

THE ROLE OF MUSIC IN THE TRAUMA NARRATIVE AND “STORYTELLING”:
PERSPECTIVES OF CLINICIANS

by

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A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Music
School of Music
Western Michigan University
May 2021

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Western Michigan University, 2021

There is a lack of detailed literature describing how music is used for expressing and processing the trauma narrative. This study used a constructivist grounded theory approach through an anti-oppressive lens to explore the ways in which music therapists use music in exploring clients’ stories. The term “story” is used as opposed to “narrative” or “memory” to incorporate a broader definition of expression including non-verbal, musical, metaphorical, or any other method the client chooses. Eight board-certified music therapists (MT-BC) were interviewed regarding their use of music in the context of clients’ stories. Braun and Clarke’s reflexive thematic analysis was used to analyze the data. Three themes were constructed from the data. 1) Music Cultivates a Space for the Story, 2) Music Meets the Individuality of the Clients and their Story, and 3) Music Structures Healing Within the Story. One sub-theme was found in the second theme, Deep Processing Poses Potential Dangers. These results provide a picture of the roles music plays in processing a client’s story and may be beneficial in developing future research in this area.

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ACKNOWLEDGEMENTS

I would like to thank my committee members Dr. Edward Roth, Dr. Jennifer Fiore, Dr. Angela Moe, and Dr. Nancy Mansberger, for their support and enthusiasm. I asked for their mentorship at a time when we all had bigger things to worry about, but each of them graciously agreed to lend me their time and expertise. I am especially grateful to Dr. Ed Roth for scheduling last minute meetings, answering never-ending emails. It is wonderful to have an advisor so willing to share in every frustration and every joy.

I would also like to express my appreciation to the WMU Graduate College for funding this project through the Graduate Student Research Grant. I extend my thanks to all my professors and mentors at WMU who fostered my love of learning and research, especially BRAIN Lab manager Alycia Sterenberg-Mahon. I always walked away from our conversations with some new eye-opening bit of wisdom.

I am deeply indebted to my family, especially my sister Charlotte and my partner Adam for their boundless patience, wisdom, and love. Each time I lost sight of my own goals they did whatever it took to help me find my way again.

Finally, I would like to extend my most heartfelt thanks to all my participants. This project would not have been possible without their thoughtfulness and perceptive insights. They all shared in my excitement about this research and offered many kind words of encouragement. It was a privilege to share this space with such wonderful people.

Taylorlyn Mehnert

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Chapter I

Introduction

Background of the Question

The use of music in treating trauma has been the practice of modern American music therapists since WWII. Music therapists and volunteers were brought in to play music for soldiers experiencing “shell shock” (American Music Therapy Association, n.d.-a; Davis, Gfeller & Thaut, 2008). Since that time, the study of trauma has evolved greatly as has the use of music. Trauma is now understood as a complex disorder with a wide range of symptoms including anxiety, dissociation, aggression, or emotional difficulties (American Psychiatric Association, 2013, p. 271-272; Substance Abuse and Mental Health Services Administration, 2014, p. 59-90). Music interventions such as drumming, music listening, and songwriting have been used successfully to treat individuals who have experienced trauma (Gooding & Langston, 2019; Landis-Shack et al., 2017; McFerran et al., 2020).

When encountering a traumatic event, the brain encodes the event differently than typical memories (Levy & Schiller, 2021; Maddox et al., 2019). This often causes memories to be fragmented or incomplete (Barry et al., 2018; van der Kolk, 2014). Some of the most effective psychotherapeutic treatments for trauma involve exploring these memories and creating a more complete and detailed account: the trauma narrative. It is believed that generating this narrative allows the individual to reduce avoidance of the memory and related triggers, incorporate adaptive information into their understanding of the event, and create meaning in their experience (Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002). There is some evidence that music therapists use music in the creation and processing of the trauma narrative. In a study similar to the present one, Bensimon (2020) explored the relational needs

of trauma victims through interviews with music therapists. Within one theme, they found that music could be used to validate the trauma narratives and make sense of chaotic memories. It has also been suggested that music improvisation may allow for a deeper processing of the narrative (Amir, 2004; Sutton & De Backer, 2009) and that interventions like songwriting can help structure the expression of the narrative (Clements-Cortés, 2008; Felsenstein, 2013; Hatcher, 2007). However, there is a dearth in the literature detailing this process.

Definition of Terms

In the literature, the term “narrative” is often used to refer to an explicit, verbal telling of a traumatic experience (Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002). However, this is not in line with what participants shared throughout their interviews. As will be demonstrated throughout this paper, a client’s traumatic experience could be expressed entirely through music or metaphor. As one participant stated,

I often think of [the story] as rooted in the verbal, you know, but I don’t think it has to be... I remember working with clients who don’t use spoken language and still feeling like they’re telling me a story, you know. And it’s not the same kind of linear story that may be typical when, you know, you think of a story. But it’s still a story. It’s still a narrative. It’s still, “This is how my experience unfolds in time, telling you something about me.” (001)¹

This study will use the terms “story” and “storytelling” as opposed to “trauma narrative” or “trauma memory” to incorporate a broader definition. The client’s “story” is not limited to the verbal nor is it an explicit, linear telling. Here, I will functionally define the

¹ Three digit numbers are used to anonymously identify participants.

client's "story" as any aspect of the client's traumatic experience (e.g. explicit events, related emotional experience) and "storytelling" as any way the client expresses their traumatic experience.

Rationale for Research

Creating the trauma narrative may or may not be best practice when treating trauma in a therapeutic setting (van der Kolk, 2014). Answering that question is beyond the scope of this paper. Regardless of the theoretical necessity of the trauma narrative, the fact remains that it is used in many forms of psychotherapy and is used by some music therapists (psychotherapists: Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002; Shapiro & Maxfield, 2002; music therapists: Amir, 2004; Bensimon, 2020; Clements-Cortés, 2008; Felsenstein, 2013; Hatcher, 2007; Sutton & De Backer, 2009). Some therapists may choose to not explore the trauma narrative, but as will be seen in this study, clients may bring up their trauma narrative regardless of the therapist's intent. The general lack of set protocols for processing the trauma narrative with music leaves clinicians using their best judgement. Understanding how clinicians are currently using music to process the trauma narrative is a first step to a more theoretically developed practice with clearer guidance for current and future clinicians. The purpose of the present study is to explore clinicians' perspectives of their use of music in processing clients' traumatic experiences and explore the commonalities in order to generate knowledge around the roles of music.

Chapter II

Literature Review

This literature review will begin with a general discussion of trauma, and then explore the complexities of the trauma narrative (Figure 1). The discussion of general trauma will examine trauma outside of music and how trauma is treated within music therapy. The discussion of the trauma narrative will begin with background regarding how trauma memories are encoded to form the trauma narrative, then will discuss how the trauma narrative is used in psychotherapy and types of trauma narratives that may be explored. Following that will be a discussion of how the trauma narrative is used in music therapy.

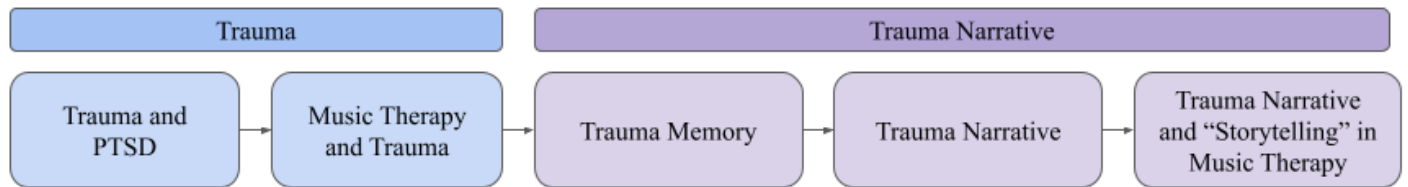


Figure 1. Literature Review Outline

Trauma and PTSD

Within our lives, we encounter stressful events which impact us in different ways. In most cases, people experience temporary difficulties adjusting, but eventually find healing (Mayo Clinic, n.d.). Peter Levine (2005) writes, “While it is true that all traumatic events are stressful, all stressful events are not traumatic” (p. 7). In some cases, though it is not entirely clear why, symptoms following a traumatic event do not go away and can have strong impacts on a person’s life. (National Health Service, 2018).

Definitions and Diagnoses

In the fifth and most recent edition of the Diagnostic and Statistical Manual (DSM), the diagnostic criteria for post-traumatic stress disorder (PTSD) define a traumatic experience as directly experiencing, witnessing, repeatedly being exposed to the details of, or learning that a close family member or friend has experienced either actual or threatened death, serious injury, or sexual violence (American Psychiatric Association, 2013, p. 271). According to the diagnostic criteria, symptoms of PTSD can include intrusion symptoms such as involuntary memories, dreams, or distress related to certain cues; avoiding certain stimuli associated with the trauma; negative changes in cognition or mood; and changes in arousal and reactivity such as angry outbursts or hypervigilance. Some people may also have dissociative symptoms in which the person experiences depersonalization or derealization (American Psychiatric Association, 2013, p. 271-272).

The conceptualization of trauma also shifted to add a new category named “Trauma- and Stressor-Related Disorders” in the DSM-5 (American Psychiatric Association, 2013; Pai et al., 2017). Because this change happened relatively recently, it seems that most of the literature refers to PTSD as the only trauma-related diagnosis and the other diagnoses included in this new category are less present in the literature.

PTSD was moved from anxiety disorders to the new Trauma- and Stressor- related Disorders. Other diagnoses included in the DSM-5 under Trauma- and Stressor-Related Disorders include reactive attachment disorder, disinhibited social engagement disorder, acute stress disorder (ASD), and adjustment disorders (AD) (American Psychiatric Association, 2013). Prior to the creation of the DSM-5, Friedman et al. (2011) argued for grouping ADs, ASDs and dissociative disorders (DD) into one category with PTSD since they are all typically

linked to an external traumatic event. They note there are many similarities in diagnoses and presentation of the other disorders to PTSD. (Friedman et al., 2011). Dissociative disorders were ultimately not included in the Trauma- and Stressor-Related Disorders section, but a subtype of dissociative PTSD is included in the PTSD diagnostic section (American Psychiatric Association, 2013, p. 272). Ultimately, it was decided that the included diagnoses should be grouped together because although they present differently, exposure to a traumatic event or stressful event is included in the diagnostic criteria for all of them (American Psychiatric Association, 2013, p. 265). Stein et al. (2014) wrote that moving PTSD from anxiety disorders to its own trauma-focused section is reflective of our changing understanding of the trauma's impacts. Anxiety was once the most commonly associated symptom. We now understand some people may not present with anxiety but may instead or also present with dissociation, aggression, or emotional difficulties (Stein et al., 2014).

There is debate around the “D” in PTSD. Prior to the release of the DSM-5, U.S. Army leadership pushed to change the title, possibly to include the term “injury” as opposed to disorder (Sagalyn, 2011). However, in 2013 the RAND Corporation argued the term injury mischaracterizes the experience. They point out there is no evidence that changing the terms would lead to less stigmatization and a new title could easily receive the same discrimination and stigmatization (Fisher & Schell, 2013). The DSM-5 committee made their ruling, and the term “disorder” continues to be the official terminology. A more recent publication in the *Journal of Military and Veterans Health* concurred with the RAND Corporation. Both articles suggest that structural changes are necessary to reduce stigma and that changing a name would not be enough (Wallace et al., 2020). In an interview with PBS NewsHour, Dr. Bessel van der

Kolk said, “There are so many important things to address that [changing the name] would be the last order of priority,” (Nation, 2011).

PTSD’s title is not the only criticism the DSM-5 has received. van der Kolk (2014) wrote that strong backlash came from the British Psychological Society, the National Institute of Mental Health, and leaders of the American Psychological Association and the American Counseling Association. Criticisms mainly center around the DSM’s failure to consider social factors behind the development of a disorder and its adherence to a symptom-based diagnosis and note the DSM-5 lacks scientific validity and seems to have no improvements over the DSM-4 (van der Kolk, 2014, p.166).

The present study focuses on the treatment of any individual who experiences adverse effects from a traumatic event. The effects of exposure to traumatic events can range from life-altering severity to mild symptoms that the individual doesn’t even realize are related to their trauma (Substance Abuse and Mental Health Services Administration, 2014). A traumatic event may affect a person’s life without meeting the diagnostic criteria for PTSD or related diagnoses. Those who experience a traumatic event and do not show signs of any mental disorder may still experience emotional dysregulation, numbing, physical symptoms, sleep disturbances, hyperarousal, cognitive changes, and more (Substance Abuse and Mental Health Services Administration, 2014, p. 59-90). This can be described as “Trauma” (an official diagnosis) vs. “trauma” (a more general experience).

