in new

treatments, awareness of the nuances of human experiences must also be taken into account in research design. Based on the individual findings from participants A and L, clinical music making supports this notion. Clinical categories did not change from baseline to last session, but specific items that were identified as causing problems with A.D.L did decrease over time. This pattern highlighted an evolving subset of two groups; those whose overall category changed and those whose category did not change but whose individual items did change. In addition, those participants with panic-like symptoms also showed no change in category but did show a decreased measure on various items. This is an important character of the sample, which would be important to consider for future explorations.

Individual responses were an important component of this study, hence, the use of the SSD model for the design. The multiplicity of issues that clinical music improvisation can hold seems further to be supported through certain studies of emotions, such as emotional responses to sad faces (Palm et al., 2010), anger in faces (Buckarov & Knyazev, 2011), and social cues recognition through facial expressions (Lange et al. 2011). The findings from this study show that social cues can improve over time demonstrated as increased eye contact, or directed speech patterns. Although not specifically a part of the reporting, the researcher observed these to be important patterns over time. Not including these in the design caused limitations to capturing a more thorough insight into the individual experience. The use of a measure to take this into account is highly recommended for future research.

An important finding was from participant I's clinical notes. The researcher commented on improved ability to hold eye contact, which was almost gaze-like at times

as the researcher would contain and hold the eye contact for her. According to Lange et al. (2011), this is a positively correlated component of social cues in that the more positive the face affect, the greater the increase in gaze. Mirroring is a technique that is well documented in the psychology literature (Bowlby, 1982) and the application of the technique in music therapy improvisation is also well documented in the music therapy clinical literature (Pavlivec, 1997; Austin, 2004; 2008). The researcher found that both nonmusically and musically, this was a new experience for all participants as demonstrated by a decrease in anxiety levels within three weeks and then a significant change at six weeks. The use of such methods in and out of the music is an important part of this emerging model. The notion of maintenance of self (May, 1996) was supported in that the psychodynamic environment between client and therapist was important and seems to be affected specifically after music making. Although not part of the design for this investigation, it could have been explored based on the observations; however, it was a limitation of the study, but a valuable insight for future research.

The researcher was also therapist, which created concern about the design and implementation of the study. The researcher noticed some instances where this could have been cause for concern. These instances were when certain participants were unsure as to which severity level of a symptom to report. In these cases, the researcher consistently kept focus on the measure and repeated the choices for the participant in the same manner as the first time. The researcher was also cognoscente of keeping all facial and body language cues neutral to provide an objective presence while the participant decided. The researcher spent one year attempting to find a therapist for the data collection. In the absence of finding someone, the researcher assumed the dual role.

Self-Confidence as a Major Indicator for Change

Self-confidence could have been measured to determine any correlation with anxiety. According to Armbrecht (2011), self-confidence is an important finding for the successful management of anxiety. Across her study sample, physiological signs of anxiety were similar between music and sports performance anxiety (Armbrecht, 2011). The researcher observed an increase in self-confidence in participants J and P. Self-confidence would also be an important component to add to any future research. A significant comparison with the literature and research findings of this study was with musical performance anxiety (Papageorgi et al., 2011). In their study, Papageorgi et al found that musicians reported that solo performances were more anxiety provoking than group performances and that there were similar features between performance anxiety and social phobia (Kirchneret al., 2008): however, the results of this study showed that the participants who reported experiencing social phobia type symptoms and who were performing musicians avoided nonmusical group experiences if there was a chance that they may have to stand out alone and speak. This was particularly poignant for participants G and J. In these cases, specific explorations about certain anxiety items led to more insight into the contexts in which these occurred in their A.D.L. The findings showed that musical thematic material could be expressed and then translated into meaningful information about the individual's relationship with the anxiety symptoms that led to changing behaviors.

