Therapists Perception of Client Responses in Improvisational Music Therapy

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Abstract

The implementation of clinical improvisation depends on the music therapist's ability to interpret the client's moment-to-moment musical expressions and to respond in a meaningful fashion. The client's focus of attentions is listed as an indicator for therapists to follow in the music therapy literature. This study used empirical data from the clients' self-reports to compare with the therapist's interpretation scores on their focus of attentions using a research designed questionnaire (Joint Improvisation Questionnaire). The correlations of paired scores on different items in the questionnaire show the degree of understanding the therapist has on different areas of focus. The sample consisted of 83 (N =83) adults who are not in a clinical setting and are able to attend the Radford University campus. The results indicated that the therapist was only able to differentiate social cues or concerns of participants during the joint improvisation, but not intentions directly related to musical elements. The areas examined by the Joint Improvisation Questionnaire include ways to approach musical elements, creativity, enjoyment, appreciation, meaning making, and concerns during music engagement.

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In addition, the people that I worked with in the clinical setting shared a moment of their lives with me. Those moments served as the inspiration for the thoughts behind this thesis and fueled me to strive for better understanding in what therapists need to do to provide better services.

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Chapter 1 - Introduction

Clinical improvisation is a widely used therapeutic technique in music therapy. The goals that can be addressed with this technique can vary greatly depending on the client population and the therapeutic orientation of the clinician. For clients with social skills deficits, it provides therapeutic opportunities to promote and strengthen social-communicative skills such as joint attention and motor imitation (Kim, Wigram, & Gold, 2008). For clients with anxiety or depression, a Cognitive-Behavioral (CBT) oriented music therapist may use improvisational problem solving, and through the music making process, explore current thought and behavioral patterns. The music therapist practices replacing these playing patterns with other ways of behaving and thinking (Erye, 2013). Clinical improvisation requires a multitude of cognitive skills and therapists may be inclined to focus on these specific skills in support of neurological-rehabilitation goals (Thaut & Hoemberg, 2014). Humanistic music therapists may see this improvisational process as offering opportunities for clients to emotionally express themselves and expand their self-awareness (Nordoff & Robbins, 2007). These are just a few examples of the many possibilities of the use of improvisation in music therapy. There is no limitation on age range, diagnoses, or clinical setting.

Challenges in Improvisational Music Therapy

While music improvisation is an experience that occurs outside of music therapy, the clinical use of improvisation occurs within the dynamic dialogue and relationship between therapist and client. The strength of the therapeutic alliance is a critical factor for outcomes in many, if not all, formal helping professions. In clinical improvisation, this alliance emerges from the interaction in the music making experience. The meaning and nature of the therapeutic alliance and the mechanism of music as therapy in clinical improvisation is often dependent upon

the therapist's orientation. However, each perspective still requires a set of basic skills from the therapist, including listening and responding to the client in the moment.

Importance of Accurate Interpretation

Clinical improvisation is a therapeutic process that requires careful consideration of factors that influence how the therapeutic process unfolds (Wigram, 2004). This process relies heavily on the music therapist's understanding of and sensitivity to client responses in order to engage and respond in a meaningful manner. The therapist will observe the client's body language, facial or verbal expressions, and interpret the musical or non-musical behaviors in the moment as the experience unfolds. The ongoing interpretation from the therapist informs decision-making and shapes the co-creating experience in clinical improvisation. Therefore, the ability to detect and accurately interpret what the client is expressing during the musical interaction is a skill set and knowledge base that is required to implement improvisational music therapy. The implementation of therapeutic improvisational dyads relies heavily on a clinician's interpretation on the client's nonverbal expression. These expressions are often the point of reference for therapists to determine the client's current needs and therapeutic progression.

However, the process often relies on a subjective assessment of client responses in the moment. There is limited empirical data on similarities or discrepancies between the client's experience and a therapist's interpretation of client responses. Therefore, it is unclear that principles and guidelines for music therapists to engage clients actually achieve the intended purpose for clients. Even in the discussion of the topic "objectivity of music", Aigen (1998, p. 255) stressed that the objective qualities of music may likely be perceived in individualized ways by clients. The decisions on what kind of scales or intervals to be played depend on the therapist's intuition in the moment rather than the objective notion about effects these scales can

bring. Findings on the correlation between therapist perspectives on the client's responses and client's self-report in improvisational dyads will strengthen the understanding of clinical decision making in improvisational music therapy.

Accurate interpretation from therapists of the client responses fosters a working alliance in therapeutic exchanges. Relational interaction is one of the principle reasons music therapists incorporate improvisation-based methods to address clinical goals with clients. The exchange of social signals during improvisational dyads was examined through the comparison of client and therapist reports in this study. Quantitative analysis of musical responses during joint musical improvisation has been used to predict difficulty in interpersonal relationships in clinical populations (Foubert, Collins, & De Backer, 2017).

In utilizing the framework of joint musical improvisation to generate information on interpersonal exchanges, this researcher hoped to gain insight into exchanged social signals between client and therapist. Findings from this research project may potentially serve to improve therapeutic relationships in creating a paradigm for therapists' evaluations of responses to their clients.

Chapter 2 - Review of Literature

Music Therapy Development and Models

Music Therapy is the clinical use of music interventions designed by a credentialed music therapist to accomplish individualized goals within a therapeutic relationship and informed by a strong base of research on clinical outcomes (American Music Therapy Association, 2013). Music therapists join with the clients and facilitate growth through individually designed experiences. The development of music therapy was influenced by several disciplines such as educational, medical, and psychological professionals (Davis, Gfeller, & Thaut, 2008). Therefore, within the music therapy field, there are a variety of theoretical orientations that may lead to different ways to implement therapeutic experiences. For example, Orff-schulwerk is a type of music therapy that was developed from education and pedagogy. Neurologic Music Therapy is informed by biomedical models. Nordoff-Robbins Music Therapy is a direction that was developed within the field of music therapy. Different ways of categorizing musical or therapeutic experiences often need to be clarified in the field of music therapy. Both Bruscia (2014) and Davis et al. (2008) used the terms "approach" and "method," which are most often used to describe different types of music therapy experiences.

Approach is often used to refer to "a way of teaching a musical skill" or "facilitating a session" (Davis et al., 2008, p. 453). This is similar to the usage of the term *model* by Bruscia (2014). In music therapy, the terms "model" or "approach" commonly indicate a systematic way to conduct sessions or to evaluate outcomes that is supported by specific theoretical orientations and implementation guidelines. Examples of music therapy approaches are "Creative Music Therapy" and "The Bonny Method of Guided Imagery and Music." In this thesis project, the term *approach* will be used to indicate the predominant mode of systematic work in music

therapy. The term *model* may be used to refer to the major music therapy approaches or other types of organized music therapy work that are variations of approaches. Examples of models are the "Nordoff-Robbins Model" or the "Riordan-Bruscia Model" of experimental improvisation therapy (Bruscia, 1987).

The term *method*, in music therapy, is used to describe a clearly defined type of music experience (Bruscia, 2014) or a system to facilitate therapy sessions (Davis et al., 2008). *Approaches* are broader compared to *methods*. *Approaches* may indicate particular ways of using a few music therapy methods. Bruscia (2014) described four types of methods in music therapy: creative (composing), re-creative (performing), improvisational, and receptive (listening). Improvisational skills, a primary focus of this study, are also required in AMTA approved music therapy curricula. Bruscia (1987) provided an overview of improvisational models in music therapy in his iconic publication, *Improvisational Models of Music Therapy*. In this text, there was a total of 11 significant improvisational models highlighted. One of the early and most prominent models of improvisation-based music therapy is Creative Music Therapy developed by Nordoff and Robbins (Cooper, 2010). However, improvisation, as a method in clinical practice, is not limited to therapists who practice under these major improvisation-based approaches.

Implementation of Improvisational Music Therapy

Bruscia (2104) described improvisational methods in music therapy practice as "various ways of engaging the client in extemporaneous music-making" (p. 128). Implementation of this improvisational method may involve a client in solo improvisations, joint musical dyads with the therapist, or group music making. The materials that can be incorporated in improvisational music therapy include voice, body percussion, movements, and pitched or unpitched musical

instruments. Although some music therapy approaches facilitate improvisational experiences for the client to play for the therapist, most undergraduate level training prepares music therapists to play with the client. For this project, improvisation created by interactions between the therapist and client is the primary focus.

Improvisational methods are used to address major goal areas that music therapists address in various clinical scenarios. The goals may include improving communication, providing a medium for self-expression, exploring relationships, identifying and expressing emotions, learning interpersonal skills, improving cognitive skills, and creative expression (Bruscia, 2014; Kim, Wigram, & Gold, 2008). Beer (2011) proposed educational guidelines for teaching improvisational skills. These guidelines emphasized that the way improvisational experiences are facilitated is related to the goal areas that the experiences are intended to address.

Beer further outlined different improvisational profiles based on the degree of structure. When different levels of structure are provided, the intended goal areas correspond to the change. The structures in clinical improvisation indicate both how the experience is constructed and how parameters are set to ensure safety and success. For example, a “highly structured improvisational activity” (Beer, 2011, p. 119) would include specific instructions from the therapist and short periods of play within designated parameters. On the other end of the spectrum, in “free unrestricted improvisation” (p. 119), the therapist follows the client musically, and time limits for playing are not imposed. However, it remains difficult for music therapists to evaluate to what extent the specific improvisational method was engaged by the client, especially for improvisations that are less structured. For instance, how do music therapists determine if they are actually following the client’s musical lead? Literature on improvisational music therapy advises that the therapist follow the client’s focus of attention in order to follow the client’s

musical lead (Geretsegger et al., 2015). The therapist makes inferences on the client's focus of attention by attending to changes in music, eye contact, body movement, instrument choice, affect, musical content (rhythmic patterns, volume, etc.), level of engagement, and verbal communication (Bruscia, 1987; Nordoff & Robbins, 2007). The therapist then engages in musical attunement to these behaviors and indicators of focus by mirroring, matching, supporting with rhythmic grounding, supporting through repetitive chord patterns, and tonality reflecting affective states, through his or her own music making (Bruscia, 1987; Geretsegger et al., 2015).

Not simply the degree of structure in clinical improvisation affects the goal areas addressed. The various ways music therapists facilitate improvisation may change the direction or the course of therapy. Therefore, it is difficult to pin down the procedure for implementing the improvisational methods. The diverse ways that improvisation may be presented as a clinical intervention are not only affected by the different approaches under which each music therapist practices. The inherent difficulty when using a constantly evolving strategy as the therapeutic agency should be considered. The need to create clear implementation guidelines and to demonstrate the fidelity of the method is paramount. At the same time, it naturally raises concerns when attempting to standardize an improvisational method with procedural guidelines regarding losing the integrity of the method. Geretsegger et al. (2015) were able to accomplish this goal when studying improvisational music therapy with children with Autism Spectrum Disorder (ASD). Related researchers also asserted that "the demands for research rigor and therapeutic flexibility can be reconciled by retaining openness to opening procedures" (Rolvsjord, Gold, & Stige, 2005, p. 263).

This project was designed to investigate the type of musical experience that is categorized as "free, unrestricted improvisation" (Beer, 2011, p. 119). There is typically no time

limit to this type of improvisation. However, due to the time restriction of this research, the improvisational experience was relatively brief. The goal areas commonly addressed by unrestricted improvisation include self-exploration, improving self-esteem, and empowerment. The warm-up section of the music making experience in this study was designed to provide a sense of safety and to promote a successful creative process by the use of a higher level of structure.

Improvisation can be facilitated with or without referential content depending on the need of clients. Referential content may refer to an image, feeling, idea, person, or life event that is particularly familiar to the client. Clients are encouraged to use these references to depict or to replicate experiences through extemporaneous music making or vocalizing when engaged in a referential improvisation (Bruscia, 1987). In contrast, in non-referential experiences, clients use no particular references to create music or to sing extemporaneously. A study using text analysis from improvisational experiences indicated that participants found that making music using references was easier (Keith, 2007).

Different models of music therapy encourage different types of improvisational experiences. In Analytical Music Therapy, verbal processing after improvisational music making is where the therapy takes place (Priestley, 1994). In other models, musical interaction is the sole medium for establishing therapeutic contact and is the agent of change (Aigen, 2005). For this project, verbal processing was not investigated.

Clinical improvisation is the target of this investigation. As presented previously, there are different sets of terminology and frameworks used to examine clinical improvisation by prominent researchers and theorists in music therapy. For this reason, there is a need to operationalize clinical improvisation as it relates to this present inquiry. This study looked at

improvisation primarily as a *method*, not as a replication of a specific *approach*. While the improvisation experience in this study was designed using a session structure based on principles of Creative Music Therapy, there was only one music therapist for this study when two are used in the Creative Music Therapy approach. The improvisational method in this study also incorporated a higher level of structure at the beginning of the session. This served as a warm up for the first three to give minutes of music making to help acclimate the participant to the tasks involved in improvisation. This researcher then directed participants to engage in free unrestricted improvisation, as indicated on Beer's (2011) spectrum of improvisational experiences. Although this project did not focus on a specific clinical or non-clinical population, like the "International Consensus Model" established by Geretsegger et al. (2015, p. 270), there are many similarities between the guidelines of the model with the free improvisation identified by Beer. The guidelines of the International Consensus Model were used to inform the implementation of improvisation and the design of the questionnaire in this project.

Evidence-Based Practice

The purpose of this study was to explore the interpersonal exchanges between the therapist and client, which are impacted by the dynamic decision-making process that occurs when using the method of improvisation. In order to give a sense of direction to this examination of improvisational methods in music therapy, it was essential for this author to connect it to a larger picture of what to consider in practicing music therapy. The definition of music therapy according to AMTA (2017) is the clinical and "evidence-based" use of music interventions. It clearly indicates that the field of music therapy adheres to the current trend in most healthcare professions that evidence-based practice (EBP) supports the provision of quality services. Different clinical fields offer varied definitions on what EBP means within their respective

disciplines (Kern, 2011). Music therapy continued to develop under the influence of several related disciplines, such as the medical field, behavioral science, creative arts, and special education; however, the definition of evidence-based music therapy can be a complex concept that is beyond simply adopting the definition from a related health profession. Additionally, music therapy is a field that offers its own specialized framework to support the use of music as a modality in working with people. Especially in considering the multifaceted factors involved in using improvisational methods, this author views improvisation as incorporating information, or evidence, that has not simply originated from objective, randomized controlled studies that are typically used by medical or behavioral sciences in support of EBP. Abrams (2010) urged the field to carefully consider an integrative perspective when defining evidence-based music therapy practice. This author applied the framework proposed by Abrams (2010) when considering evidence-based music therapy practice in the context of improvisational methods.