Cost

Because trauma can have a wide range of effects on an individual, the total cost is difficult to estimate. Traumatic events experienced in childhood can have effects throughout a person's life. The landmark CDC-Kaiser Adverse Childhood Event survey demonstrated a

“strong relationship between the number of childhood exposures and the number of health risk factors for leading causes of death in adults” (Felitti et al., 1998, p. 250). One study by Gilad and Gutman (2019) estimated childhood trauma alone costs the state and society in the US \$458 billion each year related to mental and physical health as well as adverse life outcomes. In 2012, the Government Accountability Office found the DOD spent \$2.7 billion on treatment and research of psychological health needs and traumatic brain injury between 2007 and 2010, though a breakdown of the two was not provided (Government Accountability Office, 2012).

Prevalence

In 2016, the World Mental Health Survey Consortium found that of 68,894 adults in 24 countries, 70% of respondents reported experiencing a traumatic event and 30.5% experienced four or more in their lifetime (Benjet et al., 2016). Not every person who experiences a traumatic event will develop a trauma-related disorder. The National Center for PTSD estimates that seven or eight out of every 100 people will experience PTSD in their lifetime (National Institute of Mental Health, 2020). Some communities are disproportionately affected by traumatic events. Several studies have shown Black people are more likely to develop PTSD than White, Asian, or Hispanic people (Alegría et al., 2013; Roberts et al., 2011), poverty may be a risk factor (Golin et al., 2016; Parto et al., 2011), and women may be more likely than men to develop a trauma-related disorder after experiencing a traumatic event (Olf, 2017; Parto et al., 2011). Additionally, studies of epigenetics show trauma can be passed down through generations, most prominently seen in African Americans who still see negative health consequences as a result of the trauma of slavery and the subsequent social inequity (Goosby & Heidbrink, 2013; Lehrner & Yehuda, 2018).

Because trauma is so prevalent, it is likely that many therapists will see clients who have experienced a traumatic event in their lives. As will be shown below, music therapy may be an effective treatment for PTSD and other trauma-related disorders.

Music Therapy and Trauma

Modern American music therapy can trace its origins to musicians in hospitals playing for traumatized veterans returning from World War II. When the National Association for Music Therapy (predecessor to the current American Music Therapy Association) was established in 1950 shortly after the war, people who had experienced trauma were one of the primary populations served and it has remained the work of many music therapists (American Music Therapy Association, n.d.-a; Davis, Gfeller & Thaut, 2008). Currently, the music therapy community is deeply engaged in the discussion around trauma. Trauma was one of the sub-foci of the 2020 World Congress of Music Therapy (University of Pretoria, 2020); the 2020 American Music Therapy Conference had many talks about trauma and trauma-related topics (American Music Therapy Association, 2020) and there are a plethora of books and publications on the topic (Sutton, 2002; Stewart, 2010; Lowey & Hara, 2002).

Given the prevalence of traumatic experiences, music therapists are likely to encounter many clients who have experienced trauma even if that is not the primary reason for referral. A music therapist could potentially use music in these situations in a myriad of ways. In *Music, Music Therapy and Trauma* (Sutton, 2002), music therapists describe singing together for bonding and kinship (p.98), music improvisation for play (p 112, 136-140) or to rediscover individuality and self (p. 131), and music listening for relaxation and to establish comfort (p. 200-201). Across many populations, music is used effectively for goals also associated with

symptoms of trauma such as emotional regulation (Sena Moore, 2013), improving sleep quality (De Niet et al., 2009; Jespersen & Vuust, 2012), and decreasing stress (Pelletier, 2004).

A theoretical review of music therapy in the treatment of trauma by Landis-Shack et al. (2017) found music therapy was effective in addressing emotionally dysregulating intrusions, avoidance, negative alterations in mood, and arousal and high reactivity. Though they only found four empirical studies examining music therapy for PTSD. The music therapy techniques used were group drumming, playing in bands, learning an instrument, recording music, music improvisation, and songwriting. They concluded music therapy is most useful for negative affect and mood alterations. In a scoping review of music therapy in military populations (primarily individuals with PTSD or traumatic brain injury), Gooding and Langston (2019) found a variety of music therapy techniques. Active music making was the most cited use of music, of which drumming was the most common intervention. Other methods they found included music listening, music-assisted relaxation, group music making, Guided Imagery in Music (GIM) techniques, Neurologic Music Therapy (NMT) techniques, and performance. The most common goal was emotional expression/regulation.

A critical interpretive synthesis of literature by McFerran et al. (2020) explored the ways music can be used in the treatment of trauma, specifically looking at studies with brain-based rationales. They found four categories of music use: stabilizing, entrainment, expressive, and performative. Stabilizing interventions used music listening based on the theory that music can bypass areas of the brain damaged by trauma based on writings by Perry (2009) and Porges (2009). Entrainment interventions include group drumming, structured improvisation, and shared singing which are used based on theories such as Siegel (1999) who advocates regulating hyper- and hypo- arousal, which are common symptoms of trauma. McFerran et al.

(2020) suggest entrainment can help clients stay within this “window of tolerance.” The third category of expressive interventions includes improvisation, guided imagery, and songwriting in music psychotherapy. While the first two categories are focused on bypassing damaged neural systems, these interventions are based on the work of Herman (2002) and van der Kolk (2014) in which higher cognitive skills are used to explore the trauma and make meaning. The final category is performative which contains interventions such as songwriting and performance. These interventions are based on theories by Herman (2002) and Butler (2010) which are focused on the individual creating their identity within their social world (McFerran et al., 2020).

The focus of research and practice seems to be largely on emotional regulation and the direct physiological and social needs of those who have experienced trauma including lack of leisure skills, decreased socialization, increased isolation, increased stress/anxiety, little emotional regulation, and lack of sleep (Davis, Gfeller & Thaut, 2008; Gooding & Langston, 2019; Landis-Shack et al., 2017; Sutton, 2002). Both Landis-Shack et al. (2017) and Gooding and Langston (2019) note there is often a lack of specificity within studies and consistency across studies in the description of music therapy methods. McFerran et al. (2020) conclude that in addition to high levels of bias towards music’s efficacy, often the theoretical rationale is not connected to the music intervention and the outcomes in the studies they examined. This makes it difficult to assess exactly how music addresses the needs of individuals with trauma. It is especially difficult to ascertain how deeper processing of the traumatic experience through the trauma narrative is occurring.

Trauma Memory

Trauma Memory Encoding

To understand the significance of the trauma narrative, it is important to first understand how traumatic events are interpreted and stored in the brain to form the trauma memory. When a traumatic event is encountered, several areas of the brain are involved with encoding the event. The cortical and thalamic regions send sensory inputs to the amygdala (Levy & Schiller, 2021; Maddox et al., 2019). The cortical region, or “high road,” is generally believed to send complex reliable information a little bit more slowly. While the thalamic region, or “low road,” sends signals more quickly, but with less accuracy (Dèbiec & LeDoux, 2009). The amygdala sends inputs to the periaqueductal gray which is involved in the automatic behavioral response (Maddox et al., 2019). The periaqueductal gray then sends a learning signal to the amygdala which can create a learned response to the threat/trauma memory (Levy & Schiller, 2021; Nicholson et al., 2017). The memory is then stored in the amygdala (Fanselow & LeDoux, 1999). PTSD is associated with exaggerated amygdala reactions (Levy & Schiller, 2021; Maddox et al., 2019) and a bottom-up connection from the amygdala and the periaqueductal gray to the prefrontal cortex. The dissociative subtype of PTSD may actually be associated with decreased activation of the amygdala and top-down processing from the prefrontal cortex to the amygdala and periaqueductal gray (Nicholson et al., 2017).

PTSD is also associated with neuroendocrine irregularities in the threat encoding process (Levy & Schiller, 2021; Maddox et al., 2019). Glucocorticoids (specifically cortisol and corticosterone), which are basically stress hormones, affect the release of corticotropin-releasing hormone (CTH) which is also involved in stress. Depending on when CTH is released (before, during, or after the event), it could potentially mitigate or enhance the intensity of the threat memory (Dèbiec et al., 2011; Maddox et al., 2019). Sex hormones may also play a role since women are more likely to develop PTSD than men (Olf, 2017; Parto et al., 2011),

although it is less clear how these hormones impact the process (Maddox et al., 2019).

Mechanisms of the startle response have been seen to have some impact including the sympathetic and parasympathetic nervous systems and heart rate variability which can change the emotional perception of the event and therefore consequential behaviors (Maddox et al., 2019).

This process of encoding alters the neuroplasticity of the involved networks. Each subsequent time the memory is accessed, it is reconsolidated and modified (Levy & Schiller, 2021; Maddox et al., 2019). According to Levy and Schiller (2021, p.161), “A memory trace, or engram, is therefore not a physical entity like a stored object, but rather the disposition of neural circuits to fire upon triggering by a certain reminder.” The disposition of neural circuits can be altered both to maintain the traumatic response or to extinguish it.

In their groundbreaking work, *The Body Keeps the Score*, van der Kolk (2014) describes key differences between typical and traumatic memories seen in their work. When people remember a happy memory, they always tell it in a clear structure (beginning middle and end) and they do not typically recall sensory details. Their recall of the event does not change much over time. When recalling a traumatic event, however, van der Kolk describes the memories as “disorganized.” Specific sensory details are vivid and similar sensory experiences in the present can trigger the traumatic memory but the events themselves are unclear. What a person can remember changes over time. Immediately following the event, a person might not be able to recall much at all. Over time parts of the memory may come back or be forgotten. It may take a significant amount of time before the person can recall a memory in an organized way (van der Kolk, 2014, p. 194-196). A meta-analysis by Barry et al. (2018) supports this idea of memory distortion, suggesting people who experience trauma show “compromised memory

specificity” compared to those who have not. This separation between trauma memory and typical memory has been the basis of many models which strive to understand trauma memory as a way to understand PTSD and related diagnoses.

Models of Trauma Memory

Brewin’s dual representation theory (DRT) (Brewin & Burgess, 2014) is one model for understanding trauma memory vs. typical memory. The revised version of the DRT suggests there are two types of memory encoded during a traumatic event. There is the “sensory-bound representation” (S-rep) which encodes sensory and emotional details and the “contextual representation” (C-rep) which is “recoded into an abstract structural description, along with the spatial and personal context of the person experiencing the event,” (Brewin & Burgess, 2014). The model suggests that typically these two are closely associated, but during trauma the S-rep is encoded much more strongly, and the C-rep is often disassociated.

Ehlers and Clark (2000) suggest a model of PTSD in which a person develops symptoms due to the ongoing feeling of being under threat because of, “individual differences in the appraisal of the trauma and/or its sequelae” and “individual differences in the nature of the memory for the event and its link to other autobiographical memories” (p.320). The first process refers to misappraisals such as overgeneralization, misinterpreting physical symptoms, and understanding the reactions of others. The second process has some similarities to Brewin’s dual representation theory. People who experience a traumatic event often have difficulty intentionally recalling an event but frequently and involuntarily relive sensory experiences of an event. They suggest that this is because typically, memories are incorporated into an autobiographical memory base which allows access to the memory but doesn’t allow it to come up voluntarily. In the case of PTSD, contextual information (similar to Brewin’s C-rep) is not

properly encoded, and the memory is not stored in the autobiographical memory base the same way typical memories are. It therefore does not have the same functions of retrieval and control over involuntary retrieval.

Both models suggest that in order to promote healing, the memory must be restored in some way. Ehlers and Clark (2000) suggest that in addition to reassessing problematic appraisals and changing maladaptive behavioral and cognitive strategies, “the trauma memory needs to be elaborated and integrated into the context of the individual's preceding and subsequent experience in order to reduce intrusive reexperiencing” (p.335). Brewin and Burgess (2014) suggest the recovery process involves re-associating the S-rep and the C-rep, in other words, that the sensory experience needs to be integrated with the contextual memory.

Another factor that may affect development of PTSD symptoms is how integral the event is to the person's identity. The Centrality of Event Scale (CES) measures how central a traumatic memory has become to a person's identity. Several studies have shown higher scores on the CES are positively correlated with PTSD symptoms (Bernsten & Ruben, 2006; Gehrt et al., 2018). One study by Broadbridge (2018) explored whether the integration of the event in a positive or negative way influenced the correlation with PTSD symptoms. They found negative centralization was more strongly associated with PTSD symptoms than positive centralization.

The mnemonic model from Rubin et al. (2008) may better incorporate the importance of a traumatic event to a person's identity. They suggest the event itself is less relevant than how a person remembers the event. In this model, PTSD symptoms are conceptualized as a response to the changing memory of an event following its occurrence. This bears some resemblance to the initial portion of Ehlers and Clark's model which is concerned with the appraisal of the traumatic event, although Rubin et al. say that their model cannot be compared to models such

as Ehlers and Clark because the model created by Rubin et al. inherently challenges the DSM PTSD diagnosis and may be applied beyond PTSD.

This is not intended to be an exhaustive list of models of trauma memory—which would fill volumes— but is instead intended to give a picture of the many ways in which trauma memory can be understood. Our understanding of how trauma memory is formed and accessed is still developing. Ultimately, these models concur that trauma memory is different from typical memory and has a strong impact on PTSD’s development and its related symptoms.