Identifying how Control Manifests

Lack of control with authority was a theme that arose and was consistent with the results of this study and with the literature in performance anxiety (Steptoe & Fidler,

1987). A fear of losing control was also reported as a major component for participant L who also reported experiencing panic symptoms. Participants L and H were the only people who had high frequencies in individual itemized scores for this.

The framework of Ridley's theory of nature via nurture (2003) presented by Keller (2010) would have been something to address in depth, perhaps by using the State Trait measure in conjunction with symptoms and context and neurological testing. It was difficult to account for where either state or trait were placed for this sample group because the study focused on a specific question of effect; however, the researcher did notice that certain participants responded to the treatment faster with effects that lasted longer. It would be productive to analyze this further in terms of any neurological or genetic predispositions to resilience levels.

Need for Theory in Music Imagination and Anxiety

The research of Vuust and Kringelbach (2010) complimented the findings of this study by highlighting that music is an auditory mirror of emotions. The theory of musical expectation and of constant flux in music-making can aid the physical and emotional arousal that is aligned with the decrease in aroused anxiety states over time.

Research on the activation of the imagination research by Zatorre et al. (1996) compliments the observations of clinical improvisation with the group sample in that memories and pictures of situations had a role in the participants' experience of anxiety. These memories and pictures were reported by the participants as helpful agents in the progression from imagination to verbal processes of any insights into physical or emotional reactions. These pictures were snapshots of past, present, and future. Imbedding qualitative data into the design as another means to gather more information

about how certain themes or music affected anxiety could have been useful. Not including this limited the study's knowledge about the individual participants.

Music listening was not correlated with any direct references to decreasing anxiety levels in this study; however, as Krout (2007) demonstrated in his study, there is malleability to using music with responses to stress; moreover, the recent work of Gadberry (2011) and Vuust and Kringelbach (2010), suggests musical methodologies that would adapt to clinical improvisations. Steering a client towards a regulated heart beat or grounding through an inability to relax or nervousness were methods the researcher observed to have worked within the clinical improvisation framework. It was particularly noticeable at times when the participant wanted to soothe the anxiety symptom but not express it as a specific sound or quality such as antsy, as in the case of participant E.

Using music is a global resource, as established from MAGR (2011) and DeNora (2004), supports the overall findings of a significant decrease in clinical categories from baseline to last session scores. In addition, from baseline to Week 6 there were significant changes, and although from Week 6 to the last session there were no significant changes, there was a trend of stabilization. Given the literature and the findings, continuation of this study in the form of follow-up would be important to consider in relation to the idea of sustainability. This pattern implies that, unlike other treatments that have failed, this could potentially be something to maintain symptoms at lower levels. Further studies would have to take place in order to explore this, but based on these findings, it looks promising to expand the study into other communities to explore the emerging clinical model and its effect on sustainability.

Need for Specific Approach in Music Therapy and Anxiety

Pearson's description of anxiety as vivid and vague was reflected in the music therapy literature in the presence of widespread investigations that either addressed or mentioned anxiety as part of something more specific (Clark et al. 2006; Ferrer, 2007; Grocke, 2008) regarding transplants, and music listening (Akombo, 2007); pregnancy and delivery (Chang, Chen, & Huang, 2008); root canal operations (Lai et al., 2008); pre-operative anxiety (Miluk-Kolasaet al., 2002); Alzheimer's disease (Guetin et al., 2009); intimate partner violence, (Teague, Hahna, & McKinney, 2006; Hernandez-Rui, 2005); students, (Wu, 2002); and inpatient psychiatry (Choi, Lee, & Lim, 2008); however, no literature was found in the individual private practice setting in which people living and working in the community would have most access to specific anxiety treatment. With this in mind, this study provides specific, current, and new evidence to add to the body of literature on anxiety and music therapy.

The music therapy field has showed great interest, however, in performance anxiety, and the work of Elliot et al. (2011), Kim (2008), Orman (2004), and Silverman (2010) has provided findings that address the effects of relaxation techniques on anxiety. This information proved to be helpful and informative when applied soothing techniques were necessary in sessions.