In Abrams' (2010) integral model of EBP, he proposed that evidence used by music therapists should be examined through the specific epistemological lens that is congruent with the framework used in practice. This ranges from a behavioral science to an artistic lens. Evidence is created using different theoretical perspectives such as behaviorally oriented studies versus artistic and subjective views on constructing therapeutic experiences (Aigen, 2008). Abrams (2010) identified such perspectives in music therapy based on Wilber's (2001) integral model. This integral model of Wilber has four quadrants that he defines as objective (exterior-individual), inter-objective (exterior-collective), subjective (interior-individual), and intersubjective (interior-collective) viewpoints. These perspectives cover a range of approaches to conceptualizing how evidence is formed and collected to support clinical practice. Specifically, the subjective category of evidence represents clinical case studies, a client's unique

personal experience in response to therapy, and the qualitative research literature. This type was used extensively in this current study. Additionally, intersubjective music therapy evidence was also present and influential in the current study. Intersubjective evidence in music therapy looks at the therapy process as a collective outcome for both clients and therapists in context-specific circumstances. This perspective considers evidence generated by more than one individual. They bring their own cultural identities into the collaboration and negotiate meaning together.

Abrams (2010) provides a working definition for evidence-based practice in music therapy: "When client and therapist work together through music to promote health, guided by grounds sufficient to help ensure that the work is valuable." (p. 360). In the current study, the process of using clinical improvisation was examined through this principle of practice in the way that the decision making for treatment planning and implementation can be informed by consumer values and perspectives. The ability of a music therapist to offer this essential component, in order to ensure a high quality of music therapy services, was the core element being investigated in this research. From Abrams' guiding principle to the more comprehensive definition of EBP from the AMTA, the method of improvisation requires further explanation as to how it relates to structuring a music therapy service.

In 2010, the AMTA established the definition of evidence-based music therapy practice as an integration of "the best available research, the music therapist's expertise, and the needs, values, and preferences of the individual(s) served" (para. 1). The unique use of music as the tool of therapy requires a specific definition for the context and practice of this profession. In the context of clinical improvisation, there is difficulty obtaining clear information on "the needs, values, and preferences of the individual(s) served" (AMTA, 2010, para. 1) when the musical expression directs the joint music making experience. Because improvisation is one of the most

commonly used methods in music therapy, it is important that it is examined closely to understand its indications and clinical benefits as EBP. Nordoff-Robbins music therapists use video footage analysis to determine the needs and preferences of clients during improvisation. Music therapists in a variety of settings do not often have access to the resources or the training to evaluate and determine this information in a systematic way. Furthermore, not every music therapist who uses improvisation is trained in the Nordoff-Robbins model or would need to be for there to be clinical benefit from the use of this method. Therefore, the therapist is required to make a judgement on the spot. This taps into the EBP principle of the music therapist's expertise.

Improvisation is an intervention that is dynamic in nature. This challenges the therapist's ability to provide a client-focused experience, reflecting the client's needs and values, when the therapist has not previously established these values with the client beforehand. In music therapy's definition of EBP, the emphasis of clients and therapists working together is placed at a high priority (Abrams, 2010). This inquiry seeks to understand the ways in which music therapists come to these musical decisions and to check them against the client's stated needs and values.

Abrams (2010) used keywords including "client," "therapist," "work together," "music," "promoting health," "sufficient grounds," and "value to analyze evidence provided by four different perspectives in music therapy. He proposed an integrated understanding of existing views and evidence to define evidence-based music therapy practice. This study utilized a researcher-designed questionnaire to collect direct input on these aforementioned elements offered by the Abrams working definition. The items from the questionnaire offered an opportunity to compare client and therapist observations regarding music engagement. Through

the comparison, this author sought to understand how the client and therapist work together and influence each other by reported observations and values.

Abrams recommended that music therapists should take a clear stance from their own perspective when presented with evidence. The clinician needs to consider the differences and strengths from other perspectives on the subject matter. In this way, evidence being evaluated can be relevant or generalize to a broader clinical context, or it can be applied by practitioners under their own frameworks. This current study investigated the subjective evidence reported from clients and further used the comparison between the therapist and clients to formulate evidence from the intersubjective perspective. Furthermore, the questionnaire was tested as a clinical tool by analyzing the inter-rater agreement rate between the therapist and clients. This data analysis provided objective evidence in using this newly designed questionnaire.

In this current study, the evidence that was used to form the questionnaire is predominantly based on subjective and intersubjective perspectives in the current music therapy literature. Music therapy practice informed by subjective evidence considers the client's experience or the reported views from others involved in the client's life. The trained therapist is expected to deliver a sense of empathy to the client's inner phenomena by showing understanding of the client's music expression and how the expression represents his or her self-identified values (Aigen, 2005; Ansdell, 1995; Lee, 2003). From this lens, the inner world of the client is believed to be reflected in the music they create. The therapeutic potential of the interactions rests on the therapist's ability to ascertain the client's story, experience, and history largely through the client's music. The present study seeks to examine the therapist's abilities as he or she attempts to understand and respond to a sense of meaning through the client's music.

The difficulty for music therapy practitioners in applying EBP lies in the decision of how to address and integrate the three components discussed by AMTA and make clinical judgements based on their individualized clinical cases (Buysse, Wesley, Snyder, & Winton, 2006). In the population that music therapists serve extensively, such as early childhood services, there is limited research on the ways in which therapists' experiences and clients' values affect the process of choosing the best treatment options (Kern, 2011). Therefore, researchers developed decision-making models for music therapy clinicians to refer to in order to select effective treatment plans for clients.

The model by Buysee and Wesley (2006) proposed five steps in the decision-making process: 1) pose the clinical question that is relevant to the current case, 2) find the best available research evidence, 3) evaluate the evidence quality and relevance, 4) integrate research with client values and professional expertise, and 5) evaluate outcome. In the review of this five-step model, Kern (2011) maintained that the fourth step, integrating research with client values and professional expertise, was the most difficult one to accomplish. Success in this task relies on the music therapy practitioner's clinical reasoning ability in order to apply the principles of evidence-based music therapy practice. This current inquiry looks directly at the gap between these two: the client values/experience and the professional's expertise.

Themes Reported from Music Therapists and Clients

A recent qualitative research synthesis summarized research articles on improvisational music therapy from 1990 to January 2015 (Meadows & Wimpenny, 2017). The theoretical and methodological information on clinical improvisation was reviewed to provide core themes that music therapists use to guide clinical practice. The articles focused on the way therapists and clients engage in clinical improvisation.

Meaning making was a central theme identified by clients and therapists when reflecting upon their improvisational experience in music therapy (Gardstrom, 2003; Meadows & Wimpenny, 2017). From the perspective of therapists, "professional artistry" was considered to be a significant element of clinical improvisation (Meadows & Wimpenny, 2017, p. 173). Music therapists were found to commonly believe that their musical abilities and artistry are an entrance point for therapeutic contact to be made. Meadows and Wimpenny (2017) suggested that therapists are required to be open and willing to connect with their own emotional being and visceral experience in clinical improvisation in order to enter the same space with their clients.

In improvisational dyads, not only does the therapist's sense of self impact the direction of the experience, but the client's self-construction in the form of musical material was identified in the literature as important to the process as well. Creating music as a form of self-expression is a significant experience for both therapist and client, individually as well as collaboratively (Meadows & Wimpenny, 2017). Self-expression, or self-reconstruction, in music making is also an important therapeutic mechanism. Specifically, "*change*" is promoted by the experience of a different self in music or the realization of one's abilities through improvisation by taking risks, accepting uncertainty, showing vulnerability, and undergoing the unknown progression of co-creation (Brescia, 2005; Gardstrom, 2004; Keith, 2007; Turry, 2010). The equality that is embedded in improvisational dyads may also contribute to a therapeutic dynamic that is conducive to change for clients.

Another repeating theme in the improvisation-related literature in music therapy is the act of meaning making during or after music making (Meadows & Wimpenny, 2017). Both clients and therapists may interpret the musical experience and relate it to other areas of life. Improvisational products can be seen as metaphors that are rich with meanings (Sorel, 2010). For

clients with limited verbal expression, improvisation may be a rehearsal of skills used to make sense of one's internal phenomena through expression. Markworth (2014) affirmed this concept by pointing out that meaning making can be at a nonverbal or verbal level. At times, music therapists connect musical content with verbal processing in order to facilitate the development of client insight. Thus, meaning making can occur in four ways: from the reflection of the actual music making experience, the images and memories evoked, the verbal processing between therapist and client, and from the analysis of the musical outcome (Meadows & Wimpenny, 2017). Amir and Yair (2008) supported the last approach of analysis of musical outcomes. They were able to connect the tendencies shown in musical analysis with the life experiences of their clients.

Analysis of Client Responses in Improvisation

Traditionally, Nordoff-Robbins music therapists worked with clients with severe developmental disabilities or mental health disorders. Since 1990, music-centered music therapists started to work with adults or clients with sufficient abilities in verbal communication. From this, more research on client responses emerged in the music therapy literature (Gardstrom, 2003; Keith, 2007).

When music therapists analyze improvisational experiences, there are two distinctive methods: analyzing musical content and analyzing the verbal responses. The Improvisation Assessment Profiles (IAPs) (Bruscia, 1987) is one of the unique ways to analyze musical content in improvisational music therapy. It possesses the capacity to analyze musical patterns and psychological profiles simultaneously. There are several studies that use IAPs to examine improvisational work with the adolescent and adult populations (Gardstrom, 2003; Keith, 2007). Gardstrom, Keith, McFerran, and Skewes (2000) investigated both the musical content and

verbal, or textual, content in their research. Gardstrom's (2003) qualitative study suggested that discussion with clients on meaning making at different time frames, during, immediately after the joint music making experience, or in retrospect while reviewing the video recording, may yield different insights. In a study by Keith (2007), taking client verbal descriptions about the music immediately after the music making experience was found to be valuable in examining the practice.

Analysis of therapist and client dialogue after improvisational dyads showed that these verbal exchanges facilitated new and shared meaning (Keith, 2007). In addition, the therapist also became more accepting of the meanings constructed by participants. By contrast, Ansdell (1996) held the position that there is a true reality from the therapist's reading of music-derived meaning as compared to the perspectives of outside listeners. Nevertheless, he affirmed that there is some additional value in considering client perspectives. The argument from Stige (1999) also reflected that therapists can improve on taking the client's view on music therapy experiences instead of their own understanding of what occurred.

The interpretation of client-therapist improvisations is a unique topic in music therapy. In improvisational dyads, the experience often is a joint endeavor (Bruscia, 2000). Music making is not the only co-created content. Co-creation occurs in both musical content and verbal processing content, which impacts meaning making. In much the same way that music making is shaped by both individuals' ongoing and potentially ever-changing responses, the meaning making also can be constructed together. There are many improvisational experiences not processed verbally by the therapist. However, the joint meaning construction may still occur without intentional verbal reflection (Gardstrom, 2003). Meaning making can lead to different understandings by the client and different therapists involved (Meadows & Wimpenny, 2017).

In order to understand improvisational experiences in music therapy, several tools have been developed by researchers. Bruscia's (1987) IAPs endeavored to depict the way clients interact with music. However, the meaning of these improvisations is not typically captured from this analysis. In this study, meaning making during or after improvisational experience was not the main purpose of exploration. However, this concept was included in the investigation.

Another tool that was developed to assess client responses in improvisation is the Individual Music-Centered Assessment Profile for Neurodevelopmental Disorders (IMCAP-ND) (Carpente, 2013). The IMCAP-ND was designed to assess musical-play interactions specific to clients with neurodevelopmental disorders. The IMCAP-ND can be used with both children and adults at different levels of development. The framework of the IMCAP-ND targets specific areas that examine the client's perception of music and ability to interpret and create music with the therapist. It provides information on relational experiences and utilizes creative musical interaction throughout the assessment process. A strength of the IMCAP-ND is its ability to transfer musical relational behaviors to a broader understanding of clients' clinical presentation in order to share with multidisciplinary professionals.

On the other hand, the IMCAP-ND is based on a therapist's observation of the client's presentation to form understanding of the clinical picture. This provides limited information from the client perspectives. It is understandable that younger clients with neurodevelopmental disorders may demonstrate difficulty in verbally processing the improvisational experience. When it is applicable, acquiring client input may improve understanding of the client's phenomena and further aid the therapeutic process.

Applications to Current Music Therapy Practice

In 2015, the AMTA hosted a research symposium to inform the strategic priority of future research. The symposium was referred to as "Improving Access and Quality: Music Therapy Research 2025" (MTR2025). MTR2025 represented the intention to improve the accessibility and quality of future music therapy research projects. There were various recommendations made by the contributors in the symposium. One of the major directions for research that was agreed upon was "consumer impact" (AMTA, 2015). "Consumer impact" refers to how the consumer's voice should be viewed with critical importance in planning, implementing, and researching music therapy. Recommendations under specific topic areas or populations also impact the significance and orientation of consumer inputs.

When working with people with Autism Spectrum Disorder, consumer experiences and needs are areas in need of exploration. Relevant questions for this population include what brings consumers to music therapy, what the consumers' desired outcomes are, and what music therapy means for consumers" (AMTA, 2015). For people receiving music therapy who have an acquired brain injury and comorbidities, it is suggested to include the patient's voices in music therapy research, which is referred to as "service-user led research" (AMTA, 2015). Under the category of "building research capacity: research infrastructure," the recommendation is that consumers and consumer voices serve as collaborators and partners in music therapy literature. Including consumer voices is a major direction of improvement music therapy research can focus on in the MTR2025 initiative.

Another major area for attention from the MTR2025 initiative is to clearly define and describe interventions in music therapy research projects. This adds clinical relevance to the literature and serves the professional in practice, which may encourage more clinicians to

conduct research or engage more actively in discourse related to evaluation of the music therapy research. As clinical improvisation is one of the four major methods music therapists use in practice, a driving motivation of the current study was to design a research project that clinicians are able to replicate. This procedure represented common versions of implementing clinical improvisation in practice. The method of investigation in this research also intended to explore a new way clinicians may independently or collaboratively evaluate improvisational experiences with clients in their clinical practice. In clinical improvisation, the role of clinicians particularly affects the therapeutic experience moment to moment. This experience, which is often difficult to capture and clearly explore, is the topic of this current study.

In clinical improvisation, the music therapist serves as a role model, an accompanist, an instructor, or a partner when engaged in music making dyads with clients (Bruscia, 2014). The therapists may offer instruction on how to use instruments, provide musical patterns to elicit musical responses, or add accompaniment that encourages playing from clients. According to Cooper (2010), although research studies on jazz musicians offer rich information from the perspective of the improviser, understanding of the therapist experience of improvisation is limited, especially in music therapy literature. A study by Procter (1999) evaluated the impact that music therapists' created music has on the musical relationship between therapists and clients. The findings showed that musical input by the therapist is of significance in predicting the musical connectedness between therapist and client. This conclusion from Procter strengthened Cooper's view on the importance of therapists attending to the therapeutic influence shaped by their musical content.