Memory Loss and Repression

In addition to being disorganized or fragmented, some researchers and clinicians believe that traumatic memories can be repressed or lost. Whether this is possible or not was an especially contentious argument in the 1990s sometimes referred to as the “memory wars” (Patihis et al., 2014). van der Kolk (2014) writes that it has been well documented for over a century that traumatic memories can be repressed and resurface decades later (van der Kolk, 2014, p.192). Some argue it is more likely that these memories are not real because of the “misinformation effect” or “false memory syndrome” which describe the way memories can be implanted in a person's mind through suggestion (Loftus, 2005; Otgaar et al., 2021).

Researchers have implanted memories of getting lost in malls or accidents from childhood (Loftus, 2005). While this may be true, a literature review by Dallam (2001) found there is no empirical evidence that this is a widespread “epidemic” and requires several faulty assumptions including: “(1) A recovered memory is likely to be a false memory; (2) False/recovered memories are usually caused by incompetent therapists doing ‘recovered memory therapy’; (3) It is easy to implant false memories of traumatic events that never happened; (4) People who

recover memories are highly suggestible; (5) ‘False Memory Syndrome’ is common among psychotherapy patients who recover traumatic memories; and (6) Alleged perpetrators are somehow immune to developing false memories” (Dallam, 2001, p. 16). A study by Patihis et al. (2014) found when given the statement “Traumatic memories are often repressed,” over 80% of the surveyed undergraduate students agreed with the statement, less than 30% of research-oriented psychologists agreed, and more than 60% of other therapists and practitioners agreed with the statement. A more nuanced study by Dodier (2021) found that of the 3158 participants, 71% agreed with the concept of repression, 74% with the concept of unconscious repression, and 54% with the concept of deliberate memory suppression.

Regardless of when or how they are accessed, as memories are encoded, accessed and re-coded, they change (Levy & Schiller, 2021; Maddox et al., 2019). Both Ehlers and Clark (2000) and Brewin and Burgess (2014) suggest this reshaping, if done constructively, is the key to healing from trauma. As will be discussed in the following section, several methods of psychotherapy have embraced this model and help clients to verbally access their memories in the form of the trauma narrative.

Trauma Narrative

It is unclear exactly what role the trauma narrative plays in healing. Some of the methods described below focus heavily on the telling of the trauma, others place it in a less crucial role. van der Kolk (2014) wrote:

We have discovered that helping victims of trauma find the words to describe what has happened to them is profoundly meaningful, but usually it is not good enough. The act of telling the story doesn’t necessarily alter the automatic physical and hormonal

responses of bodies that remain hypervigilant, prepared to be assaulted or violated at any time. (p. 21)

The current review will not examine whether or not the narrative is the most important part of treatment, but rather will detail the ways the narrative is used in therapy and the roles it may play.

Trauma Narrative in Psychotherapeutic Methods

The content of traumatic memories is explored in several forms of therapy that are specifically designed to treat individuals who have experienced trauma. In a systematic review and meta-analysis exploring the efficacy of psychological treatments, Bisson et al. (2007) found trauma-focused interventions were more effective than non-trauma focused treatments in treating PTSD. They also found trauma-focused cognitive behavior therapy (TF-CBT) and eye movement desensitization and reprocessing (EMDR) were likely more effective than stress management and other therapies.

CBT can be used in a variety of ways, but Drs. Anthony Mannarino, Judith Cohen and Esther Deblinger developed a sub-type of CBT called trauma-focused CBT (TF-CBT). They focused the method primarily on the treatment of traumatized youth and their caregivers (Cohen & Mannarino, 2015; Mannarino & Cohen, 2014), although it is also used in the treatment of adults (Bisson et al., 2013; Levrier et al., 2016; Lowe & Murray, 2014). TF-CBT is often divided into three phases. The first is the “stabilization phase” which involves psychoeducation and the development of skills (e.g. relaxation, cognitive processing), the second is the when the trauma narrative is developed and processed, and the third involves the integration and consolidation of the story (Cohen & Mannarino, 2015; Mannarino & Cohen, 2014) Within TF-CBT, clients share more details and develop the story in order to gain mastery

over the story rather than avoiding it and eventually share it with their nonoffending caretakers (Cohen & Mannarino, 2015).

EMDR, developed by Francine Shapiro, approaches the traumatic event differently. The client is asked to bring the traumatic memory to mind but does not have to explicitly recount the events to the therapist. Instead, the client describes the most vivid image associated with the event and the focus is put on the associated negative emotions. The client explores the memory while moving their eyes back and forth or engaging in other dual-attention stimuli such as hand tapping (Shapiro & Maxfield, 2002). Ideally, the process results in connections between “the dysfunctionally stored memory and more adaptive information” (Shapiro & Maxfield, 2002, p. 937).

Several studies compare the efficacy of CBT and EMDR. In a systematic review, Gillies et al. (2016) found that CBT and EMDR had relatively similar effectiveness in decreasing the likelihood of a PTSD diagnosis for adolescents. A similar meta-analysis found TF-CBT to be slightly more effective than EMDR (Lewey et al., 2018). Bisson et al. (2013) looked at treatment in adults and found that CBT, TF-CBT, and EMDR are equally effective immediately after the traumatic experience, and that TF-CBT and EMDR may be slightly superior to CBT in the one to four months following treatment.

There are other methods of psychotherapy that incorporate the trauma narrative. Another type of CBT shown to be beneficial in the treatment of PTSD is prolonged exposure therapy (PE). PE helps clients to stop avoiding thoughts and situations that are functionally harmless but remind the client of a trauma. Clients are exposed to the triggers in real life or through their own imagination in order to break down the association between the fear response and the harmless stimuli. Reducing this avoidance allows clients to explore the traumatic

memory (Foa, 2011). Powers et al. (2010) found no differences between PE and other treatments such as EMDR but reported that PE patients had better outcomes than 86% of patients in placebo or waitlist control groups.

Dr. Judith Herman suggested a three-stage model of trauma recovery which is strongly based around constructing the trauma narrative. The first stage is about establishing safety, the second stage involves the client re-telling the traumatic event, and in the third stage the client reconnects with others (Herman, 2002). Herman says constructing and transforming the narrative then integrating the narrative into the client's life story is a crucial part of the healing process. The narrative may change many times as the pieces come together and may never be complete. "Out of the fragmented components of frozen imagery and sensation, patient and therapist slowly reassemble an organized, detailed, verbal account, oriented in time and in its historical context. The narrative includes not only the event itself but also the survivor's emotional response to it and the responses of the important people in her life" (Herman, 2002). The idea is that as the client tells and reconstructs their story over and over, it begins to lose its power over their life. "It is a memory like other memories, and it begins to fade as other memories do. Her grief, too, begins to lose its vividness. It occurs to the survivor that perhaps the trauma is only one part, and perhaps not even the most important part, of her life story" (Herman, 2002).

These treatment methods clearly outline the connection between the narrative and healing. However, Kaminer (2006) points out that while many studies involve the exploration of the trauma narrative, the therapeutic process through which the narrative creates changes is not always clear. Kaminer (2006) conducted a review of psychotherapeutic interventions that utilize the trauma narrative and found six processes through which the trauma narrative may

lead to healing: emotional catharsis; the creation of linguistic representation; the habituation of anxiety; empathic witnessing of injustice; developing an explanatory account; and the identification of purpose and value in adversity. Kaminer notes while these processes are distinct, they are often interconnected.

Form and Content of Trauma Narratives

While many treatment models that incorporate the trauma narrative strive for a clearer and more detailed narrative (Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002), Bedard-Gilligan et al. (2017) findings contradict the idea that reduced fragmentation of a memory accompanies a symptom reduction. When examining the narratives of people who experienced a traumatic event, they found no significant differences in fragmentation pre- and post-treatment regardless of the treatment or its efficacy. Similarly, Scheeringa et al. (2017) identified four different types of narrative among adolescents (expressive, avoidant, fabricated, and undemonstrative) but did not find any differences in treatment outcomes suggesting that the more expressive narratives are not necessarily more effective for the treatment of PTSD.

Many studies have explored narrative content. O’Kearney and Perrott (2006) found a relationship between PTSD and sensory and emotion language in the narrative across 19 studies. Welton-Mitchell et al. (2013) found that the themes in the content could predict the level of detail in a narrative. They found narratives with fear themes correlated with high sensory detail while narratives with anger and spirituality themes correlated with low context detail. One study by Luno et al. (2013) even found a connection between PTSD symptoms and certain linguistic characteristics including punctuation (positively correlated), word count (positively correlated), determiners (such as these, those, few many, etc.; negatively correlated), negative causal connectives (such as although, nevertheless; positively correlated),

and semantic language related to death (positively correlated). Freer et al. (2010) found the narrative may change based on chronicity (single event or repeating traumas) and the event timing (relative to a person's life). The perception of severity, emotional tone, and catastrophic language were higher for those with multiple trauma experiences. Those who experienced trauma in childhood rather than adulthood included greater emotional tone in their narratives.

Trauma Narrative and “Storytelling” in Music Therapy

Trauma Narrative

The literature regarding the use of music in the trauma narrative seems to be approached from many angles. The trauma narrative is mentioned in some cases but literature in which the narrative is a major focus is lacking. Where the trauma narrative is mentioned, there seems to be inadequate detail or specificity as to the role of music (similar to the assessments of Landis-Shack et al. (2017) and Gooding and Langston (2019) regarding the general use of music in trauma).

There are some theoretical writings based on clinician experience, research outside of music therapy and/or case studies which attempt to define the role of music. In a discussion about the use of music and art for trauma survivors, Greene (2015) pointed out music may be useful in the reconsolidation of traumatic memories. They suggest music is a powerful tool for externalizing and safely processing the memory. Sutton and De Backer (2009) write while music does not necessarily have explicit meaning in the way language does, it can be used to access what might lie beneath the words of a traumatic experience. And because music is inherently an experience of time, it can be used to address the fragmentation of the trauma memory and the repetition one may experience in the form of flashbacks or simply rumination on memory fragments in order to create meaning in the events. They suggest that in reflecting

the fragmented, repeating experience, music can begin to give the trauma form and allow therapists to exist in that space with the client. This allows the client to become a more active participant rather than a passive victim of the memories and begin a fuller expression. Amir (2004) also explored the use of music improvisation and how it can “expose” and “deal with” trauma (p.96). They write music improvisation can “bring out hidden, unconscious material and make it conscious and available to the client” (Amir, 2004; p.96). They describe that music acts as a symbol of the unconscious experiences of trauma and allows it to exist in the present moment. Techniques such as improvising to a specific title, having the client read a book while improvising (to divert their attention), creating short projective improvisations or improvising a musical life story may bring the unconscious to the forefront and allow for the creation of the trauma narrative.

Some case studies of traumatized individuals include the exploration of the trauma narrative, but it was not the focus of the work in any of the following studies. When working with displaced traumatized preschool children, Felsenstein (2013) mentioned writing a song in which each child contributed one line describing what they wished for. This song, Felsenstein says, “enabled parts of the trauma story to be told within the group and for a reasonably coherent picture to emerge” (p. 78) but was not developed further because the treatment was only short term. This was only a small part of a larger treatment plan. Clements-Cortés (2008) described using music with a Holocaust survivor. The primary focus of treatment appeared to be facilitating sleep and discussion about health and hospitalization. Clements-Cortés also used music improvisation to allow the client to reflect on their experiences of being a hidden Jew during the Holocaust and songwriting to create life-review. Specific methods were not discussed in this paper. Hatcher (2007) described songwriting with a client based on the

question, "If you could write a letter telling the whole world something about you, what would you like them to know?" The songwriting was not necessarily specific to the trauma narrative but within this process the client was able to explore the emotional content of their story which they could or would not explore through verbal means alone.

Bensimon (2020) examined the relational needs of trauma victims through interviews with 41 music therapists. Though it was not its own theme, music's role in the narrative came up in several places. One theme found was the need for "emotional witnessing." In this theme Bensimon described how music therapists, group members, or the clients themselves use music to emotionally validate clients' stories and make sense of a chaotic memory. In another study, Bensimon et al. (2012) studied six soldiers diagnosed with PTSD. In addition to other exercises group members played out sounds of one member's trauma directed by said member in order to feel supported and heard. In Bensimon et al. (2008) the authors examined group drumming with six soldiers diagnosed with PTSD or related diagnoses. The focus of the study was not on traumatic memories, but in their discussion the authors mentioned "non-intimidating access to traumatic memories" (p.44). The participants associated the sound of the drums with the sounds of war. The authors reported that throughout the study, participants experienced less anxiety related to the stimuli and eventually the associations decreased.