The evidence-based performance wellness model of Montello (2002, 2005, 2010) supports the finding that improvisation techniques aid in the expression and identification of particular voices in the therapeutic process that are expressions of anxiety. In addition, the model also compliments certain reports of increased productivity and self-worth after music psychotherapy treatment.

The overall literature, however, within the expressive therapies field was broad and vaguely informed about anxiety. In the case of poetry and expressive therapy modalities, there were no studies found. The findings of this study helped to somewhat close the gap in literature in this field but at the same time, also illuminated the need for further work in the expressive therapies community on anxiety.

There was an intriguing element throughout the literature review regarding attempts to soothe or to experiment with relaxation techniques to lessen anxiety. It seems apparent that the idea to soothe or relax an individual's experience of anxiety is an underlying bias of researchers or displays naivety regarding the multiplicity of the types of anxiety. As the findings have highlighted, anxiety has various qualities that were expressed in the music rather than the researcher using a one-dimensional attempt to relax or calm symptoms. It could also be that general knowledge of anxiety is limited to panic disorder or panic type symptoms. Those kinds of symptoms could possibly elicit a response and need to help a person re-group and calm down; however, the prevalence of such a disorder was not apparent in this study. The preference of participants as they reported over the course of the study was to explore expressing the anxiety. This took the form of different sounds such as qualities such as "antsy" or "scratchy" and instrument choices such as guiros, or thin, sharp sounding instruments along with erratic rhythms and discordant patterns on guitars. For example, participant N controlled syncopations in the music and reported that it became something he recognized as his expression of anxiety of fear of the worst happening. Another expression of anxiety was the discovery and re-connection with different voices through vocal holding and free associative singing as in the case of participants O, C, I, and J. A central theme that occurred at the

mid-way point of the study was when soothing anxiety techniques were preferred. In the case of participant C, a variation of receptive music therapy was applied. The variation was a music listening experience that was based on the participant's preferred music. In addition to this variation, an active music-making improvisation also took place at the same time that would be classed as a variation of extemporizing as a means of soothing anxiety. Overall, the responses were aligned with the music expectation concept findings and adaptations from Austin (2008), Gadberry (2011), Kringelback and Vuurst (2010).

As noted, Osborne and Kenny (2008) had music therapy listed in the reference list, but no other references towards music therapy were found. Performance anxiety shared a similar feature of interpersonal focus to social anxiety. It is hoped that future studies in music therapy and music psychology find this investigation helpful in providing information to show that clinical music psychotherapy is an effective choice of treatment with adults who are experiencing performance anxiety. Furthermore, this study can help towards specifically informing the fields about how to identify, assess, address, and work with anxiety symptoms specifically, with empirically based clinical direction and methodology.

The therapeutic relationship was reported to be important, and the music component was reported to aid in the process. As Scheiby (2005) and Baker and Wigram (2005) highlighted, the therapeutic relationship in music therapy is unique in that the client and the therapist co-create the music, which evens the power dynamic of the therapist client relationship. Based on the results, this is possibly a key component of using music to change anxiety levels because of the reported issues of participants' fears of authority.

The findings also highlighted decreases in reported performance anxiety issues. Several participants reported a decrease throughout the study. This took the form of applying for new jobs and speaking in front of large groups. The performance wellness model by Montello (2002; 2010) supports this aspect of the approach. The training and experience of the therapist was possibly an important role here as well. The specific music psychotherapy training and combination of advanced improvisation techniques and number of years of experience possibly affected the findings. It could be critical to explore the first 3 weeks of treatment in relation to the use of music improvisation in order to gather more feedback from clients based on brief questionnaires about the music experience.

Music and the Imagination Process

The following table represents a model that has been formulated to provide a theoretical context for this study. The imagination and anxiety model fits with the tempo dynamic schema theory of Nordoff and Robbins (2007) as well as with influential elements from the ideas of Kenny (2006), Kossak (2009), Scheiby (2005). Furthermore, the findings of this investigation support the theory for a model of practice in a clinical approach to anxiety and the broader field of expressive therapies.