Contrarily, Nolan (1994) believed that therapist perspectives dominate the music therapy literature today. He emphasized the need to investigate the client's psychological processes

during music making. In the MTR2025 initiative, one broad conclusion provided a recommendation that both clients' and clinicians' voices be included in research methodologies. It was the intention of this current study to investigate both therapist and client perspectives during a joint music making experience. This offers a unique opportunity to provide not only individual viewpoints from each perspective but also a comparison between the perspectives. The MTR2025 supports the importance of clinician involvement and consumer perspectives. While relevant, interactions between clinician and consumer have not been listed as a specific topic for exploration. However, the therapeutic relationship is often considered as one of the common factors of therapy. Therapeutic interactions in music therapy sessions provide unique value due to the characteristics of the music itself. This writer attempted to connect the areas music therapy clinicians and researchers are urged to explore within the context of the unique interpersonal dynamics and musical exchanges that occur in improvisation. Through this approach, the strength of music therapy indicated by previous literature may be examined by direct client inputs and therapist reports.

Value of Consumer Perception

In mental health settings, recovery-oriented care, which emphasizes the inputs of service users in treatment planning, implementation, and evaluation, has become standard practice worldwide (Slade, 2012). Service users are viewed as experts-by-experience in this model of practice. The World Health Organization (2013) also listed this model as a principle focus in "The Mental Health Action Plan 2013-2020." Because of longitudinal studies and new findings on perspectives from service users, the term "recovery" required a specific definition in the mental health field. Longitudinal studies showed that at least one third of mental health consumers achieved partial or full recovery (Liberman & Kopelowicz, 2002). The concept of

recovery-oriented care centers around contextual and social factors in the way treatment improves quality of life. The three main components of the recovery-oriented service include offering consumers an active role in collaboration with providers, promoting social integration, and emphasizing clients' strengths, resources, and preferences in treatment planning (Davison, Shahar, Lawless, Sells, & Tondora, 2006). In response to these changes in the mental health delivery system, music therapy had been used through recovery-oriented services in mental health settings (Solli, Rolvsjord, & Borg, 2013).

Several research articles pinpoint how music therapy addresses components of recovery-oriented care. Jensen (2008) described positive effects of community music therapy on social inclusion, partnership, and accountability. Studies on contextual and resource-oriented approaches to music therapy by Rovsjord (2010) and Ansdell and Denora (2012) documented positive outcomes in promoting strengths, self-determination, and a collaborative relationship in support of recovery rather than pathology. In that research, music therapy's health promoting potential in everyday life was explored. Baines (2003) highlighted music therapy's ability to provide empowerment and consumer involvement in music therapy. In this model, the consumer perspective is invaluable as it is emphasized in the core themes of recovery-oriented care. In a meta-synthesis reviewing the consumer's perspectives on music therapy experience, music therapy was observed to create a sense of belonging and mastery, and provide opportunities for social engagement and enjoyable events (Solli, Rolvsjord, & Borg, 2013). The three components highlighted previously were all reflected in the qualitative consumer statements. They concluded that music therapy in mental health care reflects the values of recovery-oriented practice.

When music therapists utilize the improvisational method, the process of clinical reasoning and decision making occurs on a moment to moment basis. It creates further difficulty

in evaluating the effectiveness of the treatment directions and providing rationale for how music therapists facilitate the musical experience in sessions. In the previous sections, the music therapy literature has suggested that one of the mechanisms of change in improvisation is through experiencing a new version of self in music making. This opportunity for a reexperiencing or reframing a new version of self is facilitated by the music therapist. This author believes that decision making in improvisation relies on the therapist's understanding of client perspectives. The micro decisions, musical and otherwise, that therapists make in response to client input impact greatly the music that will be co-created to frame this self. Therefore, this author asserts that sensitive responses from the therapist that are aimed at meeting the client, and providing the client an optimal environment, are of utmost importance. This requires the therapist to have a basic understanding or insight into the client perspective of the improvisational experience.

Since previous research proposed difficulties in integrating the three components of EBP in music therapy, which are best available research, music therapist expertise, and client needs, values, and preferences, this current study further intends to provide relevant information from all three aspects in order to bridge the gaps with value placed on the client experience. The questionnaire in this study incorporated major themes reported on improvisational methods and offered a channel for therapists and clients to discuss their respective views on these themes.

Chapter 3 - Methodology

Participants

Participants were invited to take part in this study through social media and emails directly from the researcher or faculty members in the Department of Music at Radford University. This author recruited acquaintances or students on the Radford campus through word of mouth. Recruitment flyers approved by the Institutional Review Board at Radford University were posted on bulletin boards on campus or the adjacent areas. The Student Research Participation System (SONA) was also used to recruit students who were enrolled in psychology classes. No compensation was offered with the exception of students who used the SONA system. Students in SONA received credits in the system and fulfilled class assignments.

There were 83 participants. The researcher coordinated 30-minute sessions with potential participants. The sessions took place at the music therapy clinic in the Department of Music or an available research lab in the College of Humanities and Behavioral Sciences Building at Radford University. Demographic information was collected at the end of the questionnaire (see Appendix A). The minimum age for participants was 18 years old. The participants were required to be their own legal decision maker. The researcher aimed to invite participants from a wide range of ages. To minimize the variance in findings and to establish a baseline for adults, the participants were screened by the researcher to ensure normal hearing, no current symptoms of psychosis, and grade level reading comprehension. All participants signed a written consent form. The purpose of the study was briefly explained on the informed consent.

The intended population in this study was adults who do not represent specific clinical populations with whom music therapists work. The rationale for this choice was to examine client-therapist interactions and the therapist's ability to interpret client responses through a sample that may be applicable to various music therapy settings. Music therapists use clinical

improvisation with a wide variety of populations. Adults in a non-clinical setting would offer the most opportunity for a recruitment of participants from a wide range of ages and backgrounds. Furthermore, this questionnaire was newly-formed and it was important that the researcher uses a general nonclinical population. The goal for this study was to establish norms in a non-clinical sample to use in future studies for comparisons with clinical populations (e.g., early stage dementia, stroke, clients with neurodevelopmental disorders, etc.).

Participants in this sample possessed a varied range of musical experience, such as college students who were majoring in music and adults who had had music lessons. Music ability was not assessed in this study. However, the participants' music background may have influenced their participation style in joint improvisation. For this reason, musical background information was collected in the questionnaire demographic section.

Design

This study aimed to gain insight into social signals and musical behaviors that occur between client and therapist during an improvisational exchange. A correlational design was utilized in this exploratory study to compare the findings from a questionnaire designed by this author. Both therapist and client filled out the questionnaire immediately after the joint music making experience. The input from participants was gathered only once. The data collection was cross-sectional. This author aimed to use the questionnaire to investigate the client's impressions of the music experience at the most optimal point in time. The exchange of social signals during improvisational dyads was examined through the comparison of client and therapist reports from the researcher-designed questionnaire. The comparisons simultaneously offered valuable information on interpersonal functioning from self-reports and from the observational standpoint of the music therapist.

The questionnaire included items with a rating scale and an open comment section related to the participant experience. The rated items addressed the client's level of concerns or focus of attention during music making experiences, such as aesthetic aspects, the personal interaction, following one's own instincts, and creating a steady beat in music. These items were derived from existing literature on musical and interpersonal elements of importance for client and therapist to attend to in improvisation. The purpose of this study was to explore the degree of inter-rater agreement within improvisational music dyads (the therapist and the client). The immediate feedback from clients on their improvisational experience was generated using the questionnaire. The music therapist's interaction style and level of understanding of the clients' musical responses were examined by their own responses to the exchange on the questionnaire.

Materials

Musical instruments. During the improvisation experience, the researcher provided clients with a selection of both pitched and unpitched instruments. The instruments were typical of instruments used in improvisational-based interventions in music therapy. The pitched instruments consisted of an 88-key electronic keyboard, a plugged-in classical guitar, and a xylophone. There was a second xylophone available in the room during the first five sessions; however, the second set was not provided afterwards. The guitar was provided at session 7 and beyond. The researcher decided to add an additional pitched instrument due to feedback from early sessions. The unpitched instruments provided were two medium-sized djembes, one tubano, three different-sized hand drums, one handbell, and four maracas. There were two sets of yarn mallets, one pair of Remo HK-1225-08 8-inch lollipop drum mallets, one pair of Remo 10 by three-eighths-inch beaters for floor tom, a pair of hard rubber mallets for glockenspiel, and a pair of Remo not so loud (N.S.L.) five-eighths by 13.5-inch mallets.

Questionnaire. Self-report questionnaires and interviews are often employed to measure interpersonal functioning (Sinnaeve, van den Bosch, & Steenbergen-Weijenburg, 2015). The use of these tools in this study targeted information about interpersonal exchanges in the context of an improvisation intervention in music therapy by understanding the perception of both parties involved. Quantitative analysis of musical responses during joint musical improvisation has been used to predict difficulty in interpersonal relationships in clinical populations (Foubert, Collins, & De Backer, 2017). This study used subjective evidence from qualitative analysis in music therapy literature as well as published educational materials for training improvisation skills to form the questionnaire. While the data generated from the questionnaire was quantitative in nature, the items quantified previous qualitative information and educational materials.

In Meadows and Wimpenny's (2017) qualitative review of improvisational music therapy from 1990 to 2015, professional artistry, performing self, and meaning making were the three distinct themes that emerged. The design of this questionnaire referred to these themes. The formation of this questionnaire primarily focused on the perspective of clients. Furthermore, following direction from the recovery-oriented practice concept used in mental health and the AMTA's research initiative, the clients' strengths, resources, and preferences in treatment planning were considered in designing the questionnaire. In addition, a few facilitation techniques that are repeatedly mentioned in educational materials for music therapists were used to form items in the questionnaire. In conclusion, to explore how to improve music therapists' understanding and interpretation of client responses, the questionnaires were formed based on three main directions: (a) client intentions for music engagement, (b) client concerns in music engagement, and (c) common themes reported from music therapists and clients. The rationale of including each item in the questionnaire will be explained in the following paragraphs.

1. I focused on following or matching a beat in the music.

Grounding techniques are reported to be very helpful for offering a foundation in improvisation and in supporting clients when the music does not present direction or intentionality (Bruscia, 1987; Wigram, 2004). Grounding, specifically rhythmic grounding, as defined by Bruscia, refers to when the therapist keeps the beat or a repetitive pulse to support the client's improvisation. The first item was created to evaluate if clients relied on the rhythmic pulse to orient their musical experience or if they attended to this element during music making.

2. I paid attention to patterns in the music.

3. I tried to copy the sounds/patterns in the music.

4. I tried to make music that sounded new or different.

In training music therapists how to improvise with clients, developing a "recitative" style of playing may be helpful (Wigram, 2004). This particular style may serve as an accompaniment for clients to improvise with freely. Offering structure and predictability may support clients, who are typically untrained musicians, when they engage in music making experiences. Item 2 asked if participants look for identifiable features or recitable patterns when they improvised music with the student researcher. Item 3 was a follow-up from Item 2 to examine if participants tended to copy the patterns they observed from the music therapist. Item 4 followed up from Item 2 to examine if participants intended to bring new musical ideas when they indeed attended to patterns in music. On the other hand, if a participant reported not being aware of patterns in music, item 5 was designed to evaluate if the participant experienced a higher degree of uncertainty in how to play music.

5. I felt unsure of how to play music during the session.

6. I felt embarrassed playing in front of another person.

One of the themes that arose from the qualitative research on improvisational music therapy is that there is a sense of uncertainty and tension during the client-therapist co-creating experience (Meadows & Wimpenny, 2017). Items 5 and 6 explored how much the concerns of performance and how participants' responses were perceived to occupy their attention during the experience. Item 5 addressed to what degree clients attended to the anxiety that arose from music making with endless possibilities. Another aspect of tension can rise from clients seeking approval from a co-improviser, which was explored in item 6.

7. I concentrated on whether I was having fun or not.

Consumers reported that music therapy experiences are identified as enjoyable events (Solli, Rolvsjord, & Borg, 2013). Therefore, Item 7 investigated if participants in this study also valued the music experience as enjoyable or not.

8. I focused on whether I like the music I was creating or not.

Item 8 continued to assess the reasoning behind the consumer's report on music therapy experiences as being enjoyable. Furthermore, this author investigated if participants found the music making experience more satisfying or less anxiety provoking when they liked the musical creation.

9. I attempted to play music that sounded like my feelings or thoughts.

Clinical improvisation provides clients a channel to potentially carry out their inner self in an authentic way or even offer an opportunity to explore the growth they aspire to actualize. The music is "understood as an expression of self" (Meadows & Wimpenny, 2017, p. 176). Clients' current emotional state or thoughts may be expressed freely in music making. This item was designed to examine the degree to which participants had awareness of how their feelings and thoughts were influential to music making.

10. I paid attention to how the music therapist responded to me.

Establishing contact is categorized as one of the first steps when implementing clinical improvisation (Carroll & Lefebvre, 2013). Music therapists often reflect musical or non-musical expressions from the clients in order to honor the client's sense of self and also insert the presence of the therapist. This approach represents empathy and unconditional acceptance through musical interactions that align with the humanistic philosophy in therapy. Item 10 was used to examine how important it was to participants that the music therapist was responsive and interactive with them.

11. I thought about the meaning of the music.

Improvisational music therapy appears to be used as an agent for meaning making. Through active music making, some clients reach a different level of self-awareness when their musical tendencies offer valuable insights into their current ways of being in their daily lives. In the above literature review section, meaning making is reported extensively in improvisation-related literature. This item was designed to explore if participants found meaning in the improvisational experience without verbal processing facilitated by the music therapist.

12. I felt supported by the music therapist to play the music I wanted to play.

Music therapy literature emphasizes the importance of establishing a trusting relationship between clients and therapists during clinical improvisation (Beer, 2011). Meadows and Wimpenny (2017) indicated that when clients feel supported, the musical connection and emotional relationship is able to emerge. The egalitarian relationship develops a shared experience and a "co-created narrative" (p. 177). Furthermore, the posture of expressing support in music is suggested to improve the client's motivation to participate. Supporting the client's

intention was one of the guidelines in the procedure of this study. Item 12 evaluated to what degree participants felt this principle was accomplished in the implementation.

13. Open comments: Please add any additional thoughts or reflections on your experience.

Item 13 was created to collect qualitative data from the participants. The space allowed participants to provide as much input as needed to share experiences that were not discussed during previous questionnaire items.

The questionnaire was administered through the online platform Qualtrics using an iPad tablet in person, immediately after the participant completed the music making experience. When there was difficulty using the iPad to access the internet, a laptop or the author's smartphone was offered. There were written copies ready for use as well.