Trauma "Story"

Music may also be used to explore a client's "story" (functionally defined as the expression of any aspect of the client's traumatic experience) in a less explicit way. The Bonny method of guided imagery and music (GIM) is a practice developed by Helen Bonny in which the client listens to prescribed classical music programs and describes the imaginations evoked by the music to facilitate their "integration of mental, emotional, physical and spiritual aspects

of well-being,” (Association for Music and Imagery, n.d.). Among other populations, GIM has been proven effective with refugees (Beck et al., 2018) although this study did not detail the content of the sessions. The images a client experiences can come together to form a narrative that expresses the client’s life story (Bonde, 2004).

Another method of music as potential storytelling is Diane Austin’s vocal holding techniques. As the name suggests, the primary purpose of this method is to facilitate the feeling of being held by creating a stable, predictable musical environment with two alternating musical chords. The client can then sing with the music therapist and eventually improvise vocally (sometimes verbally, sometimes non-verbally) within this space to explore unconscious feelings (Austin, 2001) In this space, a narrative of sorts may develop. In a case study, one client sang about the trauma incurred from their mother singing phrases such as “I never had a real mother” and “you hurt me” (Austin, 2001). These phrases were not a coherent narrative in the way some psychotherapies might encourage (Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002) but it was an expression of the client’s traumatic experience all the same.

A critical interpretive synthesis by McFerran et al. (2020) briefly discussed the use of music in developing the trauma narrative within the category of “expressive” music interventions saying:

...following on from the seminal work of Herman (2015), contemporary trauma work emphasizes the importance of establishing safety and stability before progressing to reconstructing the trauma narrative. This may explain the mixture of methods used in this category, where song writing can be used for reconstructing the trauma narrative, and improvisation for exploring less conscious reactions, and movement through a

range of other activities can provide opportunities for moving back into relationship building and re-establishing safety.

McFerran et al. (2020) noted incongruities between theory, research, and practice saying that, “Future research would benefit from a more clearly articulated connection between theoretical rationale, music-based methods, benefits and research approaches.” The present study will not provide empirical evidence for the links between rationale, methods, and outcomes, but will provide insight into clinicians' perceptions of their work.

Summary

People who do not naturally heal from trauma over time can experience a wide variety of symptoms which are categorized as “Trauma- and Stressor-Related Disorders” in the DSM-5 (American Psychiatric Association, 2013). These symptoms range in type and severity but can profoundly impact a person’s life (Substance Abuse and Mental Health Services Administration, 2014). Since its inception in the United States, music therapy has been used to treat trauma (American Music Therapy Association, n.d.-a; Davis, Gfeller & Thaut, 2008). Music therapists use a wide variety of techniques including drumming, songwriting, improvisation and music listening to address symptoms such as emotionally dysregulating intrusions, avoidance, negative alterations in mood, and arousal and high reactivity (Landis-Shack et al., 2017; McFerran et al., 2020).

The encoding and retrieval of traumatic memories in the brain is a complex process and our understanding of it is still developing (Levy & Schiller, 2021; Maddox et al., 2019; Nicholson et al., 2017). Several models have attempted to explain how trauma memory functions from a clinical standpoint. These models tend to agree that in order for healing to take place, the memory needs to be restored in some way (Brewin & Burgess, 2014; Ehlers & Clark,

2000; Rubin et al., 2009). We do know that each time the memory is re-accessed, it is changed (Levy & Schiller, 2021; Maddox et al., 2019) which acts as the basis for this assumption of the need to re-access traumatic memories.

The trauma narrative is commonly used in psychotherapeutic treatment of trauma (Cohen & Mannarino, 2015; Foa, 2011; Herman, 2002; Shapiro & Maxfield, 2002). Methods such as TF-CBT and EMDR incorporate the trauma narrative, though TF-CBT stresses the verbalization of the narrative more strongly than EMDR (Cohen & Mannarino, 2015; Shapiro & Maxfield, 2002). Dr. Judith Herman (2002) is often noted as making large contributions to the understanding of the trauma narrative especially through their model of trauma recovery.

It is not entirely clear how music therapists use music in developing and exploring the trauma narrative. Music improvisation may be useful in exposing and making meaning of fragmented and unconscious memories (Amir, 2004; Sutton & De Backer, 2009). Songwriting may help clients to develop their thoughts and feelings around a traumatic memory (Clements-Cortés, 2008; Felsenstein, 2013; Hatcher, 2007). Music may also help clients explore their story (functionally defined as the expression of any aspect of the client's traumatic experience) through the Bonny method of guided imagery and music (GIM) or Diane Austin's vocal holding techniques in which a client can safely access and explore memories without generating an explicit narrative.

Overall, it is likely that music therapy is a useful tool in the treatment of trauma. As Landis-Shack et al. (2017) point out, music therapy is often more accessible, less time constricted and less stigmatizing than traditional psychotherapy. Music therapists may use music to process the trauma narrative in many ways, but the methods are not entirely clear and there has not been much theory generated across these methods. Although there is not much

structured guidance for music therapists in this area, they are treating individuals with trauma, which at times means exploring the trauma narrative. This study aims to examine how different clinicians use music to explore trauma narrative and their perceptions of the roles music can play.

Chapter III

Method

Design

This study used a Constructivist Grounded Theory (CGT) design (Charmaz, 2006) with an anti-oppressive (Brown & Strega, 2005) lens borrowed from the field of social work. CGT methodology was chosen over other forms of grounded theory research because of its capability to fully explore my research question and for the closeness of the central tenets (described below) to my philosophical views.

The anti-oppressive lens primarily informs my paradigm, theory and reflexivity, but because of the interconnectedness of all elements of research, the entirety of the research process is informed. Brown and Strega (2005) describe anti-oppressive research as an extension of Marxist, feminist, and critical theory along with elements of poststructural, postcolonial, feminist, Indigenous, queer, and antiracist theories all of which are evident in the following presentation of the anti-oppressive approach. I believe an anti-oppressive approach to this research was especially necessary because of the disproportionate effects of trauma on historically marginalized groups of people (Alegría et al., 2013; Golin et al. 2016; Olff, 2017; Parto et al., 2011; Roberts et al., 2011). Anti-oppressive research as a paradigm suggests that the researcher and participants are potentially both oppressors and oppressed within individual relationships and systemic structures; the dismantling of oppressive systems is of key importance to all research. (Brown & Strega, 2005).

The ontology of CGT holds that truth is not an absolute that can be discovered but rather an interpretation that is built by the researcher and participants through their experiences (Charmaz, 2006, p. 10). In addition, the anti-oppressive approach notes that all knowledge is

informed by a person's social identities which create a person's biases, privileges, and power relations (Brown & Strega, 2005, p. 261). In the current study, I viewed participants as equal partners in constructing knowledge and framed the knowledge within the identities of both the participants and my own.

This study used transformative, semi-structured, individual interviews. A transformative interview is framed as a collaborative creation, “a chance for people to get together and create new possibilities for action” as opposed to other conceptions of interviewing that may take a view closer to a researcher drawing out an absolute truth out of a subject (Pryce et al., 2014, p. 282-283). I prepared some general questions (asking things such as the style of music therapy they practice, how they conceptualize trauma, and how they use music in the narrative) and a direction for the interview but allowed the conversation to take the most beneficial direction as decided by myself and the participants while remaining in the realm of the research topic.

The choice of a semi-structured interview does have epistemological effects. Because I chose the research question, I have more control over the direction of the conversation and therefore more power (Pryce et al., 2014, p. 287). Anti-oppressive research encourages the researcher to shift the power of any relationship from those farthest what is “known” (in this case myself) to those closest to the “known” (the participants with lived experience) (Brown & Strega, 2005, p. 263). Therefore, I attempted to always have an awareness of and equalize these power dynamics during the interview by developing as much rapport with the participants as possible within the time constraints and allowing the participants to direct our discussion towards topics and information that they felt were valuable. CGT also holds that the research question is subject to change if the researcher feels a more important question has arisen in the process of data collection (Sebastian, 2019). While the researcher has the inherent power as the

creator of the research question, this gives the researcher an opportunity to incorporate the values of the participants into the generation of the research question shifting more power onto the participants.

Participants and Researcher

Researcher Description

As a graduate student, I have been involved in the study of trauma through classes, conferences, and other extracurricular study. I have studied trauma generally and within specific populations but had not done in-depth study of any particular aspect of trauma prior to conducting this research. I have earned a bachelor's degree in music therapy and have completed all coursework for a master's in music therapy. This has given me some knowledge regarding the neurological, physiological, and behavioral effects of music, some of which are relevant to the study and treatment of trauma. Additionally, I have completed undergraduate practica and my music therapy internship in which I have worked with individuals who have experienced trauma.

Within this study, I collected and analyzed the data without co-researchers. Because of this, I practiced continuous and intentional reflexivity to recognize the impact of my biases on the process. Prior to the interviews, I asked participants to point out any questions that they felt were biased. I made every attempt to ask open-ended questions with no assumptions. Similarly, during the coding process, I attempted to recognize my own biases and beliefs as they related to my interpretation of the participants' words. However, I believe that we create truth and meaning between ourselves as individuals and communities and that my perspective as an individual and as a scholar are impossible to fully separate from this research. For this reason, I have chosen to disclose my identities here: I am living on lands historically occupied by the

Ute, Comanche, Pawnee, Cheyenne, and the Arapaho nations known as Greeley, CO. English is my first language and the only language I am fluent in. I am 24 years old and not married. I am a white, cis-gender, female from a middle-class, Christian background. I now identify as agnostic. I also identify as neurodivergent. I am privileged to be attending graduate school; both of my parents are college graduates as well. I have experienced some traumatic events in my life.

Participants

Eight participants were interviewed during this study. In the consent form, participants were asked which demographics they consented to being reported. Twelve categories of identities were suggested, but participants were encouraged to disclose any identities that they felt contributed to their perspectives relevant to the study. Three participants reported having a disability, four reported having no disabilities, and one participant declined to disclose. Participants had a mean age of 49.1 years and ranged from 28-69 years old. One participant held a bachelor's degree, four held a master's degree, and three held PhDs. Four participants reported being white, one participant reported being white Hispanic, one reported being Hispanic, one reported being Latina and one reported being Native American/Caucasian. One participant reported being male, one reported being cisgender-male, one participant reported being cisgender-female, and five participants reported being female. Seven participants reported speaking English as their primary or only language, one reported speaking English and Spanish. Five participants reported being married, one participant reported being married with a partner, and two participants reported being single. One participant reported having military experience, and seven reported having no military experience. Two participants reported being spiritual, one reported being Christian, one described their beliefs as Native

American Spirituality, three reported no religion or spirituality and one chose not to disclose. Seven participants reported being middle class, one chose to not disclose. Seven participants reported having experienced a trauma themselves, and one reported no notable traumatic events.

In addition to demographic characteristics, participants' theoretical orientations are also relevant to their discussions. Two participants reported working with use of the Bonny Method of Guided Imagery and Music (GIM) alongside other methods of music imagery, one participant reported using Bonny Method of GIM along with music psychotherapy, one participant reported using Neurologic Music Therapy, one participant reported using CBT combined with behavioral music therapy, one reported using music within TF-CBT, and two participants reported using an eclectic, client-centered approach. This is reductive of most participants' descriptions of their own practices and is only intended to give an overview of participants' approaches to music therapy.

Researcher-Participant Relationship

With one exception, I had no personal or professional relationships with any participants outside of attending presentations by some participants during music therapy conferences. I had an academic relationship with one of the participants prior to the study but no direct relationship existed at the time of the interview.

Participant Recruitment

Recruitment Process

Ideally, according to traditional CGT, participants would have been recruited and interviewed until data saturation occurred. However, this was not possible due to the time restraints and scope of the study. Twenty-seven participants were contacted and the eight who

responded and agreed to interviews were included in this study. Eight individuals responded declining to participate for various reasons and the remaining 11 individuals did not answer the email requests.

After obtaining approval from HSIRB (see Appendix A), emails were sent to each potential participant briefly explaining the study and inquiring as to their interest in learning more about participating. If I received no response within one week, I followed up with a reminder statement. Participants were encouraged to respond to the email with any questions or to express interest in learning more about the study. Participants were also given my phone number if calling/texting was their preferred form of communication.

Following a potential participant's expressed interest, a follow-up email was sent. This email contained the consent form and answered any early questions the participants had. Participants were encouraged to contact me via email, phone, or video conferencing with any questions or concerns regarding the document and their participation in the study. Participants then chose to sign the consent document and schedule an interview, or not sign the consent document and not participate in the study. I went over the document at the beginning of the interview to ensure participant clarity. Participants were informed that they could withdraw their consent at any time prior to or during the study. If I received no response within one week of sending the consent form, I sent a follow-up email. Individuals who chose to participate in the study were compensated with a \$50 Visa Gift Card.