Table 7

Table Showing a Proposed Theoretical Model of Music and Imagination Process

Anxiety arousal sequences	Music therapy intervention sequences
Perceived danger as a result of an external stimulus (memory, imagination, person).	Clinical improvisation music making
Central nervous system is activated, Neural pathways to fear responses	Central nervous system is activated Neural pathways re-structured to regulated fear responses in tempo, rhythm, and repetition.
Physical symptoms of sweating, heart racing, dizziness, etc. Feelings of aloneness, and hyper-aroused unregulated states of fear.	Physical symptoms of anxiety re-structured in to sound channels of voice and melody/harmony. Regulates physical symptoms
Safety seeking behaviors: withdrawal, isolation, neediness, and disconnection.	Safety seeking behavior set up for interpersonal support in here and now, repairing the narrative through improvisational techniques together. Quality of presence. Attunement.

In the sample, there was a portion of music therapy graduate students who showed improvement in anxiety levels and self-confidence. It may have helped their education process of professional identity from the perspectives of experiencing their own process and observing a professional in the same field. During the course of this study, the researcher also noted how qualities of self-confidence and self-belief grew among the group members. Learning to know themselves and their own anxiety themes indicated

that the emerging model could become an appropriate application for other students in other fields as well as to be able to identify and work through anxiety in the short-term.

Summary and Conclusions

The conclusions are represented in the following summary as a way to identify music psychotherapy as a valid treatment for anxiety. One conclusion is that music psychotherapy clinical improvisation intervention decreased anxiety severity scores within six weeks of treatment. A second conclusion is that clinical improvisation decreased anxiety scores over the course of 12 weeks. Third is that from six weeks to last session attended, anxiety severity was maintained at the decreased level that occurred up to Week 6. A fourth conclusion is that for some people, anxiety scores may remain the same after treatment, but one or two identified items may decrease in severity over time with treatment. This was the case with participant L for whom symptoms of fear of losing control and inability to relax decreased in severity, although clinical category remained the same. This was also a case in which panic-like symptoms prevailed over the general group feature that was not in accordance with panic. Findings like this would be important to develop further and potentially answer pertinent questions about how the intrinsic quality of specific symptoms of anxiety can be addressed with music, possibly through meta-analysis.

The development of a model that addresses the specific symptoms of anxiety may aid in lessening the compounding feature of this disorder with other co occurring disorders. Possibly the relationship between inability to relax and general nervousness, may in fact be part of a larger continuum that if not addressed, may lead to the more severe physiological symptoms. Based on the findings, the context of anxiety symptoms

was a unique and individual experience that required structure and clear identification in the check in phase of weekly sessions. It would be important in any future work to emphasize this in the beginning of sessions after the administration of the BAI. In addition, it has also been established that music is an effective method of treatment to use with this specific population, possibly because of the malleability and quality to contain physiological, emotional, and the psychological operations of anxiety.

The 3 month short-term model that is suggested is a clinical conceptualization of the findings from this study (see APPENDIX C). It is presented as a potentially helpful addition for music therapists working in community based services. The short-term, 3 month model is designed with services such as outpatient clinics and private practice. Future directions may include adjusting the design so that more frequent sessions occur within less time, for example, daily instead of weekly. It could be useful for other sectors of the community that may need less time to stabilize clients, such as inpatient settings. The findings from baseline to Week 3 may be influential for such adjustments. Key components to be emphasized are the individual multifaceted experience of anxiety, the structure of session format, and inclusion of flexibility of improvisation combination were of extreme importance. The action of co-creating music maintained a connection to the present, yet at the same time, allowed for exploration of other issues that arose during the improvisations. The study was specific to working with people who experience anxiety in the community, and by design, and results cannot be generalized to the larger community. The character of the sample did provide insight into the prevalence of general anxiety symptoms with people living and working in a busy urban setting. The demographic captured full time students, unemployed professionals, and full time