Procedure

In this project, co-improvisational dyads between a music therapist and a client were used. This was designed to reflect a common set-up in the creative music therapy model (Nordoff & Robbins, 2007). After the participant completed the informed consent form, the researcher directed their attention to instruments in the room and encouraged participants to explore the instruments or to ask any questions. All the instruments were set up within close physical proximity to participants. The author initially sat in front of the electronic piano and guided the participant to sit in front of the rest of the instruments. During the verbal introduction to the musical experience, the author offered the opportunity to select or exchange instruments available, including the electronic piano, at any time of the experience. The therapist also pointed out that there was a timer set for 10 minutes on the iPad as a reminder. The therapist advised that a timer would be watched to manage the time and that the participant could choose whether or

not to pay attention, depending on his or her preference. The therapist encouraged participants to communicate discomfort or adverse feelings at any point during the session. All participants were reassured that early termination of the session could be suggested or a modified experience may be offered, at the participant's request.

The first 3 to 5 minutes of music making was referential in nature, in order to help participants to feel comfortable in a novel experience. The second part of the musical experience consisted of one or more free improvisations with the therapist with no referential or verbal directions given. Since studies report that it is easier for participants to engage in referential rather than non-referential improvisations, this researcher intended to provide a sense of safety. This also served to ease the participants into improvisational experiences by providing referential verbal instructions (Keith, 2007). According to Keith's study on meaning making in improvisation, participants appeared to focus less on the quality of their music and more on the connection between music and other areas of life experience in referential improvisations.

Three warm-up experiences from Wigram's (2004) educational text were adapted and used to facilitate the referential music making experience. First, the intervention referred to as "*Explore the sound*" (p. 184) was employed for clients to get familiar with the timbre and their abilities in manipulating the instruments. Participants were encouraged to use the mallets with instruments and explore their preferences. The researcher gave feedback by stating that they could choose to use the mallets or not, freely at any point of the music making experience. Second, the combined instrumental and vocal "*echo game*" (p. 187) was introduced. The researcher verbally prompted the participants to mimic the musical patterns they heard from the therapist's playing. They were encouraged to match the dynamics, rhythmic patterns, melodic contour, or the quality of the sound. The researcher encouraged participants to keep the call and

response interaction going regardless of how accurately they were able to replicate the patterns heard. There was also no limitation on which instruments were being incorporated by participants during improvisational experience.

In addition, there were vocal sounds that are not used in typical musical performance, such as an animal sound, shout, cluck, different types of laugh, and lip or mouth sounds, demonstrated by the music therapist (Wigram, 2004). The purpose of using these vocal sounds was to model the idea of using free expression without considering it as a musical performance. It also intended to decrease participants' anxiety or embarrassment about sounds they made. The therapist gave verbal direction to switch roles with participants. Participants were prompted to initiate musical ideas and the therapist demonstrated copying the ideas to respond. The warm-up experience was designed to provide an opportunity for participants to acclimate to instruments and attend to elements of music such as tempo and volume. The warm-up procedure also let the therapist demonstrate the conventions of improvisation and offer opportunities for participants to respond to the therapist. This also allowed for the researcher to observe turn-taking ability and the sensitivity of the participant to respond to the therapist's musical input through their musical behaviors. This step of the procedure further acted to reassure participants who did not have music therapy experience previously and created a sense of safety for engaging in novel activities.

The third warm-up intervention used an ABA structure referred to as "*Soft - loud - soft*" (Wigram, 2004, p. 189). The researcher explained to the participants that there would be no judgement of any form of their expression or the style of playing. At the same time, participants were encouraged to engage in a joint music making effort to create a brief and gradual "soft - loud – soft" sequence. Participants were reminded again that they could utilize any instruments

available, vocal sounds, body percussion, or movements to co-create the sequence. This warm-up led the music making experience to create a sense of togetherness in the musical dyad. When the dynamic of music reached a very soft level, the researcher verbally communicated that the next experience would be free with no outside references for a few minutes. The participants were offered a choice to transition to the next phase without stopping the music or they could pause the music to regroup.

The free improvisation section was influenced by the Creative Music Therapy model (Nordoff & Robbins, 2007), however the improvisation was not limited to common procedures in Creative Music Therapy sessions. The primary music making guideline from the researcher was to facilitate musical interaction between the therapist and the client. The emphasis was placed on establishing the therapeutic relationship through the musical contact. The researcher aimed at providing an "attentive and supplementing" energy as Nordoff and Robbins (2007, p. 297) described in order to invite the participant to the joint music making experience. The musical style and characters were to be shaped by the music therapist's support after observing the intention shown by the participant.

The participants were prompted to start the music during the free improvisation section if they felt comfortable in doing so. The therapist provided verbal reassurance that she would follow, musically, right away. The initial music responses from the therapist were informed by two main factors of participants' rhythmic pulses as suggested by Nordoff and Robbins (2007):

1. *Its rhythmic and/ or arrhythmic character - the extent and nature of its rhythmic consistency, clarity, independence, definition, autonomy.*
2. *Its individual quality of intentional drive - in that it is wary or impetuous, tentative or assertive, playful or serious, etc.* (p. 298).

The “quality of intentional drive” (p. 298) the participant demonstrated -- and that was perceived by the music therapist -- was the guide for the style of music being created. During the back and forth or simultaneous co-creating process, the therapist continued to adjust the musical styles by referring to how the participant was responding to the evolving music with his or her way of playing.

Another guiding principle that informed the therapist’s musical direction was that of affective attunement. The music therapist adhered to the affect and body language observed from the client and played in a style that reflected the emotional expression. It is described as channeling the emotional energy and transforming it in musical expression to establish connections (Aigen, 2005). The emotional attunement represented a gesture of unconditional positive regard from the therapist. During most music making sessions with participants, the therapist immediately reinforced when participants demonstrated a strong rhythmic expression or mirrored the energy level of the participant by reflecting the participant’s musical content in the therapist’s own music making. During music making, if the participant did not initiate musical changes after 8-16 measures, the therapist varied the dynamic slightly to verify the intention of the participant. When a participant showed signs of responding to the changes, the therapist returned to following the participant’s musical direction.

Facilitating a release of emotions through music is not considered to be the primary therapeutic mechanism in Creative Music Therapy (Aigen, 1998). The therapist’s aim is not to create a musical reflection of the individual’s emotional state. Rather, it is to facilitate an experience of co-creation between two people (Ansdell, 1995, p.127). For this reason, the procedural guidelines from Creative Music Therapy (Nordoff & Robbins, 2007) focus on the moment to moment flow between the client-therapist interaction. The decision making from the

therapist is largely instinctual. There is usually a co-therapist when working with children with special needs. However, there is more development of Nordoff-Robbins music therapists working with adults and with only one music therapist in recent years of practice.

The therapist in this study encouraged participants to communicate their preferences in sound quality or volume of music at any point of the meeting. If the music making came to a natural pause or ending at any time of the music making experience, the therapist encouraged the participant to restart a new section of music making. The therapist facilitated a continuous 5 to 7 minutes of free improvisation, or several short sections that added up to a total of 5 to 7 minutes with the participants. When participants chose to not use any instrument during the music making experience, the therapist verbally encouraged participants to simply listen to music or tap on their arms or lap if they felt comfortable. When the timer showed less than 1 minute left in the music making, the therapist verbally prompted the clients to bring the music to “an ending” when they were ready. Participants were encouraged to end the music in whichever fashion that made sense to them. The therapist made frequent eye contact with the participants and mirrored the changes initiated by them. When the participants expressed signs such as smiling, nodding, blinking eyes, or a loud exhale, the therapist paused at the last sound. When the last sound was elongated for a few seconds, the therapist terminated the music making completely. The participants were verbally debriefed after the music experience to check if any concerns were raised.

Handling of Data

The responses from the questionnaire were entered through the online survey platform Qualtrics. Both the participants and the music therapist filled out the questionnaire immediately after engaging in joint improvisation. There were several occasions when the music therapist

entered the scores after two or more back-to-back sessions. The scheduling did not allow time for immediate data input. However, the responses from the music therapist were reported no later than 2 hours after the session. The scores from participants and the therapist on each rating scales in the questionnaire in each session were entered into the software IBM® SPSS® Statistics V22.0. The means and standard deviation of the participant scores from each item were reported and compared with the therapist's scores. Pearson Correlation Coefficient was generated using SPSS and reported for each item on the questionnaire. Demographic information was gathered and illustrated by tables. Participant input from the open comment section was evaluated to find common themes.

Chapter 4 - Results

Demographic Information

There were 83 participants (N = 83) whose ages ranged from 18 to 59 years old. Fifty nine percent of the participants were between 18 to 20 years old. Thirty percent of participant ages fell between 21 and 29 (see Table 1). White or Caucasian participants consisted of 65.1% of the sample. Another 20.5% of the participants identified as Black or African American (see Table 2). There were 36 male and 47 female participants (see Table 3). Most of the participants were affiliated with Radford University. All participants reported having at least a high school degree (see Table 4). Detailed demographic information of the participants is presented in Tables 1 to 4.

Table 1. Participant Age

	Frequency	Percent
18-20	49	59.0
21-29	25	30.1
30-39	5	6.0
40-49	1	1.2
50-59	3	3.6
Total	83	100.0

Table 2. Participant Race/Ethnicity

	Frequency	Percent
Asian/ Pacific Islander	2	2.4
Black or African American	17	20.5
Hispanic American	4	4.8
Multiple ethnicity / Other	6	7.2
White/ Caucasian	54	65.1
Total	83	100.0

Table 3. Participant Gender

	Frequency	Percent
Male	36	43.4
Female	47	56.6
Total	83	100.0

Table 4. Highest Level of School Participants Completed

	Frequency	Percent
High school degree or equivalent (e.g., GED)	14	16.9
Some college but no degree yet	55	66.3
Associate degree	3	3.6
Bachelor degree	6	7.2
Graduate degree	5	6.0
Total	83	100.0

Data Analysis

For each participant, there are two datasets reported from using the joint improvisation questionnaire: one from the participant's self-report immediately after the experience, and one from the therapist's speculation on the participant experience. Although there were no intended therapeutic goals set for the interaction with participants in this study, due to the role this researcher served as the facilitator of a therapeutic experience, the data set reported from this research represents the therapist's view in all the writing on data analysis. The design of the joint improvisation questionnaire was intended to elicit two kinds of information: one was the frequency of occurrences (e.g. rarely, occasionally, or throughout the experience) during improvisational experience, and the second was to what extent a claim was accurate to the clients (e.g. disagree, neutral, or agree). The report of data analysis will change wording based on the type of information gathered in each item on the questionnaire. A detailed description of participants' self-reported experiences, the correlations between the therapist's speculation and participant reports, and the possible impact from participants' past musical experience on their report will be delivered in this section.

Descriptive statistics of the participants' input from the questionnaire are reported in Table 5. Frequency distributions of responses for the 12 items of the joint improvisation questionnaire are reported as bar charts on Figure 1. From the results on Item 1 and Item 2, the participants generally agreed that they often attended to the beat and the patterns in music when engaged in music making. Slightly more than three-quarters (75.9%) of the participants indicated that they paid attention to following or matching the beat often or more than often during music making (see Figure 1a). At the same time, 75.9% of the participants stated that they attended to patterns in music often or throughout the experience (see Figure 1b). This finding is consistent

with the claim from the music therapy literature that providing rhythmic grounding serves to facilitate improvisation. Participants also mostly agreed that they tried to copy sounds or patterns during the experience on Item 3 (79.5%, see Figure 1c). However, this may be due to the research procedure incorporating the "echo game" as a warm-up experience before changing to free improvisation, making it even more likely that participants would respond to Item 3 with agreement. On Item 4, the participant data trended towards trying to "make music that sounded new or different." Although, 35.4% of participants did not express specific opinions on this question, they rated neutral in their responses (see Figure 1d). When asked if they felt unsure of how to play music during the joint improvisation, the participants responded with varied perspectives. The majority of the participants rated that they "felt unsure" at least "occasionally" (67.4%, see Figure 1e).

Table 5. Descriptive Statistics of Participant Scores and Therapist Interpretation Scores

	Participant N	Participant Mean	Participant Std. Deviation	Therapist N	Therapist Mean	Therapist Std. Deviation
1. I focused on following or matching a beat in the music	83	4.02	.975	81	3.90	0.800
2. I paid attention to patterns in the music	83	4.08	.927	81	3.85	0.808
3. I tried to copy the sounds/patterns in the music	83	3.93	.921	81	3.95	0.687
4. I tried to make music that sounded new or different	82	3.41	.902	81	3.48	0.743
5. I felt unsure of how to play music during the session	83	3.00	1.179	81	3.60	0.983
6. I felt embarrassed playing in front of another person	83	2.33	.977	81	3.19	0.923
7. I concentrated on whether I was having fun or not	83	3.24	1.066	81	3.52	0.950
8. I focused on whether I liked the music I was creating or not	83	3.64	1.111	81	3.85	0.615
9. I attempted to play music that sounded like my feelings or thoughts	83	2.54	1.223	80	2.45	0.940
10. I paid attention to how the music therapist respond to me	83	3.61	1.080	81	4.19	0.573
11. I thought about the meaning of the music	83	2.99	1.110	81	3.10	0.889
12. I felt supported by the music therapist to play the music I wanted to play	83	4.63	.557	81	3.35	0.727
Valid N (listwise)	82			80		