In order to create a diverse yet representative sample, every effort was made to ensure that no more than 80% of the sample represented any one gender or race. Gender and race were selected as the measured demographic criteria due to their presence in the 2018 American Music Therapy Association Members Survey & Workforce Analysis. The only demographics

reported in the survey were race, gender, and age. Of 1,828 respondents, 87.14% identified as female and out of 1,818 respondents, 88.4% identified as White/Caucasian/European (American Music Therapy Association, 2018). Age was determined to be an unnecessary measurement due to the arbitrary nature of the “age groups” and feasibility in relation to recruitment due to the experience requirement. In order to attempt to recruit a diverse sample, emails were sent to Latin Music Therapy affinity group, the Asian Music Therapists Network, and the Black Music Therapy Network requesting recommendations for potential participants. No response was received from any of the groups, but one individual did contact the researcher saying that they had heard about the study through the Latin Music Therapy affinity group.

Participant Selection

Participants were recruited through purposive (specifically, maximum variation) and snowball sampling rather than a theoretical sample as is typical for constructivist grounded theory (Charmaz, 2006, p. 96-122). My PI and I identified potential participants based on their expertise as a clinician in the field of music therapy. ‘Expertise’ was identified through presentations at conferences and publications that have made a clinician known as an expert in the content area relevant to this study. Additionally, some participants recommended colleagues they believed would have valuable contributions to the research questions. Four participants were recruited through the latter method.

In order to participate in the study participants had to: a) hold the Music Therapist-Board Certified (MT-BC) credential, b) have a minimum of 5 years working with individuals who have experienced trauma, c) use music in the creating and processing of the trauma narrative, d) and have access to equipment for a phone or video conversation and be willing to have said conversation recorded. While it would have been very interesting to hear from

individuals who specifically did not use music in the creation and processing of the trauma narrative, the scope of this project did not allow for that comparison.

Interviews were conducted from December 23, 2020 to February 3, 2021 via WebEx video or phone conversation. I connected from my home and participants connected from homes, offices, or other private locations. I used a Windows desktop computer with an Intel i7 processor running Cisco Webex software and Adobe Audition 2020; a Blue Yeti Snowball microphone; and over-ear headphones to hold interviews with the participants and record video, audio, and transcripts.

Data Collection

Due to the vulnerability of the population with whom the participants work and the current state of the COVID-19 pandemic, observation data of participants' work setting, and record data were not collected for this study. Data were collected through one-on-one interviews with participants. I also took some notes during the interview.

Participants were asked to set aside 90-120 minutes for the interview. Excluding the time spent going over consent documents and working out technology issues, the interviews were a mean of 66 minutes in length with a range of 40-98 minutes. Each participant was interviewed only once. Interviews were conducted via Cisco Webex as video or phone call. Webex meetings were scheduled and locked to ensure the meeting was secure. Prior to the interview, participants were given my phone number to call/text if there were technical problems with internet connection or software.

This study posed a minor risk of traumatization/retraumatization due to the potentially difficult topics involved. Some participants appeared to have great difficulty addressing certain topics, at times becoming tearful or expressing that they felt strong emotions. The following

measures were taken to ensure participant comfort and safety: Prior to the start of the interview, participants were asked if they had any triggers/topics they would like to avoid or if there was any way I could make the interview more comfortable or accessible. Participants were invited to take breaks whenever they felt necessary; participants were informed that they could ask to come back to the conversation at another time; participants were informed they could end the conversation completely. Participants were also provided resources for dealing with traumatic stress.

Participants engaged in a discussion regarding their philosophies of music therapy and trauma treatment, their methods of processing trauma (most specifically the trauma narrative), their theories as to the function of music in this process, and their experiences as a clinician. Participants were asked primarily open-ended questions with some more specific questions for the sake of clarification. I often simply reflected the participants' statements to ensure clarity. At the end of the interview participants were asked to share if they felt any important topics had been missed in the discussion to avoid missing or misrepresenting the participants' ideas.

Calls and transcriptions were recorded within the Webex platform and moved onto my locked desktop. The audio from the call was also recorded onto my desktop using Adobe Audition 2020 version 13 back-up in case the Webex recording failed. As soon as Webex recordings were available, the recordings were moved to a folder on WMU's secure Google Drive and deleted from my desktop hard drive. Recordings made on Adobe Audition were also uploaded to the secure Google Drive folder and deleted from the hard drive.

Participants' data were de-identified by changing their names to numbers. Any demographic data that participants did not consent to be included in the report were removed as well (see demographic section of consent document in Appendix B).

Analysis

No secondary coders or collaborators coded the data collected from subject interviews. I initially intended on coding data according to “Constructing Grounded Theory” by Kathy Charmaz (2006) which guided the development of this study. After reviewing data and considering the amount of data collected, I determined that a reflexive thematic analysis (RTA) according to Braun and Clarke (2006, 2019; see also Braun et al., 2019; Clarke & Braun, 2017, 2018) would be more appropriate. Braun and Clarke describe their method of thematic analysis as “similar to grounded theory-lite” or similar to the general techniques of grounded theory (Braun & Clarke, 2019). Braun and Clarke specifically recommend using RTA over grounded theory “when you want to address research questions that are not focused on social processes or influencing factors,” (Braun & Clarke, 2019, p.17) and specifically when examining “people’s behaviours or practices – the things they do in the world, or their accounts or perceptions of their practices” (Braun & Clarke, 2019, p.12) which is applicable to this study. Additionally, RTA does not attempt to develop a theory, but rather is aimed at providing an interpretation of the data. Over the course of this study, it became clear that the data were likely not robust enough for the development of theory making RTA a more suitable choice.

Braun and Clarke describe that while CGT and RTA can lead to very similar outcomes, a key difference between grounded theory and RTA is that grounded theory is a methodology and RTA is a method (Braun & Clarke, 2019). CGT through an anti-oppressive lens informed the assumptions of this study while RTA was employed within that paradigm for the analysis.

Finally, RTA was chosen over other forms of thematic analysis for its compatibility with the assumptions of this study and my own values and beliefs. RTA is theoretically flexible and allows for an inductive, data-driven, constructionist approach to analysis in line with CGT

through an anti-oppressive lens. Other forms of thematic analysis are in direct conflict with this approach. Some methods of thematic analysis search for codes to support themes rather than allowing themes to emerge from the codes in conflict with an inductive, data-driven approach. Thematic analysis methods that require use of multiple coders and calculated interrater reliability are in conflict with a constructionist approach, whereas RTA assumes there is no “accurate” way to code data or one absolute truth existing within the data. Rather than the influences of the participants and researcher are impossible to separate from the data. Critics of RCT who take a positivist approach may take issue with the assumption that there is not a “correct” way to code the data. However, it is my belief, in line with an anti-oppressive approach, that the search for an absolute truth often results in further marginalization of oppressed groups. In a lecture, Clarke (2017) made a similar point noting that thematic analysis often has an “explicit social justice orientation.” They say that because the framework is not rigid or predetermined it can be used to give voice to marginalized groups and create active social change.

The first step of a RTA is to familiarize oneself with the data. In this case, NVivo transcription transcribed the data, but I listened to and read over interviews multiple times. Initially, my focus was to ensure the accuracy of the transcriptions. Following read-throughs were focused on beginning to understand the content of the data. During this process, I noticed that some participants’ opinions and practices were more closely aligned with my own education. I felt a tendency to make inferences about practices that I was more familiar with, whereas I tended to take practices I was less familiar with on face value. I was also aware of a potential bias towards methods that I had personally used clinically and therefore seen the

efficacy of. Being aware of both of these potential biases throughout the process allowed me to contextualize my analysis and understand my relationship to the data more clearly.

After uploading full transcripts of the interviews into NVivo for Windows standard package software, the participants were categorized as ‘cases’ within the data to allow for easier analysis. In each interview, I began by asking participants about their approach to music therapy and their ideas about trauma. These questions were necessary for me to understand the participants’ context and to ask more appropriate and meaningful questions related to the research question, but these initial inquiries themselves were not necessarily directly related to the research question. Therefore, I began by coding all interviews into three sections: views on music therapy, views on trauma, and views related to the research question. This practice is not necessarily typical within RTA, but in this study it allowed me to more easily locate data related to the research question.

I then began a more detailed level of coding. Some codes described specific lines or words; others described whole paragraphs. Many pieces of data had multiple codes some of which tended to be semantic and others latent. I changed, merged, and renamed codes as was appropriate throughout the entire analysis process. Ultimately, I ended up with a little over 100 codes. After going over the interviews and the codes themselves several times, I began to group codes and create themes. During this process I returned to the codes and the raw data repeatedly to ensure a robust connection between all levels of analysis. I went through several configurations of themes but settled on three themes and one sub-theme. I then defined and named each one to clearly describe the codes which built it.

Chapter IV

Results

I conceptualized the data collected in this study into three themes and one sub-theme.

The three themes are: #1 Music Cultivates a Space for the Story, #2 Music Meets the Individuality of Clients and Their Story, and #3 Music Structures Healing within the Story.

Theme two contained one sub-theme, Deep Processing Poses Potential Dangers.

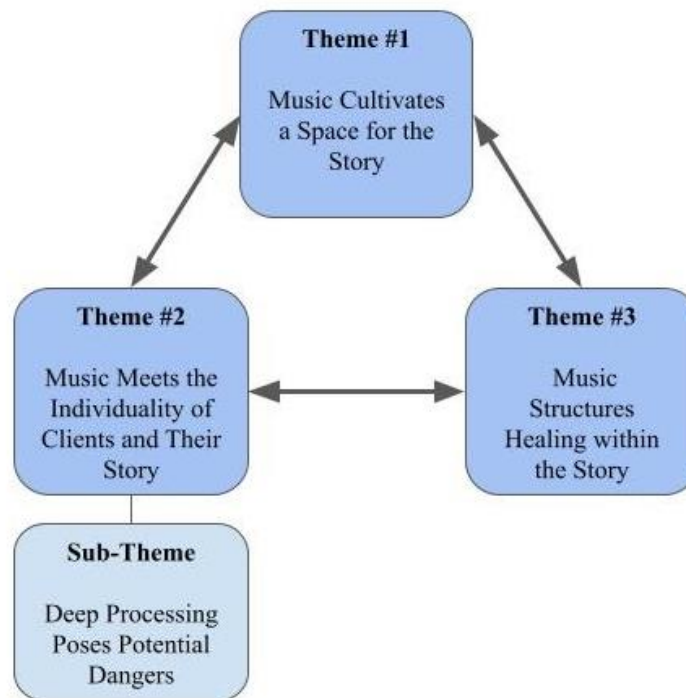


Figure 2. Themes

This study explores the use of music in the storytelling of trauma. While each theme highlights the role of music, there is a non-musical parallel to each theme: Space can be cultivated for the story without music, the client's unique story can be told without music, and healing can happen in the story without music. As will be described below, the use of music as opposed to traditional talk therapy or other non-musical therapies creates a unique experience. This is not to say that the use of music inherently makes the storytelling process better or

worse. Music simply provides different avenues to explore a personal and complex process. As shown in Figure 2, these themes are not a linear process, but are interconnected and can be accessed repeatedly in whatever way is most beneficial to the client.

Throughout the remainder of this paper, the numbers 001–008 will be used to identify participants and their quotes. Participants were given numbers to protect their anonymity.

Theme #1: Music Cultivates a Space for the Story

While this study set out to understand music in the storytelling process, it became clear that participants also viewed music as an important tool for creating the environment in which the client can tell their story. This theme encapsulates approachability of music as a therapeutic medium as well as its ability to facilitate the development of skills and relationships that clients may need to be in place in order to facilitate the storytelling.

For clients who are apprehensive about talking or seeking services, participants described music as a non-threatening entry point. It can bypass the idea that they have to come in and talk with someone they don't know or trust yet. One participant described their experience with clients.

So it's that whole concept that, like, this isn't threatening. This isn't scary. "I don't have to talk to you, which is what I don't want to do anyway." So, yeah, I think it just. It just creates this avenue that's safe for them. (007)

One participant described music as the motivation for a young client to engage with the therapists. At first the client "would not talk about anything, wouldn't do anything."

And so we found something [music] that did pique his interest and keep his attention and used that as a way to allow him to express himself nonverbally first, which led into verbal expression or disclosure about what happened in his life. (008)

Music is also very accessible because, as participants pointed out, just about everyone experiences music in some way, and it is typically something people can relate to. Krause et al. (2013) go further note that with the development of technology, people tend to access music in many different ways at many different times throughout their day. One participant described a “speech” that they give their clients about music.

It's on the radio, but it's also in the grocery store, at the gas station, on the TV, blaring from someone else's car. Your phones already have music programmed into them. The Internet like it's everywhere. It's more it's the most accessible form of art. (002)

Using music to encourage clients and help make them comfortable engaging with therapy is often the first step in creating a therapeutic space for storytelling. People are often already comfortable engaging with music, and it doesn't typically carry the same stigma that traditional therapy might (Landis-Shack et al., 2017).

Participants described many different roles music can play as it prepares the client and the space for storytelling. When describing what things needed to be in place before the storytelling, all but one participant highlighted safety as a key issue. Clients need to feel safe in the space.

