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Matthew J. Brady

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Running head: BASS GUITAR AND MUSIC-CENTERED PRACTICE

EXPLORING THE USE OF THE BASS GUITAR AS A CLINICAL INSTRUMENT
WITHIN MUSIC-CENTERED PRACTICE

A THESIS

Submitted in partial fulfillment of the requirements

For the degree of Master of Science

in Music Therapy

by

Matthew J. Brady

Molloy College

Rockville Centre, NY

2016

MOLLOY COLLEGE

Exploring the Use of the Bass Guitar as a Clinical Instrument Within Music-Centered
Practice

By

Matthew J. Brady

A Master's Thesis Submitted to the Faculty of

Molloy College

In Partial Fulfillment of the Requirements

For the Degree of

Master of Science

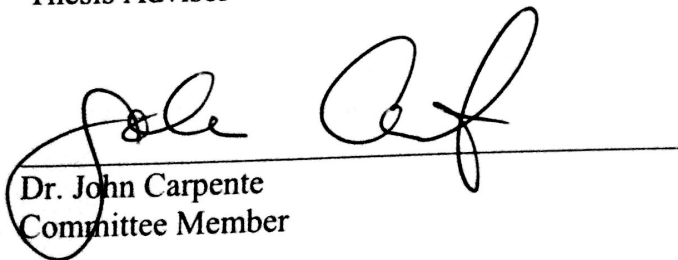
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Thesis Committee:



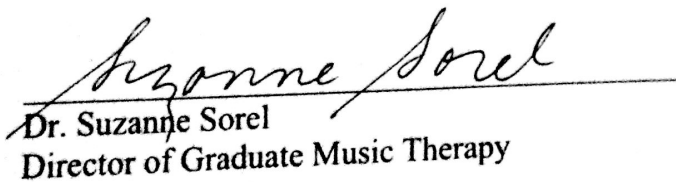
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Abstract

There is limited research on the use of the bass guitar in music therapy. This study explored the use of the bass guitar as a clinical instrument from a music-centered perspective in clinical work with individuals with neurodevelopmental disorders and emotional challenges. Data were collected from filming individual music therapy sessions with three participants. Each participant had four sessions of music therapy. Data were analyzed using inductive thematic analysis. Five themes which reflect the interventions and social processes within music-centered work with the bass were identified: following the client's lead, grounding, client and therapist as rhythm section, client and therapist as soloist and accompanist, and co-creative thematic development. These themes provided structure for further examining the role of the bass within clinical interventions. Clinical descriptions of musical interactions, with audio excerpts, are included to show how the bass guitar was used within improvisational interventions within each theme, as well as to provide context for clinical techniques and roles within the music. Understanding the role of the bass and its aesthetic qualities within the musical process can contribute to providing effective interventions, supporting the role of the client, and facilitating further development in music when working within these themes.

Key words: bass, bass guitar, music-centered, music therapy, improvisation, autism, inductive thematic analysis, qualitative

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**Exploring the Use of the Bass Guitar as a Clinical Instrument
Within Music-Centered Practice**

This study investigated the clinical use of the bass guitar in music therapy with children and adolescents with emotional and neurodevelopmental challenges. In order to investigate this topic, I analyzed films of sessions with clients in which I am using the bass as a clinical instrument in treatment. I then utilized inductive thematic analysis to better understand what occurred in these sessions and sought to find themes related to musical-clinical interventions involving the bass in my interactions with clients. I looked at the aesthetic components of the bass and the role these components play in therapy. I also analyzed the different musical techniques I employed on the bass and the effects they appeared to have had on the participants' participation, and how their responses in turn affect my interventions, ultimately viewing aspects of the musical processes within these sessions.

When I refer to techniques being employed on the bass, this refers primarily to musical techniques of playing the bass. Examples include slapping, popping, double-stops, bending notes, glissandos, or syncopated rhythms. As a therapist, I may use one of these musical techniques as a clinical technique, for example, using double stops or chords on the bass to reflect a client's mood as a technique of empathy, or using a slapping technique on the bass to differentiate my music from a client's drumming of a fixed basic beat while maintaining support of their playing, as a redirection technique. Both musical and clinical techniques were factors in this study.