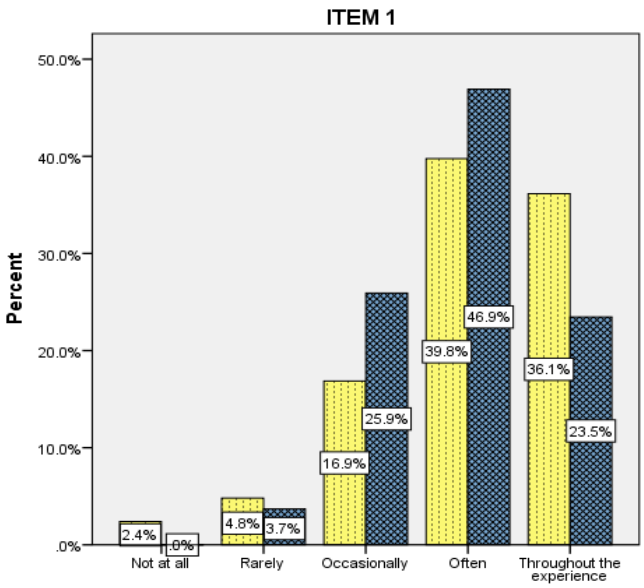

Figure 1a: I focused on following or matching a beat in the music

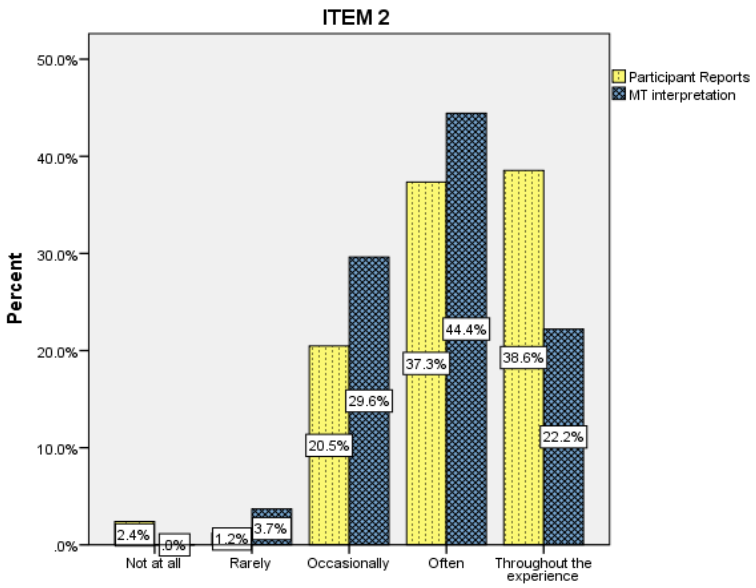

Figure 1b: I paid attention to patterns in the music

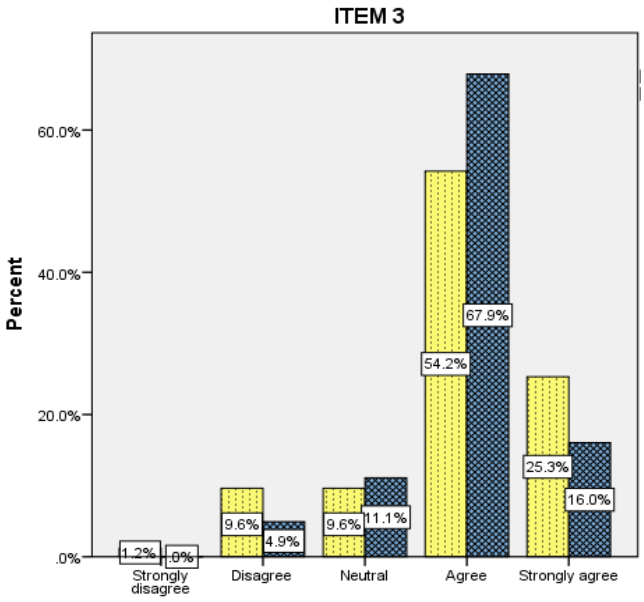

Figure 1c: I tried to copy the sounds/patterns in the music

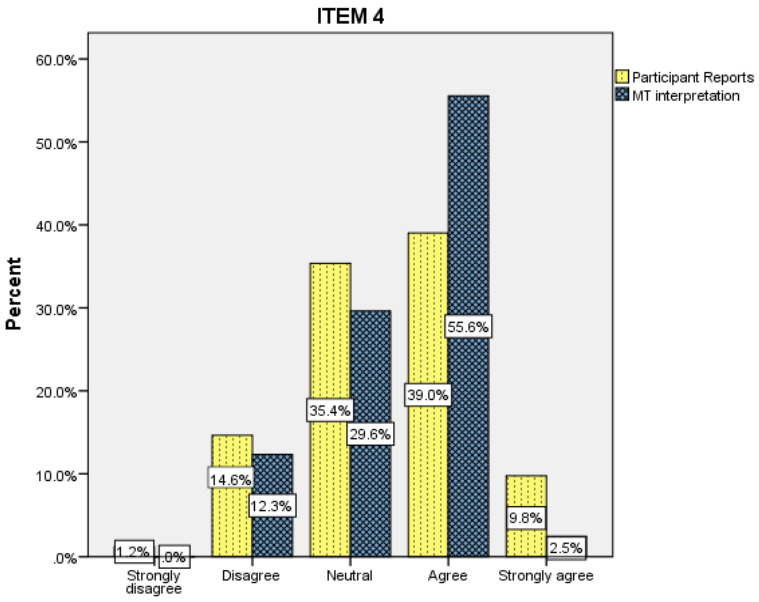

Figure 1d: I tried to make music that sounded new or different

Figure 1: Frequency distributions of responses for 12 items of the joint improvisation questionnaire

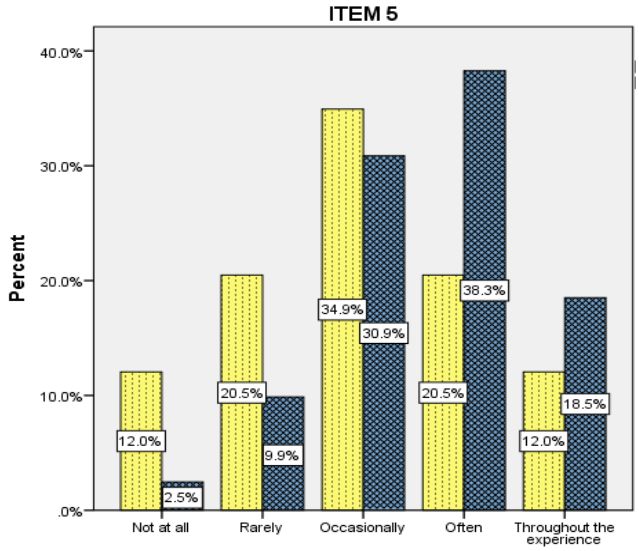

Figure 1e: I felt unsure of how to play music during the session

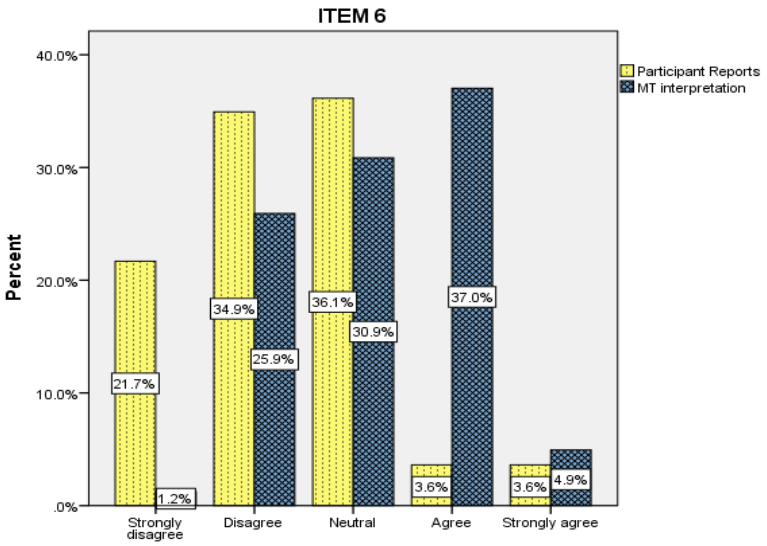

Figure 1f: I felt embarrassed playing in front of another person

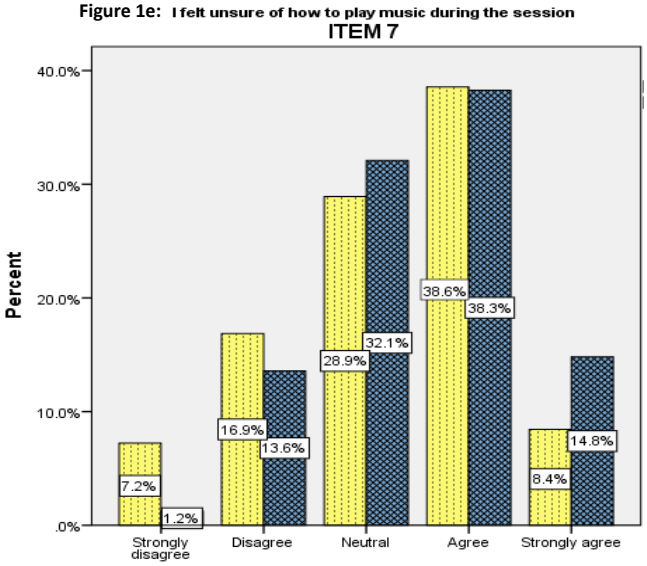

Figure 1g: I concentrated on whether I was having fun or not

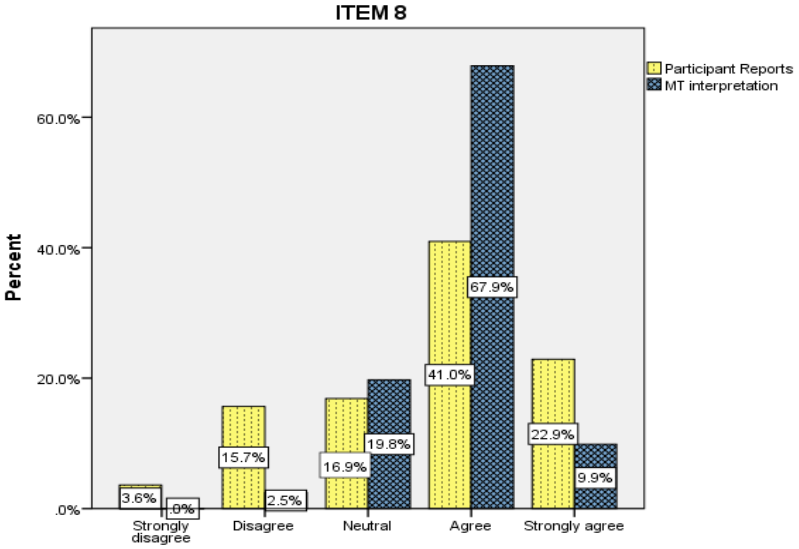

Figure 1h: I focused on whether I liked the music I was creating or not

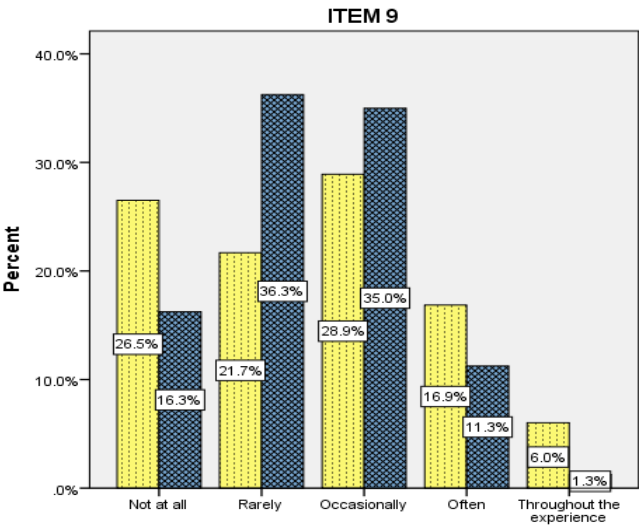

Figure 1i: I attempted to play music that sounded like my feelings or thoughts

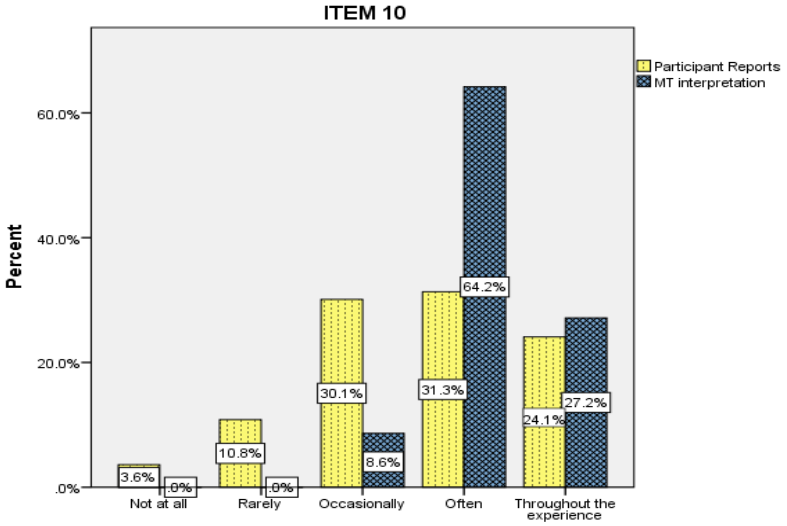

Figure 1j: I paid attention to how the music therapist respond to me

Figure 1 continued: Frequency distributions of responses for 12 items of the Joint Improvisation questionnaire

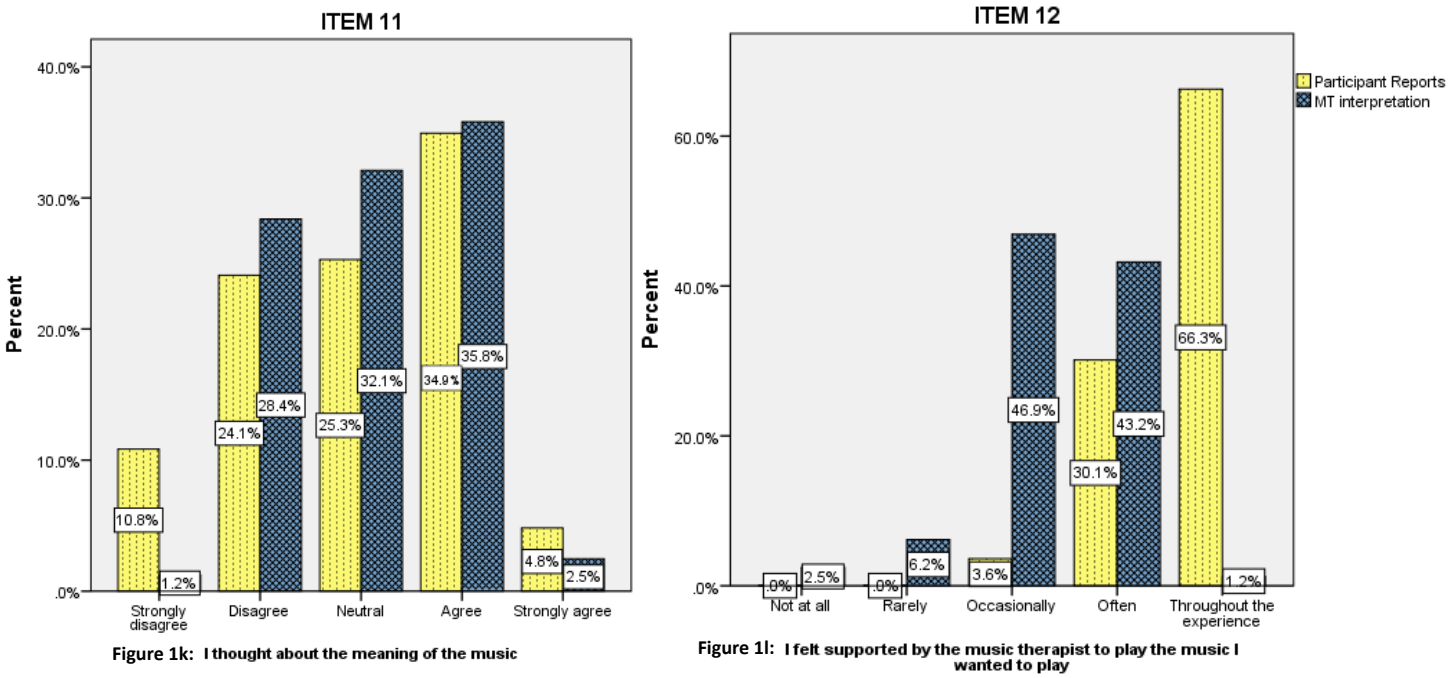

Figure 1 continued: Frequency distributions of responses for 12 items of the Joint Improvisation questionnaire

The participant reports for Item 6 indicated that most of them felt comfortable to some extent in expressing themselves during the joint music making experience. Given that many participants were not musicians who are experienced in improvisation, this writer expected a higher amount of anxiety or embarrassment, as demonstrated by hesitancy to try instruments and by a lack of initiating musical ideas. However, 92.8% of the participants rated that they felt neutral or denied feeling embarrassed during the joint music making experience. Item 7 was designed to elicit client perspectives on common themes in the music therapy literature that music therapy is enjoyable and motivating. Although 47% of participants in this study concentrated on whether they were having fun or not during the improvisational experience, the responses on this item were diverse (see Figure 1g). Fifty-three percent of participants who responded neutrally or disagreed as to whether they focused on having fun or not. This result does not equate to the fact that participants did not enjoy the experience overall; however, it

shows that having fun was not always a conscious intention or a center of focus during the improvisational experience.