corporate executives in the age range of 20 to 35 years old. As 82% of U.S inhabitants live in these settings (WHO, 2009), this is important new information that could be gathered in other urban areas. This study presented the prevalence of general anxiety within the community and established anxiety as a constant and intensifying occurrence in current culture. In this research, music psychotherapy interventions illuminated how the quality and productivity of individual lives changed within 6 weeks of treatment. Future researchers are invited to build on this model and further investigate, in the service of healing, the anxiety narrative for every individual who experiences it on a daily basis.

APPENDIX A

BECK ANXIETY INVENTORY

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

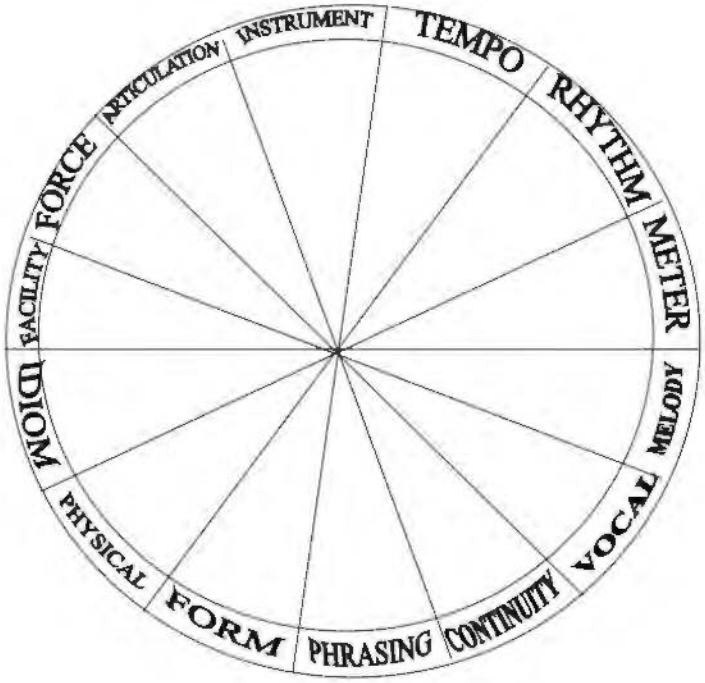
	Not At All	Mildly but it didn't bother me much.	Moderately - it wasn't pleasant at times	Severely - it bothered me a lot
Numbness or tingling	0	1	2	3
Feeling hot	0	1	2	3
Wobbliness in legs	0	1	2	3
Unable to relax	0	1	2	3
Fear of worst happening	0	1	2	3
Dizzy or lightheaded	0	1	2	3
Heart pounding/racing	0	1	2	3
Unsteady	0	1	2	3
Terrified or afraid	0	1	2	3
Nervous	0	1	2	3
Feeling of choking	0	1	2	3
Hands trembling	0	1	2	3
Shaky / unsteady	0	1	2	3
Fear of losing control	0	1	2	3
Difficulty in breathing	0	1	2	3
Fear of dying	0	1	2	3
Scared	0	1	2	3
Indigestion	0	1	2	3
Faint / lightheaded	0	1	2	3
Face flushed	0	1	2	3
Hot/cold sweats	0	1	2	3
Column Sum				

Scoring - Sum each column. Then sum the column totals to achieve a grand score. Write that score here _____.