...in order to have enough of a safety to actually, first of all, engage, you know, and express and then to even begin to think about transforming, it needs to be safe enough.

It needs to be there needs to be a space that's delineated for the work. And that means that's a container, you know, a ritual container. Music has a unique capacity to establish that, in my understanding. (001)

Clients may also learn how to experience safety. If an individual has experienced an ongoing trauma or is currently experiencing a trauma, they may not have the cognitive or physical capacity to experience safety. Especially in cases of early childhood trauma, clients may struggle to differentiate between safe and unsafe situations due to breakdowns in their fear-related neural circuitry (Marusak et al., 2021). One participant suggested that music is a useful modality through which to practice and learn to experience safety.

What I mean is before a person is able to say, “This is the traumatic, you know, this is the traumatic thing that happened,” maybe I need to have a more of a more healthy construct in my head and in my whole being. And if I can learn through music to experience safety, to experience a safer way of identifying my feelings, then perhaps through music I can, you know, then really get to the heart of the matter. (004)

Participants mentioned establishing various coping skills such as focusing on the breath, relaxation techniques or learning an instrument. They described these coping skills in the long-term for preparing the client for the emotional difficulties that may arise when they do share their story and in the short-term for getting the client into a healthier space. One participant mentioned using music to regulate young clients.

But it kind of helps hone in, organizes the body and organizes the internal rhythms and also lets them get out a lot of the willies and those buzzing feelings that they have inside

of them. You know, that they don't, people don't maybe let them get them out in an appropriate way where they say, don't do that, you know, hold that in. But, you know, their body is just buzzing. And so we're just banging around on instruments for an hour. Sometimes that's what they need to be able to process some of the trauma that they experienced that led to lack of impulse control or to their body to not be able to regulate. (005)

Additionally, participants mentioned creating trust: trust of the therapist, “First and foremost is me earning their trust,” (006) as well as trust of the music, “Other people need to take time to develop the relationship, me and the person, and develop the co-therapist relationship with the music and trust in music to be a facilitator...” (005)

Every participant described a connection between emotion and storytelling. Five participants brought up the use of music in exploring emotions prior to storytelling. Three participants described the importance of being able to identify emotions. Clients may have difficulty identifying what they are feeling verbally. In some cases, clients may be experiencing alexithymia, the inability to put words to physical experiences of emotion (van der Kolk, 2014, p. 100). Participants described how music can provide examples and facilitate the connection between the experience and the expression.

...not to understate just the role of the being able to musically help identify these feelings. Music becomes such a, you know, can become, and does become, such a very direct link to how we're feeling. To be able to get in touch with like, you know, I might say that I'm really angry because so-and-so, you know, so-and-so hit me. But that's that

verbal expression is an expression of something that is it's more than verbal language.
(003)

One participant described music listening as a way to create a degree of separation between a client who was hesitant to identify their own feelings. The participant described how the client would listen to the songs and be able to talk about the emotions the singer must be experiencing. Over time, the client was able to “make that connection that like, ‘Wait, this is me, I am feeling these things,’ but kind of separated.” (007)

Having clients “play their emotions” on certain instruments was mentioned by participants as a way for clients to practice putting words to feelings and feelings to words. Others described going beyond emotional identification and the need to practice expression.

Going back into the idea that it can allow you to externalize something... Well, you know, the idea that you take that emotion that you're feeling, put it here on this keyboard or put it here on this drum. What does it sound like? Release it through this. And I think that that's probably something that's more unique with this music. I mean, also maybe with art and movement and like the arts in general, you know, it kind of takes this in here and puts it out there. So that way it's not just contained inside. (002)

Establishing trust, safety, coping skills, and emotional understanding help bring the client into a space for storytelling. Participants described putting these things in place to prepare the client to engage with the story in a productive and healthy way.

Beyond teaching skills and creating an environment, music may serve as an immediate catalyst for a story to be told. Five participants mentioned music improvisation or music listening as directly prompting storytelling. One participant described a situation in which

listening to the song, “I Will Survive” unexpectedly prompted a client to share his trauma of being left in a warzone as a soldier. The song gave the client “that space that he needed” to be able to share that story. (002)

Participants placed different emphasis on the uses of music described in this theme, but all participants, in one way or another, described the importance of preparing the client before they engage in storytelling. They described the ability of music to develop safety, trust, coping skills, and emotional identification, expression, and regulation. Some aspects such as establishing trust and safety were described as applying to therapy in general but having specific importance in helping a client prepare to tell their story.

Theme #2: Music Meets the Individuality of Clients and Their Story

This theme looks at music’s ability to connect with clients in whatever way and on whatever level they need in order to be able to safely tell their story. Each participant noted that every client’s experience with trauma and the telling of that story is different. The client brings their whole self to each session: their experiences, their perceptions, their abilities, their place in the healing process. As each client brings their needs to the session, the music actively meets the clients where they are at. They may be prepared to share their entire explicit narrative, or they may not even fully acknowledge that they are carrying trauma. The therapist may specifically intend to process the story and explicitly state this to the client, but other times the story comes out whether the therapist intended it or not. This theme explores the ways that music facilitates, supports, and expands the bounds of storytelling.

Participants noted many different ways in which a person's trauma and their experience coping with the trauma may differ. “...because there are a lot of things that you can experience and depending on the trauma, depending on the experience, depending on the severity,

depending on how you were impacted, like it's so individualized and contextualized.” (005)

They mentioned the process as flexible and tailored to the clients’ needs. “Well, I think it's all individual. I mean, I don't think I could name any universals about this work.” (001) One participant mentioned that the type of trauma and point in the client’s life it occurred influences their concept and treatment of the trauma.

I really think when you're talking about trauma, the what kind of trauma matters... It's a different experience when the neurobiology was formed by traumatic experiences as opposed to ‘you’re fine until you have this event in adulthood’. (006)

One participant mentioned that music may not be necessary or appropriate for every client. “I do not believe there is a one size fits all. And I believe that there are some people that can process their trauma and get through just fine without music.” (006) The American Music Therapy Association (n.d.-b) writes that music may in fact be contraindicated for clients with active hallucinations, clients in high arousal states or depressed and are sensitive to certain volumes, and clients who are struggling with self-regulation or dissociative symptomatology.

Another participant said clients may not want to share with a therapist at all. “Figure out how you want to share it, how you want to express it, or even if you want to share it, or maybe you just need to get through it yourself.” (002)

Three participants placed a strong emphasis on cultural and identity differences. One participant pointed out that these differences exist especially in music therapy since music is so often tied to culture and identity.

... you know, these musics have existed in all kinds of cultural contexts for millennia.

And we occupy a certain space in that and have a certain part of that story. That's a

different way that our field typically looks at this. And I think it's really important to think about that. (001)

Two of the participants who put a strong emphasis on cultural and identity differences noted the lack of trust that can exist. “You know, women, LGBT communities, people of color, that's kind of the go to is what's the point like who's going to help me anyway? You don't understand. There's a lot of defensiveness there.” (002) That distrust seems to be common among marginalized groups and is warranted based on historical mistreatment within the healthcare system (Suite et al. 2007; Veltman & Chaimowitz, 2014; Whaley, 2001). Another participant spoke specifically about Native American culture.

Music is used for different things in different cultures. And so if we're using spiritual music as something in leisure or play or just for fun, that could be insulting to our client or the person that we are working with. And so that might kind of impede the clinician client relationship a little bit and break some trust issues. So I think that that could be something that would impede on whether somebody were to express something to you as the clinician. Also in the Native American world, we were really taught not to share things. And so because that's a part of us. And I don't know if that was a lack of trust with the white man, if you will. So there's that aspect of things. And then also just knowing cultural aspects like engaging in eye contact isn't necessarily avoidance. It may have been taught to that person as a way to respect somebody else. And so but also, again, knowing the beliefs. (008)

In addition to cultural differences, clients have other personal differences that can be met in a musical context such as a client's ability or willingness to verbalize. Participants

brought up many reasons that a client may not be able to or may not want to communicate their story verbally.

Certainly at a given time, not everybody well either has the ability to talk about it or they just may not want to talk about it. Mm hmm. And that's OK. It would be in that case, it would be important to let that person know that's fine. (003)

Not speaking about a trauma for whatever reason could be a major hurdle to traditional talk therapy, but participants shared ways that non-speaking people or people who do not want to speak can still share their narratives. When talking about people who have experienced domestic violence, one participant talked about how they may share their story musically.

And so they don't feel confident in what they have to say and they don't feel like they have the space to say it. So sometimes it's just creating a musical story through melody and through change and through rhythm. And, you know, you get to the space that you feel comfortable to add words, so be it. But sometimes it just stays as a musical story with, you know, motifs and themes that repeat. (005)

One participant noted that clients they had worked with in inpatient mental health facilities often weren't able to verbalize their experiences or say, "because of that, that [traumatic event] happening, I feel really angry. And I know that I need to be able to seek help and accept medications." The participant went on to describe the use of music in that situation.

Chances are they don't have those verbal abilities yet, and therefore that's where music can become a...not only can it become a way, and does become a way, to more safely

and clearly express the trauma and the way to process it, and the way to become healed, you know, the music... the way it helps us, you know, is multi-layered. (003)

Not only can music allow those who can't or don't want to verbalize their story access to storytelling, it can also provide access for those who can't yet identify the emotions they are experiencing, as one participant pointed out.

And that they just don't know how to identify those emotions. Like, it just kind of gets lumped into, "Well, I feel bad. Yeah, I feel angry, but I feel sad." Right. And it doesn't they can't really pick that apart and be like, "I felt hopeless. I felt worthless, I felt powerless. I was pissed off and I felt that a huge injustice was being done." (007)

Music allows clients to use many different types of expression. In the above examples, clients often use music as the expression itself. One participant gave an example of a young client who would talk about his story verbally but preferred to share it solely through music. The client wrote a song in which different instruments represented different characters in his story (supporters, abusers, etc.). When the client shared their story with the nonoffending family member as part of the therapy, they chose to simply share the song rather than retell the story verbally. (007) Felsenstein (2013) described a similar method of using songwriting with children to express a story but used lyrics rather than instrumentation.

Clients who prefer verbal methods may not want to or be able to directly lay out their story in a linear fashion (Barry et al., 2018; van der Kolk 2014, p. 194-196). Participants who use Bonny Method of Guided Imagery and Music (GIM) in their practice mentioned the very common occurrence of clients using metaphor that is guided by the GIM music listening.

Their story may come up, you know, the work information comes through using uh, using symbol and metaphor and in much the way dreams will show up only in and you can dialogue with them and so... um, in GIM they may have an image come up that I'm feeling like, whoa, that was that's some sort of a, that's some sort of a trauma there.

(004)

Similarly, one participant mentioned using music *as* the metaphor for the trauma. This seemed to go beyond simply telling the story through music to involve a more fully experiential expression similar to the descriptions of Amir (2014).

I think that's when it's about making sure that you're being heard and being heard means that there is some sort of, sorry to use this word, simulacrum, you know, between the you know, between the musical form and its contours and the lived experience. That there's some kind of resonance, there's some kind of correspondence so that I feel like, you know, what we're playing here is a good enough symbol. It's like a living experiential symbol of my trauma. So you're really hearing it. You're getting it. And that's important. (001)

Participants mentioned that the expression of the story may be deeply linked to the emotional experience. “And sometimes it's just not even like a story or the context. It might just be the experience or the emotion at that time.” (005) This is reflective of Berwin’s DRT which suggests that the sensory-bound memory is much stronger than the contextual memory of a traumatic event. Clients may use music to express the feelings associated with an event not the contextual information.

And sometimes the, you know, the talking doesn't do us much to get in touch with his feelings and the music can help the person just to like, yeah, this is really how I feel now. I can feel it in my music and I can play it and that. And I think that process that through, you know, using the music to identify, to find where the feeling is in my body, or in my spirit is if there is a way of talking about it, I find it latch on to it and express, you know, get it out of myself, you know, really try to get that feeling out there so I can just feel I want to feel more relieved and the music can help us to feel better. (003)

In the process of telling the story, music can play many different roles. Participants described music as “support”, as a tether to reality and the present moment, as “holding” or an “emotional container”, and as a connection to the emotional aspects of the story. The terms “holding” and “container” are commonly associated with GIM (Abbott, 2005), though they are also used by other music therapists as well (Aigen, 2009).

The GIM music is large so it alters a container that is safe, it can hold the enormity of a client's emotions when they're expressing trauma or fear or whatever it is hate towards their abuser or whatever it is. So that, you know, whatever they have to do is healed. If we use music that's too small, it doesn't really give the client a safe enough space to be in it to be able to express all they need to express. It offers an aesthetic experience that the client would never have if they were just talking about it without that, you know. It offers the beauty and the non-verbal support that music can give. (004)

This client went on to describe “small” music as a single instrument such as a flute or a singer such as John Mayer. They described “large” music as typically something without words or at least words that are in a language the client doesn't know with more instruments.