On the other hand, 63.9% of the participants agreed to some extent that they focused on whether they liked the music they were creating or not (see Figure 1h). This result indicates that participants value the outcome of the co-creation of music as positive. It seems to be of some importance for the participants that the therapist collaborated with them to create something they like. The report on this item may indicate that participants intend to create a representation of self or engage in meaningful self-expression. By contrast, participants reported very differently on Item 9. The participants did not consider conveying their feelings or thoughts during music making most of the time (see Figure 1i). There are 48.2% of participants who stated that they either did not attempt to play music that sounded like their feelings or thoughts at all, or that it occurred rarely. At the same time, 51.8% of the participants reported attempting to convey feelings or thoughts in music at least occasionally. The function of music in depicting feelings or thoughts was not mentioned or facilitated during the procedure. As the music therapy literature indicated, expressing thoughts or feelings can be a self-identified intention or a center of focus for clients at moments during an improvisational experience.

Item 11 was another question that elicited participants' views on meaning making during the joint improvisation. The results showed that 60.2% of participants did not affirm that they thought about the meaning of the music (see Figure 1k). However, as indicated previously, meaning making was not prompted during the facilitation of the joint improvisation. It appears that while not all participants directed their attention to the meaning of the music, 39.8% of them did. Meaning making during an improvisational experience may be specific to some participants but not others. However, it appears to be of value for certain participants.

When asked if they were attending to how the therapist responded to them, the participants' responses showed that it happened frequently during the joint improvisational experience (see Figure 1j). There are 85.5% of the participants who reported that they paid attention to how the therapists responded to them at least occasionally. Specifically, 55.4% of the participants stated this center of focus appeared often or throughout the experience. As most participants reported attending to how the music therapist responded to them, Item 12 further invited them to evaluate their experience with the therapist. All participants reported that they felt supported by the music therapist to play the music they wanted to play to some extent. No participant stated that they rarely received support or did not receive support at all (see Figure 1l). There are 96.4% of participants who experienced support either often or throughout the music making experience. It is interesting that many items on the questionnaire generated diverse outcomes from the participant experiences; however, almost all participants received support to play the music they wanted to play. It is possible that participants felt the need to report socially acceptable answers in the presence of the therapist and may have perceived this item as an evaluation of the therapist. On the other hand, the participants may have perceived being offered support from the demeanor of the therapist or the general guidelines followed in the procedure of this study. Restriction of range in participant scores on this item may have limited the correlation between therapists scores and participant scores from reaching statistical significance.

Correlations between Client Ratings of Own Experience and Therapist Ratings of the Client's Experience

The Pearson correlation coefficient was used to assess relationships between client ratings of their own experience and therapist ratings of clients' experience. These correlations are presented in Table 6. There were several occasions when the therapist scores did not upload to

the Qualtrics system before the laptop became disconnected to the internet. Therefore, data points were missing from therapist ratings on four participants. Eighty-one pairs of data were available for analyses on 10 items, and 80 pairs were achieved on the other two items.

Pairing the scores on each item, significant correlations were not observed for Items 1 to 4 and Items 7 to 12 (ps > .05; rs < .206). There were two correlations that reached statistical significance. Explanation of the meaning of a correlation coefficient and the effect sizes it represents is provided in Appendix B. On Item 5, *I felt unsure of how to play music during the session*, the therapist's perception and the participant scores reflected a positive and strong correlation (r = .515; p < .001; r^2 = .265; n = 81). This indicates that 26.5% of the variance in participants' scores can be explained by the ability of the therapist to predict participants' experiences (r^2 = .265). The presence of a strong positive relationship indicates that therapist ratings of the clients' experiences corresponded to a significant degree with ratings provided by the clients themselves. On Item 6, *I felt embarrassed playing in front of another person*, the correlation between the therapist's perception and the participant scores showed a medium sized relationship (r = .306; p = .006; r^2 = .094; n = 81). Approximately 9.4% of the change in participants' self-reported scores is accounted by the therapist's perception. This medium sized, positive relationship reflects the therapist's ability to discern the variance in participant experience (r^2 = .094).

There were two correlations that approached significance. On Item 3, *I tried to copy the sounds/patterns in the music*, the correlation shows a positive and small to medium strength relationship that approached significance (r = .206; p = .065; r^2 = .042; n = 81). This indicates that the therapist's interpretation of the participant's experience may account for a small proportion of variance in participants' self-reported scores (r^2 = .042). In addition, the

correlation of scores on Item 8, *I focused on whether I like the music I was creating or not*, did not reach statistical significance. However, there was a trend towards a positive and small to medium size relationship between therapist's perception scores and the participants' self-reported scores (r = .194; p = .083; r^2 = .038; n = 81). A small proportion of variability in participants' self-reports may be detected by the therapist's observation.

Table 6. Correlations between Participant scores and MT Perception scores

Whole Dataset

			MT1	MT2	MT3	MT4	MT5	MT6	MT7	MT8	MT9	MT10	MT11	MT12
1	I focused on following or matching a beat	Correlation	.092	-.108	.221*	.056	-.102	-.040	.042	-.208	-.004	.101	-.128	.049
		Sig.	.416	.339	.047	.619	.363	.721	.711	.063	.974	.370	.254	.665
		N	81	81	81	81	81	81	81	81	80	81	81	81
2	I paid attention to patterns	Correlation	.178	.042	.072	.091	-.183	-.010	.111	-.039	.046	.034	-.047	.176
		Sig.	.111	.712	.521	.421	.103	.926	.322	.729	.688	.766	.678	.115
		N	81	81	81	81	81	81	81	81	80	81	81	81
3	I tried to copy the sounds/patterns	Correlation	.155	.079	.206	.135	.006	.059	.077	-.132	.028	.120	-.026	.147
		Sig.	.166	.484	.065	.231	.956	.604	.493	.242	.806	.287	.817	.191
		N	81	81	81	81	81	81	81	81	80	81	81	81
4	I tried to make music that sounded new or different	Correlation	.076	.107	.048	.076	-.133	-.051	.062	.165	.071	-.145	-.052	.077
		Sig.	.505	.344	.672	.502	.238	.656	.586	.144	.533	.198	.650	.498
		N	80	80	80	80	80	80	80	80	79	80	80	80
5	I felt unsure of how to play music during the session	Correlation	-.239*	-.248*	.114	-.174	.515**	.262*	-.310**	-.237*	-.452**	.100	-.042	-.305**
		Sig.	.032	.026	.312	.120	.000	.018	.005	.033	.000	.375	.713	.006
		N	81	81	81	81	81	81	81	81	80	81	81	81
6	I felt embarrassed playing in front of another person	Correlation	-.182	.016	.286**	.017	.387**	.306**	-.216	-.042	-.299**	.112	.221*	-.165
		Sig.	.105	.888	.010	.879	.000	.006	.053	.711	.007	.319	.047	.142
		N	81	81	81	81	81	81	81	81	80	81	81	81
7	I concentrated on whether I was having fun or not	Correlation	.055	.125	.066	.146	-.082	-.130	.168	.145	.018	.075	-.141	.237*
		Sig.	.626	.266	.559	.192	.469	.246	.135	.195	.872	.508	.208	.033
		N	81	81	81	81	81	81	81	81	80	81	81	81
8	I focused on whether I liked the music I was creating or not	Correlation	.141	.175	.009	-.016	-.175	-.056	.129	.194	.198	.046	.036	.184
		Sig.	.209	.118	.935	.890	.118	.620	.249	.083	.078	.682	.750	.100
		N	81	81	81	81	81	81	81	81	80	81	81	81
9	I attempted to play music that sounded like my feelings or thoughts	Correlation	.007	.073	-.070	.080	-.102	.016	-.052	-.136	.063	.098	-.018	.072
		Sig.	.951	.514	.533	.476	.365	.885	.644	.226	.579	.385	.875	.525
		N	81	81	81	81	81	81	81	81	80	81	81	81
10	I paid attention to how the music therapist respond to me	Correlation	.016	.201	.061	-.106	.002	.137	-.018	.069	-.031	.137	.242*	-.043
		Sig.	.890	.072	.586	.347	.987	.222	.872	.538	.783	.221	.029	.701
		N	81	81	81	81	81	81	81	81	80	81	81	81
11	I thought about the meaning of the music	Correlation	.072	-.068	-.049	.130	-.099	.071	-.054	.003	.007	.155	.063	.104
		Sig.	.521	.545	.666	.247	.378	.526	.632	.981	.953	.167	.579	.356
		N	81	81	81	81	81	81	81	81	80	81	81	81
12	I felt supported by the music therapist to play the music I wanted to play	Correlation	.141	.043	.213	.194	.026	.086	.131	.130	-.036	.139	-.051	.073
		Sig.	.209	.702	.057	.082	.817	.444	.244	.249	.751	.215	.649	.517
		N	81	81	81	81	81	81	81	81	80	81	81	81

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2- Tailed).

Regression Line

Linear regression was employed to further examine the significant relationships between participant self-reported scores and therapist perception scores. The scatterplots and regression lines of comparisons on Item 5 and Item 6 are presented in Figure 2 and Figure 3. A perfect regression line would reflect a therapist who possesses the ability to interpret a participant's experience accurately every time. It will have a y intercept of 0 and a slope of 1. This hypothetical line is represented by the dotted lines in Figure 2 and Figure 3.

The regression line on Item 5, *I felt unsure of how to play music during the session*, shows a slope of 0.6. When the therapist rated the participants as experiencing a 1 ("not at all") on the item "felt unsure," participants rated higher feelings of uncertainty a rating score 2 ("rarely") on the same item. When the therapist gave a score of 2 ("rarely" felt unsure), the participants overall had higher scores of uncertainty by a small margin. However, when the therapist rated a score of 3 ("occasionally" felt unsure), the participants on average rated feeling uncertain less frequently than "occasionally." When the therapist rated a score of 4 ("often" felt unsure), the participants on average rated much closer to experiencing unsureness only "occasionally," a score of 3. When the therapist rated a score of 5 (felt unsure "throughout the experience"), the participants on average experienced unsureness less frequently than "often," a score of 4. The trend is when participants experienced higher levels of uncertainty, the therapist began to overrate the participants' feelings of unsureness. The therapist was overly concerned that some participants seemed to feel that they were not able to engage in joint improvisation while they may only experience uncertainty occasionally. At the same time, the therapist was also slightly over confident that participants appeared to feel secure in engaging in joint

improvisation. Although the participants only rated one degree higher ("rarely"), they may still have felt unsure of how to play during the experience, which was missed by the therapist.

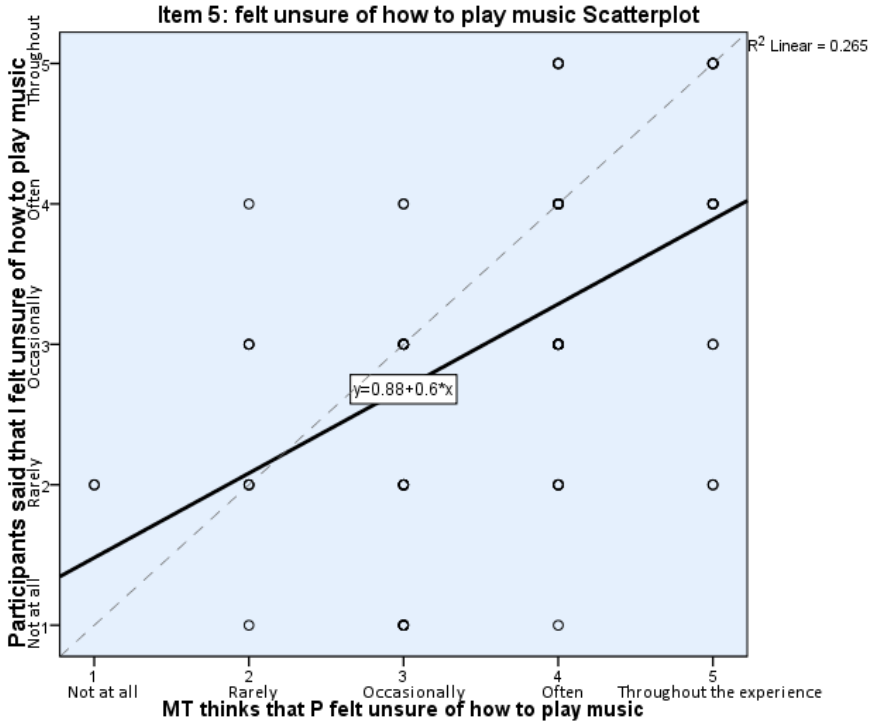

Figure 2: Scatterplot and Regression Line for Item 5

The regression line for Item 6, *I felt embarrassed playing in front of another person*, shows a slope of 0.32. When the therapist rated that participants would "strongly disagree" with feeling embarrassed, the participants rated a score of 2 ("disagree"). When the therapist rated that participants experienced low degrees of embarrassment, the participants on average reported similar levels. When the therapist rated that participants felt "neutral" about being embarrassed or not, the participants on average reported experiencing lower degrees of embarrassment. When the therapists rated that participants were embarrassed, the participants on average reported ratings lower than "neutral." On the occasions when the therapist rated that participants were strongly feeling embarrassed, the participants reported feeling neutral. Overall, the therapist assumed the likelihood of participants feeling embarrassed playing music to be higher than the

actual occurrences when participants experienced it. Based on the differences between participant and therapist ratings, the therapist appeared to be much more sensitive to possible embarrassment compared to participant reports.