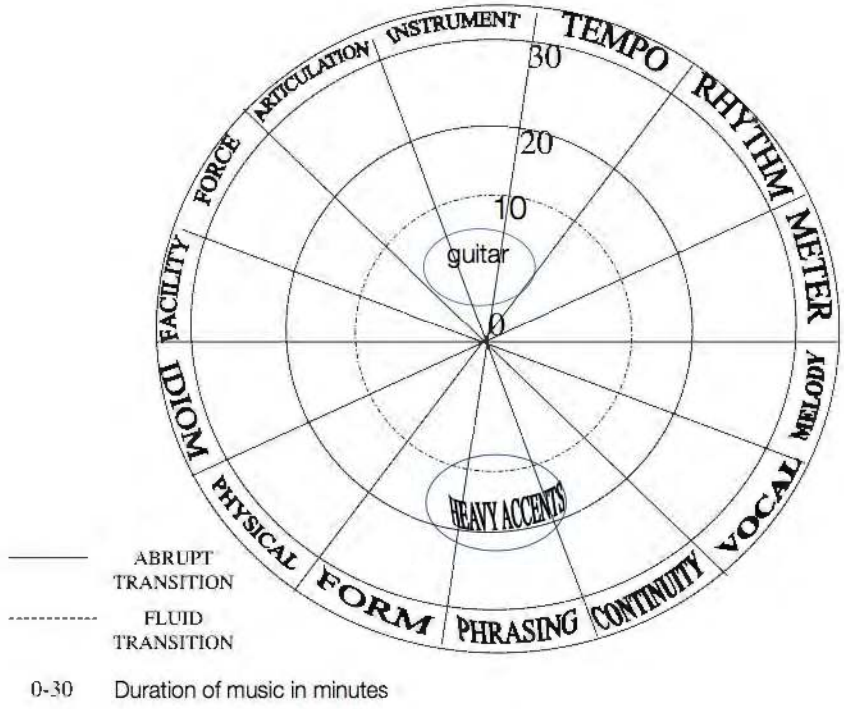
APPENDIX B

BOUNDARY MAPS

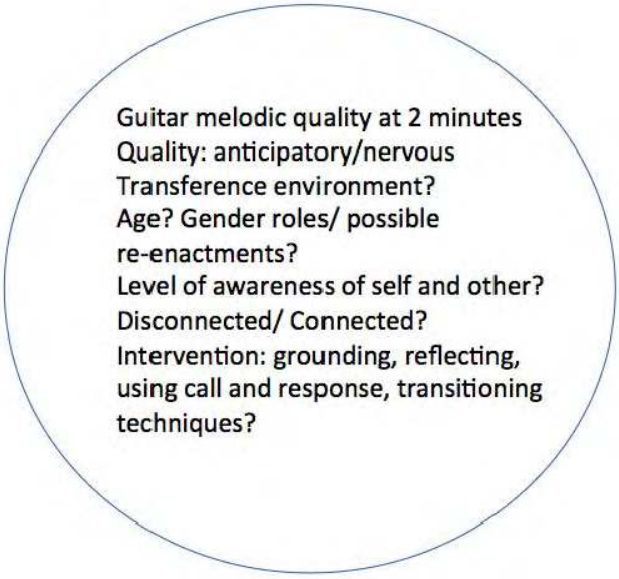
Template for the Physical Music Boundary Map from Ansdell (1991)