Another ability participants mentioned was that music has the ability to control the level of access to the trauma that clients are ready to experience or want to express. Some participants expressed that it is the therapist's job to guide the client to the storytelling and others expressed that clients should come to storytelling in their own time, if at all.

I think that it would be healthier if at some point a person were to be able to talk about the traumatic experiences, that has to be a choice that the individual would make. It can't be forced on them. (003)

One participant described music as acting as a safety valve, allowing clients to delve as deeply as they want into the trauma without having to go too deep.

So music affords that possibility to live through it as many times as you need to in the way as you need to with a kind of safety valve and filter that you need as well so that you can address, you know, what you need as you're ready to address it with another person there with you in that sort of metaphorical, symbolic world of music as an art form. (001)

Another client described GIM as operating within the "threshold of tolerance" (a theory developed by Dan Siegel; Corrigan et al., 2011) allowing clients to not take on more than they are ready to handle in that moment.

So GIM is you know, it's a very open way of working because the client you put on the music, matching it to the- matching it to- matching the structure of the music to the client's ego strength and what they're dealing with psychologically. (006)

One participant described a session with refugees where, due to the lack of translators and the desires of the group, sharing a full trauma narrative was not appropriate or necessary. The clients ended up non-verbally sharing rhythms from their home countries. That was the level of sharing that they need therapeutically in that moment.

And it wasn't necessarily a trauma narrative, as you would imagine, you know, like hearing about someone's trauma experience. You know, it's not what I would hear when I work with kids who would tell me how they moved to 14 different countries in order to, you know, keep fleeing the situations, the political situations that they were experiencing, but sharing something of themselves in a way that is honoring their where they came from and also grieving it. I see that as a trauma narrative. You know, that's telling me a story that it's a big piece of them and they want to share it with other people... (005)

In describing how music acted as a catalyst for storytelling, one participant shared how deeply music can penetrate our memory and emotions. Amir (2004) and Sutton and De Backer (2009) similarly write that music can reach unconscious and reflect more deeply than verbal language.

It was the catalyst to get to the traumatic memory, so because to me it's there's layers of things. And so and he was one that buried them down in there because remember, he wouldn't talk to anybody about any of that... (008)

Participants described that clients go through different healing processes and are often at different points in the process when they arrive for treatment. They emphasized the

importance of this individualized experience and the need to respect it. When describing how they developed appropriate treatment, music often played a key role in allowing clients to access and examine their traumatic memories in a safe and comfortable way.

Sub-Theme: Deep Processing Poses Potential Dangers

Participants said that music can access emotions and allow for deep processing, but it also brings about issues of safety and ethics. Some participants mentioned that as music therapists without other training, accessing trauma in too much depth may not be appropriate.

So I, I don't ever bring it up because one like I like I said, I'm not a trained psychologist. Like, I should not be the one to contain and hold and everything like this. And also for my own well-being... (002)

Another participant shared a similar sentiment noting that it is often best practice to validate whatever clients choose to disclose, then refer them to another professional.

But I think it's also important for us to remember our boundaries within discussing trauma and such. I've had clients who have disclosed really, really heartbreaking things to me, but I had to stay in my lane. We have to know, OK, this is beyond what I can do as a clinician. I need to send this forward to the psychologist or the social worker, whoever was in charge for some of their clinical care. (008)

Some participants had additional degrees in counseling or psychology and did not mention referring clients to other professionals. However, regardless of their education, several participants mentioned the potential dangers for therapists.

So I think this work of trauma. It's not only that using music for this work is not only really powerful, but it's also powerful towards the therapist when we kind of get smacked a little bit, surprised, hit upside the head by the information the person shares. (004)

This participant went on to share that after working with a client with a particularly harrowing story, the participant had to use some music and drawing to help themselves regulate and deal with their own anger about the client's circumstances. Another participant shared how deeply clients' stories can affect the therapist.

But why we in particular do important work is that we live in these resonantly difficult spaces with our clients who experience pain experience. You know, wounds there's no way for us to not feel along with that, to hear that with them and to really be doing our job, you know. So that, I think is. Is one of the reasons why this work is not for everyone and why we have to really understand that that's an important part, is truly hearing our clients means we're in that space, that we're going to be feeling something when they're beating that drum really, really, really hard and saying this was me. This is what I am feeling inside. And it's loud and intense and is impacting us. And you feel it in your chest. And, you know, that is that's a central part of our role as music therapists, certainly as music psychotherapists. (001)

In many different ways, participants talked about how their manipulation of the music, the clients' manipulation of the music, the clients' perceptions of the music, and properties of the music itself allow the storytelling to happen in whatever way is best and most appropriate for the client at that moment. The versatility of the music allows clients to decide how much

they are ready and willing to share and how they would like to share it. The therapists can also use aspects of the music to facilitate safe and meaningful storytelling. While verbal storytelling may be appropriate and necessary at some times for some clients, music provides alternative methods to explore the story that may be useful for some clients in certain situations.

Theme #3: Music Structures Healing within the Story

This theme describes the healing that can happen within the music-facilitated storytelling process. Music can provide a framework for the healing to occur within. Because musical expression of the story allows for a certain control and connection to the story, as was explored in the previous theme, the client and therapist can experience control of and connection to the healing as well. Some participants seemed to believe that the storytelling itself can lead to positive outcomes for the clients, others seemed to believe that the storytelling is not enough on its own and that some process needs to take place within the narrative in order to facilitate healing.

Some participants expressed that simply telling the story allows clients to avoid negative consequences of “masking” or not acknowledging their trauma. Since music, as mentioned before, can provide a nonthreatening entry to expression and allow clients to express at whatever level is comfortable for them, they may be able to begin storytelling more easily and avoid the negative consequences mentioned by participants.

It's kind of one of those things that like stuff that stays in the dark, like keeps us sick. Essentially secrets keep us sick. But it's one of those things that like once we can bring that story to light and once we can claim it, it starts to dissolve these notions that this is like these feelings of shame and responsibility and helplessness because you're doing something with it. It's not just like sitting and eating you up. (007)

Participants mentioned the need to revisit or re-experience the trauma through music in order to process the events. This is the philosophy of prominent psychotherapies used to treat trauma which encourage re-constructing and re-experiencing memories in order to create meaning (Cohen & Mannarino, 2015; Herman, 2002).

I find that the expression part is also very difficult, which makes which honestly is what makes treatment so hard because it's not like I talk to someone and all my problems are gone. It's no, you have to go through that. You have to revisit what happened to make sense of what happened. (002)

Other participants shared that the process needed to go beyond telling the story. “The telling of it doesn't cure it. That's an old idea that comes from. I don't know who Freud or whoever it was. But just talking about it doesn't clear it, it won't clear it.” (004) Participant 004 is likely referring to the work of Freud and Josef Breuer in the late 1800s which van der Kolk (2014, p.183) describes as “the origins of the ‘talking cure.’” According to van der Kolk (2014, p.183), Freud and Breuer found that when their patients with fragmented traumatic memories were able to clearly remember the event, that their symptoms of “hysteria” disappeared. van der Kolk (2012, p.184) goes on to say that the “talking cure” has lived on and in fact the same basic ideas are used in cognitive behavioral therapy which is widely taught and used today.

While some participants did not describe much beyond the telling and validating, other participants shared processes that go beyond telling that might allow the client to heal.

So it gives you that chance to, you know, listen together to create sounds together that by themselves don't have to necessarily re-traumatize someone, but gives creates an

opportunity to enter into a space where the traumatic experience can be encountered, reformulated, processed through, possibly healed, possibly transfigured, you know, in a way that is somebody needs to do. (001)

Participants mentioned using music to rewrite the narrative. The client can change the musical structure to retell the story, or if an explicit story is shared, the client can tell their story with a different series of events.

I mean, you can always share the story of like, this is how it happened. And this is a sad outcome. Or you could share the story of this is what happened, this is how I kicked their ass. It's how you want to share it. What role do you play in this and how do you want to remember it? As you know, you can continue to remember it as I had no choice but to do this. Or you can remember this as this was what I did to help myself. (002)

The practice of re-experiencing a traumatic event with different outcomes was also described by participants who use GIM. They mentioned that the support of the music they are listening to may allow them to confront abusers or fight back during an assault whether the attackers in their story are literal or metaphorical. The process of “rewiring” the nervous system through music was described by one participant who used GIM. While rewiring was the process, it also seemed to be an outcome of the process.

So, yeah, I think that they, I think that they can be rewired so that the trauma stops becoming the loudest thing in their lives. And that they can go on to live lives that are much more normal. I also believe that honestly guided imagery and music can do the same for trauma, and I've seen that and used it that way. (004)

Similarly, participants described the process of “being together” in the trauma narrative. Sharing the space, moment, or musical experience with clients seemed to be a mechanism of healing as well as an outcome. One participant described the being together as necessary for clients to heal interpersonal trauma.

I use it as a way to provide support and connection to for there to be a reminder of there is this person that knows this about you, that cares about you, that even though they're not with you, you still care about you with the things they do outside the sessions, with the music we selected together. (006)

One participant described the music making as a way to be in the experience of storytelling with the client. The therapist experiences their storytelling and to some extent experiences their story.

It's that it's that aesthetic relational way of being together in time. And it's time it's not clock time. It's time more in the sense of experiential taught the way we experience being together. So, you know, it's the Greek Kairos versus Cronos, you know, it's the, it's so, a little bit of a distinction there. (001)

Participants described many positive outcomes that clients may find in their storytelling process. One participant described how when clients go through the process of confronting their trauma in a GIM session may allow for a resolution to the experience.

Yeah. In order to give her the energy to do what she needs to do to, as we say, as we say, symbolically, she needs to she needs to kill the dragon or face the Dragon,

whatever it is. That's talking in archetypal terms. But that's what she needs to do. That's what a lot of people need to do and their imagery is to face the Dragon, whatever that is. (004)

Finding a resolution was also mentioned outside of GIM. One participant described the process of using images or photographs to assist clients in songwriting about a traumatic experience. The layout of the song was designed to help clients find closure.

I would make sure that there was a say like, say, problems or slash trauma might be at the beginning and that the middle part of the story would be a way of dealing with it. And the pictures would reflect this, too, and then that there would be some healthy way of coming to closure with that. (003)

One participant described a moment where a client told their story completely non-verbally but found peace in the experience. The participant described a “very beautiful moment” when a client came in and began to play a five-note melody on a guitar while the participant provided accompaniment. After a time, the client stopped and said that they felt “connected” and like some tension that they had been carrying had been lifted. (002)

Sometimes, clients who are processing trauma are not necessarily out of the traumatic situation and may need actionable solutions to a present situation. One participant described using music and imagery to help a client “minimize damage” by accessing an inner strength. (006) Another participant described the storytelling as a coping mechanism for helping clients to deal with other symptoms that may stem from their trauma.

So, um, just being able to express themselves somehow. Some of them, I remember, didn't really have a concept of what they were feeling or having an understanding of why their bodies were reacting or responding or why they would get upset about something or. And so I had a lot of clients who would self-harm because they had such deep pain on the inside. So they would, you know, they would hurt themselves. So I guess teaching the coping mechanisms of expression to me is most important, whether they talk about it or get it out in other ways.

Participants mentioned that some of their clients experienced gaslighting as part of their trauma. The clients were made to believe that they were in the wrong for experiencing abuse, neglect, or tragedy or that it did not happen as horribly as they remember it. After sharing a story musically or metaphorically while listening to music, having someone to combat that gaslighting and believe their story can be a healing experience for clients.

But, you know, I trust the countless times that I've just had clients look at me and go, "Oh, my God, you believe me," and they'll start crying. And I'm like, "Of course." I'm like, "Of course I believe you." And then I'll say, "And even if everything you've told me is not just factually accurate, it doesn't matter, because I can see in your face how painful it was. So that tells me it was really fucking messed up." You know, and there's just such a sense of just disbelief and relief when someone's finally believed. (006)

Finally, participants mentioned the need for clients to regain a sense of control. "I think it's just part of taking back that control when the control was stripped away from you." (007) One client described using the music itself to give the client a sense of control because they can control all aspects of the music they are making.

We could change the lyrics. We could do something with any other elements of the music. We have the power to do that. So we then have the age- the agency shifts to the person who has experienced the trauma, who may not feel that agency at all relative to the trauma, but gains that agency by engaging the art form relationally with somebody to support them. (001)

According to the participants, using music as the story or support the story gives clients space to find healing that may be difficult through verbal therapy. In cases where music is used in tandem with traditional talk therapy or in a talk therapy framework, it can give clients a different kind of control and avenue for expression. The form and elements of the music can be completely in the control of the client. The emotional content of the music can reflect their story or be used to change their story in some way. Music listening can bring parts of the story to the forefront of the client's mind and begin processing more deeply. Healing from trauma can certainly happen outside the story and outside of music, but for some clients exploring their story using music may be able to provide a unique and otherwise inaccessible type of healing.