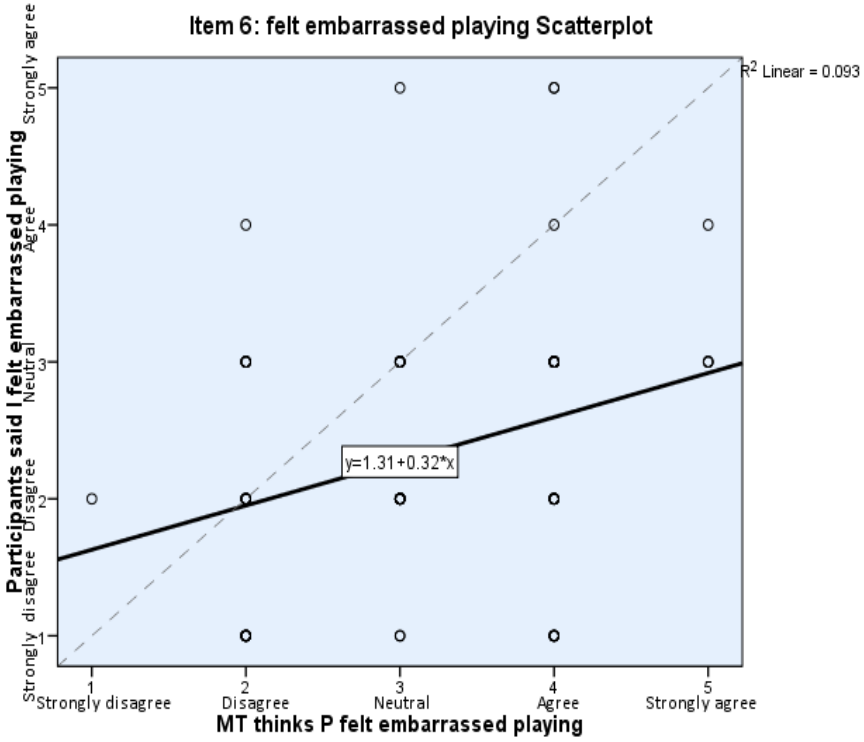

Figure 2: Scatterplot and Regression Line for Item 6

Factor Analysis of the Joint Improvisation Questionnaire

When using the Joint Improvisation Questionnaire as a clinical tool, it is designed to examine different areas of client focus of attention. These areas include musical intentions, creativity, enjoyment, appreciation, meaning making, concerns, and therapist feedback. Items 1 to 3 consisted of questions that were directly related to musical elements. Item 4 was intended to examine the client's intentions of being creative. Items 5 and 6 were designed to explore client concerns related to uncertainty or embarrassment. Items 7 and 8 were asking participants about their intentions related to enjoyment or appreciation. Feelings, thoughts, and meaning making were indicated in questions from Items 9 and 11. The degree to which participants attended to

therapist feedback and received support was elicited by Items 10 and 12. The correlations among participants' scores on all 12 items are provided in Table 7.

A Principal Components Analysis was conducted on the 12 items of the joint improvisation questionnaire to determine the number of constructs being evaluated in the set of items. Five factors with eigenvalues greater than 1.0 were identified. The eigenvalues associated with these five factors were 2.110, 1.619, 1.532, 1.532, and 1.183. These five factors accounted for 66.47% of the total variance in the 12 items of the survey.

The varimax method was used as the factor rotation strategy to determine which items load most heavily on each factor. Rotated factor loadings for each of the five factors identified are presented in Table 8.

The following items had high factor loadings that contributed to the first extracted factor: "matching a beat" (Item 1), "patterns" (Item 2), and "copying the sounds/patterns" (Item 3). The first three items on the joint improvisation questionnaire appeared to evaluate a similar construct that is related to how participants process and approach musical elements during music making, so this first factor has been assigned the name "*ways to approach musical elements*."

The items that contributed significantly to factor 2 include "felt unsure" (Item 5), "felt embarrassed" (Item 6), and "attending to therapist feedback" (Item 10). This factor was named "*concerns during music making*."

There are two items, "having fun" (Item 7) and "liked the music" (Item 8), that loaded significantly on the third factor, named "*enjoyment and appreciation*." While there is a shared construct assessed by these two items, participants responded to the two items differently. A paired samples *t*-test showed a significant difference between the mean scores for Item 7 and Item 8 (see Table 5), $t = -3.188$, $n = 83$, $p = 0.002$. The result shows that participants valued their

emotional responses to music more than the experience of music making. In other words, participants valued the co-created music more than the enjoyment of music therapy experiences.

In the fourth factor, two items loaded significantly: “feelings and thoughts” (Item 9) and “thought about meaning” (Item 11). Together, these two items comprised the construct of “*meaning making*.”

The last factor extracted from the joint improvisation questionnaire is related to the construct of “*creativity*.” There are two items that had high loadings on this factor: “new or different” (Item 4) and “felt supported” (Item 12).

Table 7. Correlations among Participants' Self-Reported Scores on 12 Items

			Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12
1	I focused on following or matching a beat	Correlation	1	.605**	.464**	-0.081	0.042	-0.034	.264*	0.143	0.091	0.194	0.045	0.039
		Sig.		0.000	0.000	0.468	0.703	0.761	0.016	0.196	0.412	0.079	0.684	0.725
		N	83	83	83	82	83	83	83	83	83	83	83	83
2	I paid attention to patterns	Correlation	.605**	1	.364**	0.052	-0.045	-0.112	0.177	.243*	0.142	.264*	0.214	0.109
		Sig.	0.000		0.001	0.643	0.689	0.315	0.110	0.027	0.200	0.016	0.052	0.326
		N	83	83	83	82	83	83	83	83	83	83	83	83
3	I tried to copy the sounds/patterns	Correlation	.464**	.364**	1	0.125	0.146	0.108	0.155	0.010	-0.116	.290**	-0.156	0.042
		Sig.	0.000	0.001		0.262	0.188	0.332	0.163	0.929	0.295	0.008	0.159	0.707
		N	83	83	83	82	83	83	83	83	83	83	83	83
4	I tried to make music that sounded new or different	Correlation	-0.081	0.052	0.125	1	-0.157	0.025	0.042	0.189	0.175	0.041	0.109	0.109
		Sig.	0.468	0.643	0.262		0.158	0.822	0.705	0.089	0.115	0.713	0.331	0.328
		N	82	82	82	82	82	82	82	82	82	82	82	82
5	I felt unsure of how to play music during the session	Correlation	0.042	-0.045	0.146	-0.157	1	.413**	-0.029	-0.074	-0.085	.249*	-0.112	-0.093
		Sig.	0.703	0.689	0.188	0.158		0.000	0.794	0.503	0.447	0.023	0.314	0.404
		N	83	83	83	82	83	83	83	83	83	83	83	83
6	I felt embarrassed playing in front of another person	Correlation	-0.034	-0.112	0.108	0.025	.413**	1	0.006	-0.025	-.221*	0.201	-0.199	-0.043
		Sig.	0.761	0.315	0.332	0.822	0.000		0.959	0.821	0.045	0.068	0.071	0.700
		N	83	83	83	82	83	83	83	83	83	83	83	83
7	I concentrated on whether I was having fun or not	Correlation	.264*	0.177	0.155	0.042	-0.029	0.006	1	.456**	0.114	0.135	0.013	-0.052
		Sig.	0.016	0.110	0.163	0.705	0.794	0.959		0.000	0.306	0.225	0.909	0.641
		N	83	83	83	82	83	83	83	83	83	83	83	83
8	I focused on whether I liked the music I was creating or not	Correlation	0.143	.243*	0.010	0.189	-0.074	-0.025	.456**	1	0.191	0.045	0.184	-0.063
		Sig.	0.196	0.027	0.929	0.089	0.503	0.821	0.000		0.084	0.686	0.095	0.570
		N	83	83	83	82	83	83	83	83	83	83	83	83
9	I attempted to play music that sounded like my feelings or thoughts	Correlation	0.091	0.142	-0.116	0.175	-0.085	-.221*	0.114	0.191	1	-0.052	.373**	-0.075
		Sig.	0.412	0.200	0.295	0.115	0.447	0.045	0.306	0.084		0.639	0.001	0.500
		N	83	83	83	82	83	83	83	83	83	83	83	83
10	I paid attention to how the music therapist respond to me	Correlation	0.194	.264*	.290**	0.041	.249*	0.201	0.135	0.045	-0.052	1	-0.065	-0.040
		Sig.	0.079	0.016	0.008	0.713	0.023	0.068	0.225	0.686	0.639		0.560	0.722
		N	83	83	83	82	83	83	83	83	83	83	83	83
11	I thought about the meaning of the music	Correlation	0.045	0.214	-0.156	0.109	-0.112	-0.199	0.013	0.184	.373*	-0.065	1	0.012
		Sig.	0.684	0.052	0.159	0.331	0.314	0.071	0.909	0.095	0.001	0.560		0.912
		N	83	83	83	82	83	83	83	83	83	83	83	83
12	I felt supported by the music therapist to play the music I wanted to play	Correlation	0.039	0.109	0.042	0.109	-0.093	-0.043	-0.052	-0.063	-0.075	-0.040	0.012	1
		Sig.	0.725	0.326	0.707	0.328	0.404	0.700	0.641	0.570	0.500	0.722	0.912	
		N	83	83	83	82	83	83	83	83	83	83	83	83

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2- Tailed).

Table 8. Rotated Component Matrix[a]

Items	Component				
	1	2	3	4	5
I focused on following or matching a beat in the music	.846	-.015	.131	.049	-.143
I paid attention to patterns in the music	.813	-.058	.111	.238	.072
I tried to copy the sounds/patterns in the music	.680	.228	.056	-.266	.186
I tried to make music that sounded new or different	-.089	.080	.225	.176	.832
I felt unsure of how to play music during the session	.038	.786	-.124	-.005	-.230
I felt embarrassed playing in front of another person	-.115	.758	.038	-.227	.092
I concentrated on whether I was having fun or not	.217	-.005	.815	-.049	-.078
I focused on whether I liked the music I was creating or not	.064	-.034	.807	.193	.115
I attempted to play music that sounded like my feelings or thoughts	.013	-.066	.153	.781	.019
I paid attention to how the music therapist respond to me	.391	.553	.074	-.006	.071
I thought about the meaning of the music	.048	-.109	-.013	.812	.058
I felt supported by the music therapist to play the music I wanted to play	.207	-.203	-.298	-.109	.585

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Chapter 5 - Discussion

This study explored the question regarding to what extent music therapists are able to understand a client's musical and non-musical responses in order to facilitate meaningful engagement. The joint improvisation questionnaire was used to gather information immediately after the music making experience. Two main areas of client experiences were evaluated in the questionnaire in order to better understand client musical and nonmusical responses during joint improvisation. One area addressed the client intentions or center of focus. The other area explored potential concerns clients have during joint improvisation. The comparisons between the therapist's observation and the participants' reports shed some light on how music therapists understand and interpret a client's musical and non-musical responses.

Client Center of Focus and Intentions for Music Engagement

From the results of the data analysis, participants generally agreed that their center of focus was on rhythmic features or patterns in music while engaging in improvisation. When looking at common themes from the existing music therapy literature on improvisation, such as creating something new, having fun, creating a representation of self-image, and meaning making, participants affirmed these intentions to varying degrees. These themes, which were examined in the questionnaire, were present in an individualized way. Not all themes were present in each person; however, many themes reported in the literature were also reported as important to participants in the current study.

Having fun. When exploring the center of focus related to enjoyment and appreciation, approximately half of the participants agreed that they paid attention to their level of enjoyment and more than half focused on whether they liked the music created or not. This outcome is consistent with a theme reported in the music therapy literature. From the qualitative data, most

participants who offered input in the open comment section reported that it was "fun," "great," "a good time," or that they "enjoyed" the experience. A few of the comments combined "fun" and "relaxing" in their feedback. Two participants mentioned that it was "fun" when they got into a "groove" during the improvisational experience. This feedback seems to support the importance of rhythmic grounding in facilitating engaging improvisational experiences.

In comparing the two questionnaire items related to enjoyment and appreciation, the results showed interesting findings. More participants reported that they focused on whether they liked the music they created rather than on having fun during the experience. In other words, clients valued their appreciation of the co-created music as a product more than their enjoyment of the music making experience. To this author's knowledge, these two aspects in reflecting on the improvisational experience of clients have not been compared in music therapy. There are several possible reasons for this finding. First, the appreciation of the music created may reflect a positive self-image associated with an act of creativity. Second, when participants feel they like the co-created music, they may experience a sense of control in the session by knowing that things can go the way they desire them to go. In other words, participants may experience a sense of ownership of the time that is given to them during the joint improvisation. Third, participants may gain a sense of achievement or accomplishment in knowing that they produced an aesthetically pleasing product. Previous music therapy literature indicated that the use of clinical improvisation offers clients an opportunity to experience a new self that may not be actualized otherwise. The fact that participants in this study valued the representation of their self-image supports this argument made in the music therapy literature.

On the other hand, this finding reiterates a question that is posed by many music therapists: does music therapy need to be "fun"? The general public often carries the impression

that music therapists provide clients with something "fun." Music therapy consumers also reported that they favor music therapy over other treatment groups in the mental health setting due to being able to have fun while expressing self. Although "having fun" was an area of focus for some participants, more of them focused on whether they like the co-created music or not. It is possible that a creative experience challenges clients, yet also provides gratification through overcoming the challenge of making music extemporaneously. This finding of participants reporting that they desire to create something they like may urge music therapists to shape the direction of facilitation to support this intention. To interpret the enjoyment of clients as an outcome that indicates success may not always be useful in evaluating if the clients received what they wanted from music therapy. Instead, the goal of music therapists can be directed towards offering support for clients to form their desired creative product even if the experience challenges them to some extent. Further research is required to examine these hypotheses. Meanwhile, this author sees this finding as a reminder that clients may tolerate an unfamiliar experience if it is meaningful or of relevance to them. In summary, music therapy does not always need to be fun. However, the client's preference and values have to be honored in the process.

Meaning making. When exploring the center of focus related to meaning making, clients reported a wide variety of views on how they saw this process unfold. About half of the participants attempted to convey feelings or thoughts during the joint improvisation and 40% of participants considered the meaning of the music. From the existing music therapy literature, meaning making is listed as a major theme in the therapeutic process when utilizing improvisation. The finding from this study indicated that whether meaning making was a significant component of a brief improvisational experience depended on the individual's

approach to music making. From a clinical perspective, meaning making may be a sign of the therapeutic progress. During an initial music therapy session, clients may not gain insight on deeper thoughts or consider the musical experience to be meaningful. However, as therapy progresses, clients may report increased reflectivity. Clinicians may use the joint improvisation questionnaire to facilitate conversation on how best to help clients create meaningful engagement in order to benefit from music therapy. One factor in this study is that participants attended only one session (i.e., the equivalent of an initial session).