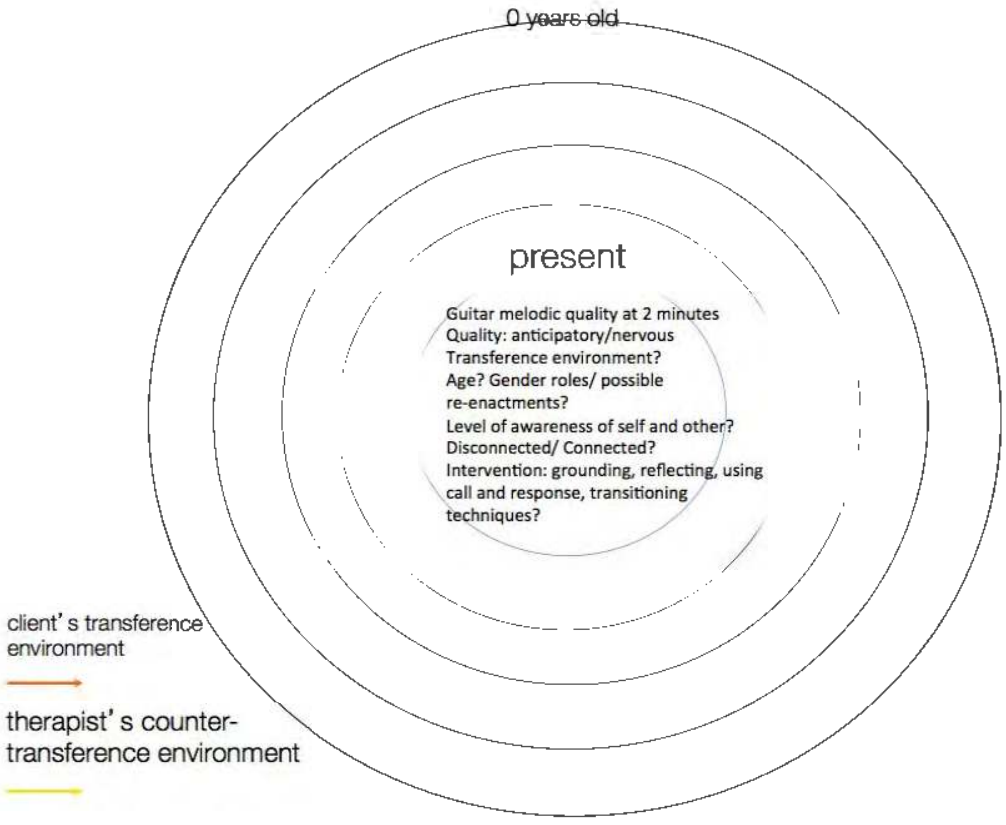
Example of the Adjusted Physical Music Boundary Map



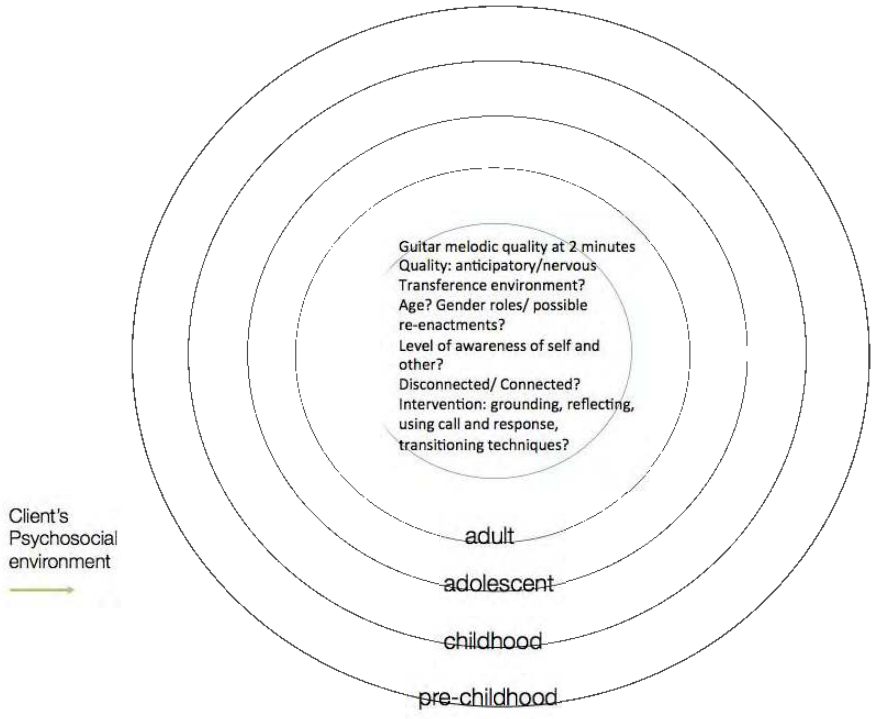
Example of Magnified Point of Interest from the Physical Boundary Map