Chapter V

Discussion

This study adds to the foundational understanding of the use of music in creating and processing the trauma narrative. There is limited literature which addresses this specific intersection, and more research is needed to fully understand it. The roles of music outlined in this study may inform inquiries in future research. This study may also support music therapists in conceptualizing their clients' expression of traumatic experiences and the music therapists' role in this process.

Eight music therapists from a variety of professional backgrounds were interviewed for this study. Three themes and one sub-theme were constructed from the data: #1: Music Cultivates a Space for the Story, #2: Music Meets the Individuality of the Clients and their Story, and #3: Music Structures Healing Within the Story. Deep Processing Poses Potential Dangers was constructed as a sub-theme of Theme #2.

Music Cultivates a Space for the Story

Theme #1 illustrates that music can be used prior to the storytelling to prepare the client and the environment. This theme has similarities to the first phase of Herman's (2002) model and the first phase of TF-CBT (Cohen & Mannarino, 2015). In Herman's (2002) model, the first stage, establishing safety, must be complete before moving on to storytelling in the second phase while TF-CBT emphasizes psychoeducation. Participants in this study described trust, coping skills, and emotional identification, expression, and regulation as important things to address prior to storytelling. Participants also described situations in which clients found music more approachable than other forms of therapy, therefore clients were able to establish the trust, safety, coping skills, and emotional skills where they may not have been able to

otherwise. The goals within this theme may be part of a larger structure of storytelling but can also function independently. Building trust, safety, and coping skills as well as practicing emotional identification, regulation, and expression are beneficial in their own right.

Participants described intentionally focusing on these goals to prepare clients for storytelling, but also described instances where the client's story came out unexpectedly while working on these goals independently. Even if music therapists do not intend to process the narrative, they should be prepared for the possibility that the rapport and skills developed in therapy may lead the client to want to share their story anyway. Differing philosophies of treatment may place different values on storytelling, but this theme illustrates that therapists should be prepared to appropriately address the story if it arises without their intention.

Music Meets the Individuality of the Clients and their Story

Theme #2 demonstrates how the flexibility of music can be an asset in treatment. The word “meet” was used as opposed to “accommodates” or “adjusts to” because participants described both the client and the music as active parties. The client may bring a different self to each session when the storytelling occurs. They may have different focuses, needs, and perspectives to their storytelling. The music therapist must be prepared to manipulate the music or aid the client in doing so to meet the client's present experience. At times therapists may need to be very active in guiding the process, other times clients may do this intuitively, or the music may play the necessary role without any manipulation whatsoever.

Music Structures Healing Within the Story

Finally, Theme #3 encapsulates the reason that this topic is worth exploring. The experience of trauma can dominate a person's life. Music may be a part of finding a functional way forward for many people. Models of trauma memory by Brewin and Burgess (2014) and

Ehlers and Clark (2000) suggest that in order to heal, the traumatic memory must be explored. Berwin and Burgess (2014) specifically suggest that the somatic memory needs to be linked to the events. It is not clear whether exploring the memory musically, non-verbally, or metaphorically would allow for this process to take place. However, biologically, memories only need to be accessed in order to be reconsolidated and modified (Levy & Schiller, 2021; Maddox et al., 2019), not necessarily verbally expressed. Clients are still accessing memories when they are practicing storytelling non-verbally, so it seems likely that the memories are still being linked according to the aforementioned models of trauma memory. The six processes through which the trauma narrative can lead to healing identified by Kaminer (2006) were frequently present in the participants' descriptions of their work, though I did not necessarily code them in the same way.

Conceptualization of Storytelling in Practice

In comparing the interviews with all eight participants, it became evident to me that the participants had very different ways of conceptualizing the ways their clients talked about or expressed trauma. It should be made clear that the participants used many different words for the process I am calling “storytelling” in this paper. Storytelling is intended to summarize the different ideas participants had about the process including entirely musical expression, metaphor, explicit verbal expression, and everything in between.

Participants who worked mostly within the Bonny Method of Guided Imagery and Music (GIM) framework tended to talk about the process as either verbal storytelling without music or as the story that unfolds in real time while listening to GIM music. The latter is not necessarily a description of the traumatic event but is often metaphorical and is brought about by the narrative of the client’s subconscious. This is not necessarily a full or accurate

description of the GIM process but is a reflection on what was shared by the participants who use it.

Other participants had additional degrees in a type of psychology or counseling. These participants tended to have a strong concept of storytelling outside of music, then incorporated music into that framework. For example, a participant who uses Trauma-Focused Cognitive Behavior Therapy (TF-CBT) described the process of preparing clients to tell their story, formulating the story in some way, then sharing the story with a friend or family member. The participant used music within each of those steps however the client preferred. The music supported existing steps of the process.

Participants who did not work within a specific music therapy or psychotherapeutic framework tended to conceptualize storytelling more broadly. It wasn't necessarily a step in a process or one specific thing, it was something that occurred naturally throughout the course of many different interventions and interactions. They often described using music for expression but didn't formulate their work and goals around the idea of the trauma narrative.

Some participants seemed very intentional about preparing the client and exploring the story explicitly. Other participants dealt with storytelling as something that occurred naturally in a broader process and did not intentionally involve storytelling in the therapeutic process. Understanding the different conceptualizations of storytelling informed the development of the themes in this study. Even across all these different ideas about storytelling in music therapy, there were similarities in the participants' processes. Music was used in different ways but with similar intentions and outcomes. Some participants described those intentions and outcomes readily as an important part of their practice and others took time to identify how storytelling fit into their process.

Value Placed on Storytelling in the Healing Process

Some participants, especially those who had a strong concept of storytelling as a mechanism in their practice, tended to indicate that they placed high value on it. They expressed that it was an important part of their work and was typically critical to their client's healing. Participants who seemed to describe storytelling as within their practice but not its own distinct process tended to be less sure about its value. They often shared the sentiment that telling the story might be useful to some clients, but they did not see it as a cornerstone of the healing process.

It is useful to note that participants regularly gave the caveat that they were speaking for their clients in the population they worked in. Participants rarely made universal claims regarding the use of storytelling and the use of music in storytelling. It is possible that the populations that each participant worked with had different needs and abilities related to storytelling. That could also account for the variability of the value participants placed on storytelling.

Ethical Considerations

Throughout the interviews, many participants referenced specific client experiences without giving client names or details. The intention of this study was to focus on clinicians' perspectives, but many participants felt that examples better illustrated their point or allowed them to develop their thinking in real time. These illustrations were often helpful to me in many ways throughout my analysis and writing. However, I did not have client permission to share these stories and even though clients could not be identified through these examples, it was not appropriate to share the quotes. Future researchers may consider setting up a plan to address this issue beforehand.

The purpose of this study was to understand clinicians' perceptions of the use of music in processing the trauma narrative. Because of the nature of these discussions, participants' clients were a frequent topic of discussion. This was appropriate for this particular study, but when developing theory in this area it is important to incorporate the view of the clients themselves. Developing theory about clients' experiences without exploring clients' perspectives would not be appropriate.

Limitations

The heterogeneous nature of certain aspects of the participant sample made the analysis of this data somewhat challenging. Participants had a variety of experience and training and worked with many different populations. Drawing parallels and creating common themes between all these variables proved somewhat difficult and is perhaps an incomplete picture.

Participants often mentioned that they could only speak for the populations they worked with. For example, one participant works primarily with clients who have experienced interpersonal trauma. This participant noted that the things they were saying may not apply to people who have experienced other kinds of trauma. Some participants had worked with or were currently working with a more diverse clientele and spoke in broader terms, but the majority restricted their comments to a specific group related to age, type of trauma, military experience, or other similar factors.

Participants who did not hold additional degrees or have additional training in a specific psychotherapy method tended to spend more time talking about what I conceptualized as Theme #1. They described "getting through" to clients that other non-music therapists could not at which point they referred them to a trained counselor or psychotherapist. Those participants who did hold another degree or have additional training in a specific psychotherapy

method tended to spend more time talking about what I conceptualized as Theme #3. They talked about the deep healing that can happen in the music and the narrative and the positive outcomes they saw in their clients. This is in line with what would be expected from music therapists vs. music psychotherapists.

Generating themes across these groups may prove valuable but may be more effective with a larger more saturated sample. Future studies should consider interviewing music therapists with a specific level of education/experience, music therapists working in a specific population, or simply increasing the sample size.

Conclusions

The three themes in this study, #1: Music Cultivates a Space for the Story, #2: Music Meets the Individuality of the Clients and their Story, and #3: Music Structures Healing Within the Story, illustrate the ways music can be used, the roles music can play, and the aspects of music that can be harnessed for unique purposes in the storytelling process. At no point does the client need to be explicit or verbal in order to explore their experiences and find healing. Music provides safety and comfort in ways that a therapist alone may not be able to. Music provides control in situations where a lack of control can be scary and harmful. Regardless of how a music therapist conceptualizes storytelling or uses music, the music is a powerful tool and partner in navigating the dangers and difficulties of exploring traumatic memories.

Appendix A
HSIRB Letter of Approval

WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: December 1, 2020

To: Ed Roth, Principal Investigator
Taylorlyn Mehnert, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 20-11-33

This letter will serve as confirmation that your research project titled “The Use of Music in Processing Trauma and the Trauma Narrative: An Analysis of the Perspectives of Music Therapy Clinicians” has been **approved** under the **expedited** category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes to this project (e.g., ***add an investigator, increase number of subjects beyond the number stated in your application, etc.***). Failure to obtain approval for changes will result in a protocol deviation.

In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

The Board wishes you success in the pursuit of your research goals.

A status report is required on or prior to (no more than 30 days) November 30, 2021 and each year thereafter until closing of the study.

When this study closes, submit the required Final Report found at <https://wmich.edu/research/forms>.

Note: All research data must be kept in a secure location on the WMU campus for at least three (3) years after the study closes.

251 W. Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293, FAX: (269) 387-8276

Appendix B

First Page and Final Two Pages of the Informed Consent Form

Western Michigan University
Department of Music Therapy

Principal Investigator: Edward Roth
Student Investigator: Taylorlyn Mehnert
Title of Study: The Use of Music In Processing Trauma and the Trauma Narrative:
An Analysis of the Perspectives of Music Therapy Clinicians

You are invited to participate in this research project titled "The Use of Music In Processing Trauma and the Trauma Narrative: An Analysis of the Perspectives of Music Therapy Clinicians."

STUDY SUMMARY: This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. Participation in this study is completely voluntary. The purpose of the research is to: generate theory around the processing of traumatic events through music therapy and will serve as Taylorlyn's thesis for the requirements of the Master's of Music degree. If you take part in the research, you will be asked to participate in an interview with Taylorlyn regarding your professional experience. Your time in the study will likely take 90-120 minutes with the possibility of a follow-up interview if you agree to it. Possible risks and costs to you for taking part in the study may be discomfort from answering sensitive questions and potential second-hand trauma and potential benefits of taking part may be a positive impact on your professional work from the theory generated in this study. Your alternative to taking part in the research study is not to take part in it.

The following information in this consent form will provide more detail about the research study. Please ask any questions if you need more clarification and to assist you in deciding if you wish to participate in the research study. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form. After all of your questions have been answered and the consent document reviewed, if you decide to participate in this study, you will be asked to sign this consent form.

What are we trying to find out in this study?

In this study, we are interviewing expert clinicians about the methods they use in treating trauma and processing the trauma narrative. We hope to generate theory regarding the function of music in this process.

IRB Approved
DEC 1 2020



WMU IRB Office

Category	Information	I consent to this information being shared in the reporting and potential publication.
Ability (Disability)		<input type="checkbox"/> Yes <input type="checkbox"/> No
Age		<input type="checkbox"/> Yes <input type="checkbox"/> No
Education		<input type="checkbox"/> Yes <input type="checkbox"/> No
Ethnicity		<input type="checkbox"/> Yes <input type="checkbox"/> No
Gender		<input type="checkbox"/> Yes <input type="checkbox"/> No
Language(s)		<input type="checkbox"/> Yes <input type="checkbox"/> No
Marital Status		<input type="checkbox"/> Yes <input type="checkbox"/> No
Military Experience		<input type="checkbox"/> Yes <input type="checkbox"/> No
Religion/Spirituality		<input type="checkbox"/> Yes <input type="checkbox"/> No
Sexual Orientation		<input type="checkbox"/> Yes <input type="checkbox"/> No
Socioeconomic Status		<input type="checkbox"/> Yes <input type="checkbox"/> No
Trauma History		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No



Should you have any questions prior to or during the study, you can contact the principal investigator Ed Roth at (269) 387-5415 or edward.roth@wmich.edu or the student investigator Taylorlyn Mehnert at 810-300-7497 or taylorlyn.n.mehnert@wmich.edu. You may also contact the Chair, Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This study was approved by the Western Michigan University Institutional Review Board (WMU IRB) on December 1, 2020.

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

Participant Signature

Date

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