To further examine the construct of meaning making, there are several components that relate to the act of meaning making based on participant reports. In the results, when participants attempted to convey their thoughts or feelings during a music making experience, they may have also processed the meaning of the music. In addition, the results showed that paying attention to patterns in the music was an indicator of processing meanings, with close to statistical significance. It is worth mentioning that when participants felt embarrassed when making music in the presence of the therapist, there was an indication of limited attention to the processing of meanings. Thinking about the meaning of the music does not equate to felt meanings. Nor does it indicate that participants found the improvisational experience to be meaningful. However, the mental act of processing meaningfulness showed signs of reflectivity.

Creating something new. When exploring the center of focus related to creativity, half of the participants agreed that they attempted to make something new or different in music. From the open comments section, several participants emphasized that the joint improvisational experience was “different” for them. Although they did not specifically mention creativity, making something new and different through music was addressed in their open reflection. Participants also used words including: “open,” “unique,” “creating,” and “freedom” to describe

the improvisation. It is an interesting reminder that having “freedom” can be something that is therapeutic for clients during an improvisational experience. Creativity may be associated with having the freedom to express one’s self. This concept can be further explored through future research.

Other than the abovementioned themes - having fun, creating a self-representation, meaning making, and creating something new - several participants perceived the brief improvisational experience as relaxing. More specifically, participants stated that the improvisational experience took their mind off what they were concerned about outside of the setting. Therefore, using an active music making experience as a distraction from stress can be considered as a client-identified intention. In addition, a few participants mentioned that they value creating music “together” with the music therapist. The joint creativity was the feature that they considered important. The sense of togetherness may be another client intention during improvisation.

Client Concerns in Music Engagement

In the results, many participants reported feeling uncertain at some point during joint musical improvisation. More than half of the participants indicated that they at least occasionally felt unsure of how to engage in the music improvisation. The experience of uncertainty found in the present study is consistent with a point of concern highlighted in the music therapy literature. Moderate correlations were found between participants who reported uncertainty and participants who attended to responses from the music therapist. The results indicated that when participants felt more uncertain some of them observed the responses from the music therapist more frequently.

Several participants reported in their open comments on their concerns regarding music engagement. Some stated that the joint improvisation was an “awkward” experience at first. They felt “hesitant” and were not sure if they would enjoy the experience. One participant reported feeling “nervous” at first. One participant clarified that when the music did not “line up,” it was anxiety-inducing. Most of these participants also shared, in their open comments, that they were encouraged and supported to overcome the initial concerns. However, one participant continued to feel awkward throughout the experience. For several participants who shared similar concerns, the fact that they were supported and able to engage in something they perceived as challenging seemed to offer unexpected rewards. Based on the results from the questionnaire, the majority of the participants did not experience high levels of embarrassment.

Therapists Perception of Client Responses

According to the correlation analyses between therapist observations and participant self-reports, the ability of this music therapist in understanding client responses differed when interpreting the musical behaviors versus social cues. This music therapist was able to discern social cues to some extent when participants showed increased levels of concern during the joint improvisation, such as if they seemed unsure of how to play music or if they felt embarrassed. In other words, the music therapist was able to detect client concerns during the joint improvisational experience. Overall, this music therapist reported more skewed scores based on the observations compared to what participants actually experienced. It is not within the scope of this study to draw inferences on whether the ability to read social cues is informed solely by a client’s non-verbal behaviors or a combination of non-verbal and musical behaviors.

By contrast, when feedback on individual musical behaviors or musical intentions was elicited in the questionnaire, the interpretation of this therapist did not match participants’ self-

reports. It appears that this music therapist did not effectively understand the tendency of participants' musical responses or their intentions behind their musical behaviors. On attending to musical elements, such as beats or patterns, the therapist's scores reflected different patterns from participants' scores. On creating something new, the music therapist was not able to discern when clients have this intention in mind or not. On enjoyment and appreciation, such as having fun or creating a representation of self-image, the therapist's interpretation did not match the participants' experience.

On meaning making, this music therapist was not able to differentiate when participants attempted to convey feelings and thoughts, or when they processed the meaning of music. However, in the music therapy literature, the therapist's understanding of the client's inner world and ability to reflect that through musical content is presented as an important skill in improvisation. It can be concluded that this music therapist was not able to achieve the goal of ascertaining the client's story through an understanding of the client's musical expression. However, almost all of the participants in this study reported that they received support from this music therapist in creating the music they wanted to make. It remains unclear if participants felt that creating their desired musical outcome required the process of meaning making. Furthermore, it is possible that participants created meaningful musical experience by the ways the music therapist co-created music despite the fact that the meanings were not shared by both parties.

This author concludes that the music therapist perceives client musical expressions very differently from the client's conceptualization of the experience. The ways in which clients achieve their musical expressions are likely to be different from the therapist's understanding of how changes in musical and nonmusical behaviors lead to expressions of themselves. In this

study, the process of comparing participant inputs and interpretations from the therapist may offer an objective view of the level of attunement and the state of the current therapeutic relationship. Through the lens of music therapists working with clients with developmental needs, such as clients with Autism Spectrum Disorder, affect attunement is a crucial principle in the implementation of improvisational music therapy. Follow-up studies may compare the correlation between therapist and client scores with other measures of affect attunement. The findings may strengthen our understanding of the relationship between musical attunement and affect attunement.

For most of the questions on the Joint Improvisation Questionnaire, average of the therapist's scores were similar to those for participant scores. The inability of this music therapist to detect an individual's focus of attention stems from not accounting for the variability of the individual client in his or her conceptualization of the experience. For instance, most participants reported that they were following or matching the beat during the improvisational experience. The therapist observed and reported similar tendencies overall. However, the participants' variability in perception did not reflect a correlation with the therapist's observed variability.

Implications for Clinical Practice

Overall, participant self-reports from the joint improvisation questionnaire and the claims from the music therapy literature are similar in respect to the focus of attention of clients in improvisation. However, the musical experience and the interpretation of musical expression tend to be subjective. Therefore, client input is particularly important in providing meaningful and quality music therapy services. While subjectivity in the client's views dictate how the therapeutic experience is perceived, the therapist's individuality informs how therapy unfolds and further shapes the therapeutic relationship. Each individual therapist has his or her own

unique biases that are brought to the therapeutic relationship. While many therapists are vigilant in processing and reflecting upon these biases, it may be difficult to pinpoint where these biases impact music making decisions in joint improvisational experiences. This Joint Improvisation Questionnaire offers an objective statistical report on the correspondence between the clients' experiences and the therapist's perception of client experiences. It may offer music therapists an opportunity to examine their use of self and their moment-to-moment decision making in musical improvisation. It can also provide clinicians with a platform to be transparent with clients in sharing their common therapeutic interaction styles in music therapy. Thus, clients may be able to engage in music therapy in a collaborative fashion. This egalitarian process supports the philosophy of empowering clients.

In this study, despite being unable to detect the clients' focus of attention in musical engagement, the basic aim of the music therapist was achieved. The music therapist intended to facilitate an experience that allowed the clients to play "what they wanted to play" during joint improvisation. The participants reported that they felt supported by the music therapist to play the music "I wanted to play." While the mechanism of how the music therapist offered support remains unclear, the principles of following the client's lead by attending and responding to the focus of client attention did not interfere with creating a therapeutic environment. However, it is possible that this aim is accomplished by other common factors in the therapeutic interaction, such as warm and positive regard towards the clients.

Furthermore, to compare the therapist's observation scores and the client's self-report with one individual client can establish a baseline for evolving perspectives during joint music making. Because the method of joint improvisation is dynamic, the client perspectives do not simply end at knowing their musical preferences. Although it was not investigated by the

research design in this study, the similarities or differences between a client's and the therapist's scores may change over the course of the treatment period. Further studies that utilize this Joint Improvisation Questionnaire are warranted to gain information on this hypothesis. Nevertheless, using this questionnaire in the initial session can obtain a baseline to be compared with outcomes from another checkpoint, perhaps after a session with a breakthrough or after a set period for evaluation. The meaning behind the potentially increased or decreased similarities between the therapist's and the client's scores can be understood in the individualized treatment context by an interdisciplinary team and the client together.

Limitations

There are several threats to the internal and external validity of this study. First, this research incorporated only one music therapist to implement improvisational music therapy. Although the procedure is clearly structured and followed, the relational style and musical tendencies may not be a reliable representation of how music therapists, overall, facilitate a joint improvisational experience. The reliability of the Joint Improvisation Questionnaire is in question as well. It would greatly strengthen the findings in this study if there were several music therapists using the same procedure to conduct sessions.

Convenience sampling was utilized to recruit participants in this study. The criterion for participation was to be able to attend the session on Radford University's campus. Therefore, all the participants were affiliated with Radford University and resided in close geographical locations. It is possible that there are regional cultural differences in social cues and relational styles to which participants tend to respond. A replicated study that uses similar sampling in a different region may strengthen the outcomes from this study. Furthermore, most participants were college students attending Radford University. Therefore, the ages of participants mainly

fell between 18 and 29. The results in this study may have reflected younger people in the general population more closely than other age groups. More data on diverse populations, such as different age groups, educational levels, and ethnicities, would generate a more reliable norm for comparison.

This study only collected data in one entry point, the initial session. However, there were participants who were acquaintances of the music therapist or people who had an existing social relationship with the therapist. It was unclear if different pre-existing relationships offered different responses in musical engagement or reflection style. More data from participants who have different stages of therapeutic relationships with a music therapist would offer more comprehensive comparison on the correlations between therapist interpretation scores and participant self-reported scores.

Implications for Future Research

To continue developing the Joint Improvisation Questionnaire as a research or clinical tool, future studies are warranted. To strengthen inter-rater reliability, a replication study that incorporates different music therapists can provide data to compare with the findings in the current study. In addition, while the interpretation of therapists who directly interacted with participants is an essential component of the question raised in this study, perspectives from an objective rater may provide different insights into the session. The sessions may be recorded and reviewed by the trained raters who are not biased from facilitating the sessions. Trained raters who are not certified music therapists can be utilized as another kind of observer to generate outcomes from the utilization of the joint improvisation questionnaire. The results from trained raters who are music therapy students versus music therapists can be compared to gain

understanding on whether the interpretation styles evolve through accumulated therapy experiences.

When future research incorporates video recording, it will allow for multiple ways to analyze the musical responses and social cues observed in joint improvisational experiences in the study. For instance, musical analyses can be conducted by objective viewers who are music professionals to detect moments when musical ideas are imitated and repeated from either the therapist or the participant. Musical analysis done by music professionals compared to participant inputs, can be used to understand how non-musicians interpret their own music responses versus how music professionals tend to perceive the same musical behaviors. Based on the results from this study, client perceptions of how they approach musical expressions are different from how the music therapist perceived what was happening with client musical expression. For instance, when the client was not intentionally copying patterns, there still can be similarities between the client's musical input and the therapist's musical ideas. The individualized interpretation from non-musicians on their musical expressions can be better understood with detailed comparisons. This information will improve communication between therapists and clients and possibly establish mutual understanding of therapeutic directions.

To understand if an improved therapeutic relationship has an impact on the correlations between the therapist's interpretation scores and participant self-reported scores, a series of sessions can be facilitated. Participants can be interviewed to report their perceived therapeutic relationships with the therapists. The increase or decrease in strength of the therapeutic relationship can be evaluated by if larger or smaller sized correlations are observed at subsequent times of evaluation. The utilization of the questionnaire prompts participants to engage in a form of reflection automatically. The process of reflection is a part of the therapeutic component in

music therapy. The act of reflection may accelerate or transform the therapeutic process without therapists changing their approach significantly. Other measurements that indicate changes in the therapeutic relationship can be employed simultaneously to establish reliability of the joint improvisation questionnaire.

Conclusion

This study explored the focus of attention from participant self-reports immediately after being engaged in a joint improvisational experience. Overall Participants attended to musical elements such as beats and patterns. However, the degree to which they focused on creativity, enjoyment, appreciation, and meaning making varied more widely. The music therapist in this study was not able to discern the differences in the participants' degree of focus on musical elements or other music-related intentions. However, when the participants showed concerns regarding music making through social cues, the therapist could detect these concerns to a significant degree. When the joint improvisation questionnaire is used as a clinical tool, several themes can be elicited. These themes include focus of attention, creativity, enjoyment, appreciation of creating a self-image, meaning making, support received from the therapist, and concerns during engagement.

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Appendix A

Participant Number:

Questionnaire:

Please recall your thoughts, concerns, and feelings during the music. Using a scale from 1-5, rate how frequently it occurred or how much you agree with the statement.

1. I focused on following or matching a beat in the music.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

2. I paid attention to patterns in the music.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

3. I tried to copy the sounds/patterns in the music.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

4. I tried to make music that sounded new or different.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

5. I felt unsure of how to play music during the session.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

6. I felt embarrassed playing in front of another person.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

7. I concentrated on whether I was having fun or not.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

8. I focused on whether I liked the music I was creating or not.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

9. I attempted to play music that sounded like my feelings or thoughts.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

10. I paid attention to how the music therapist responded to me.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

11. I thought about the meaning of the music.

1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

12. I felt supported by the music therapist to play the music I wanted to play.

1. Not at all 2. Rarely 3. Occasionally 4. Often 5. Throughout the experience

13. Open Comments:

Please add any additional thoughts or reflections on your experience.

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14. Which category below includes your age?

1. 18-20 2. 21-29 3. 30-39 4. 40-49 5. 50-59 6. 60 or Older

15. What is your gender?

1. Male 2. Female 3. Non-binary/ Third gender 4. Prefer not to say

16. Which race/ethnicity best describes you?

1. American Indian or Alaskan Native 2. Asian/ pacific Islander 3. Black or African American 4. Hispanic American 5. Multiple ethnicity/ Other 6. White/ Caucasian

17. What is the highest level of school you completed or the highest degree you have received?

1. Less than high school degree 2. High school degree or equivalent (e.g., GED) 3. Some college but no degree yet 4. Associate degree 5. Bachelor degree 6. Graduate degree

18. Have you played/ do you play a music instrument? If yes, what type of music training did you receive?

Appendix B

A correlation coefficient represents the relationship between two variables. The amount of variability that two variables share is indicated by their correlation coefficient. The range of correlation and coefficient is between -1 to 1. The strength of the correlation is the absolute value of the coefficient value. A positive correlation reflects that when one data point increases, the other one also increases. A negative correlation shows that when one variable increases its value, the other decreases its value. When the size of the correlation reaches r^2 = 0.01, it shows a small effect size. A size that reaches r^2 = 0.09 indicates a medium relationship between the variables. Correlation values that are above r^2 = 0.25 reflect a strong relationship. If one variable never changes, the correlation between this variable and another one will be zero. When one data point shows constraint of range, the correlation between this variable and another one will be lessened.