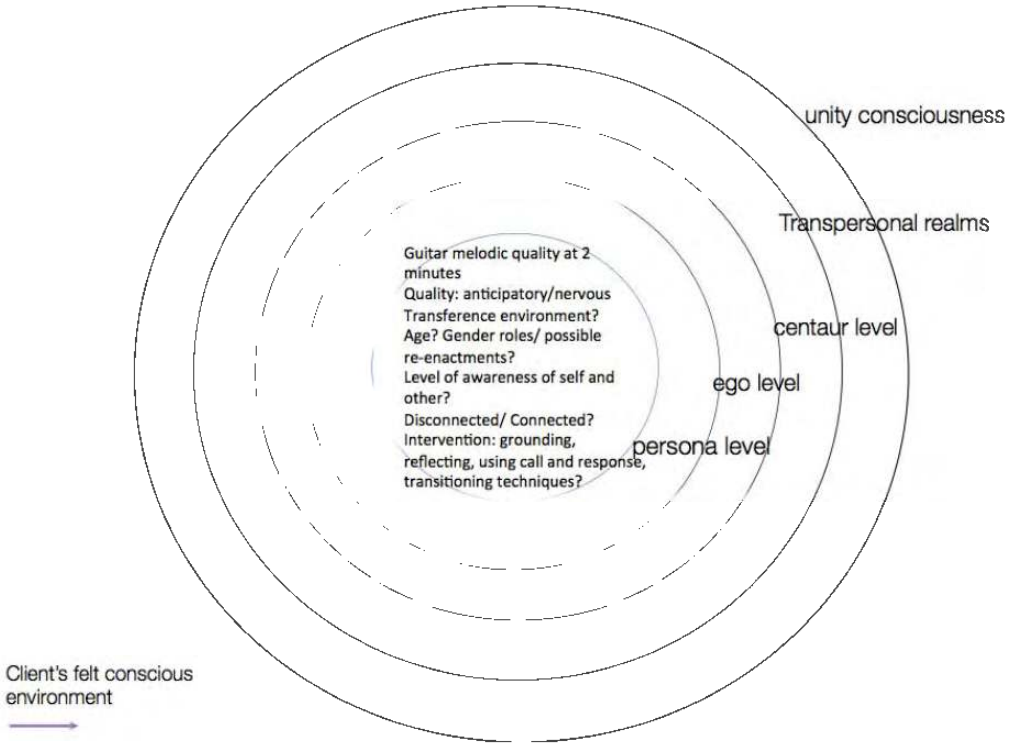
Example of Transference Environment Template



Example of Boundary Benchmarks Template: Psycho-Social Historical Events



Example of Spectrum of Consciousness Template from Wilber (2001)



APPENDIX C

HEALING THE ANXIETY NARRATIVE

Two-Phase Short Term Model of Treatment with Anxiety

This section provides a proposed clinical model of treatment based on interpretations of the findings. It is hoped that future researchers and clinicians can take this and use it in further experimental and clinical investigations and treatment. It incorporates specificity and sequential ordering from what the literature supports as effective thus far and from the method of the clinical design, such as administration of the BAI, use of the SSD design, and the flexible component of clinical improvisation within each session.

Phase 1: 6 Weeks

Baseline to Week 6: General Treatment Goals

Conduct the intake, administer the BAI, complete a history of the anxiety narrative, and establish specific current anxiety symptoms to target decrease.

Introduce improvisation and begin working with expressing or soothing certain symptoms.

Develop a relationship and identify certain themes, such as specific instruments, sounds, songs used, or any noted rhythms, textures, or likes or dislikes in the music making process.

Formulate the narrative of anxiety through the synthesis of themes into a structured pattern based on scores, mapping, and reports from the client.

Phase 2: 6 Weeks

Week 6 to Week 12: General Treatment Goals;

Maintain lowered levels of anxiety with specific symptoms.

Maintain improvisation as the focal point to continue to express or soothe identified anxiety symptoms.

Continue to monitor context of anxiety narrative.

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