This study utilized a music-centered approach to music therapy. This informed the clinical work conducted in sessions that served as the data, as well as my analysis. In music-centered music therapy, the primary focus is on the client's experience in music and does not require the generalization of goals or results into other non-musical domains (Abrams, 2011; Aigen, 2005a). In music-centered work, clinical concerns from other domains are assimilated into musical experiences and processed within the musical relationship (Abrams, 2011). In short, "the musical process *is* the clinical process" (Aigen, 2005a, p. 94). As it relates to this research topic, studying the use of the bass in therapy, as Aigen (2005a) states, "in music-centered music therapy, the mechanisms of [the] music therapy process are located in the forces, experiences, processes, and structures of music" (p. 51). This means that to understand the bass and its potential function as a clinical intervention, the bass must be viewed and understood from the perspective of what it provides in a musical experience.

The bass plays a prominent role in non-clinical music across multiple genres and contexts, ranging from the development of jazz (Brough, 2012), to the bass guitar's addition to rock and roll music (Bacon & Moorhouse, 2008), to being the foundation of funk grooves that contributed to a larger socio-cultural development through music (Danielsen, 2006). Its presence in various types of music has had an impact on people's musical involvement and experiences for years.

The Fender electric bass guitar was developed in 1951 as a response to guitarists who were consistently using amplifiers and drummers who were increasingly using larger, louder kits, overpowering the acoustic upright bass players (Bacon & Moorehouse, 2008). Before the Fender bass, there had been other attempts to amplify the bass, but they did

not achieve the widespread success or popularity of the Fender bass. In the late '50s and early '60s, the electric bass guitar gained extensive popularity in rock and roll music and replaced the upright bass in most rhythm sections, due to being electrically amplified and louder, easier to play in tune with frets, and smaller, thus more portable (Bacon & Moorehouse, 2008). With the added pickups on the Fender bass, the bass guitar also had more versatility in tone than the upright. In addition to the increase in volume, the electric bass provided more sustain in the lower presence of harmonic full band arrangements, which allowed other instruments to be more flexibly used (Keil, 1991).

With time, both as technology has developed and as musicians began to identify more specifically as bass guitarists (rather than upright bassists or guitarists switching over to the bass guitar), the possibilities and presence of the bass has allowed it to develop into its own unique instrument in the rhythm section. This development has played a role in the development of contemporary music and could, therefore, play a role in music therapy.

Context of the Researcher

My interest in this topic stems from my own experience as a bass player. I began playing the upright bass in third grade. Students at my school were given the option of choosing an instrument; My mother told me to choose an instrument that was small so it would be easy to transport, like my older brother who had played the viola. Refusing to follow these orders, I simply chose the largest instrument available. While it seems the decision to play the bass was not necessarily rooted in anything musical and was rather my own refusal to follow what my mother told me, even then, playing upright classical

bass in an elementary school orchestra gave me a sense of individuality and identity as a bass player.

As I began to become more interested in music and the bass, I bought an inexpensive electric bass guitar and became more attracted to music that prominently featured bass. Early on in my musical development, this included the music of the Red Hot Chili Peppers, Elvis Costello and the Attractions, and Black Sabbath. While each of these bands was arguably from very different subgenres of rock music, what they had in common was the artistic and creative forces of the bass players playing an integral role in the musical process. I tried to emulate the bassists in these bands (Flea, Bruce Thomas, and Geezer Butler, respectively) as I experimented with different ways of playing.

As I began to play with other musicians from different backgrounds, I was exposed to a variety of types of music that opened up my musical world and understanding of what was possible in music and on the bass. Les Claypool, of Primus, helped me realize that the bass could truly take on a lead role in a band that, now in retrospect, I went a little overboard in trying to imitate. Studying Bootsy Collins' work with James Brown and Parliament-Funkadelic humbled me and made me appreciate the creativity, discipline, and responsibility involved in holding down the groove in a band while still being able to play spontaneously and be in tune with everything going on around me in music. As I became more interested in experimental/avant-garde jazz through the work of Marc Ribot (a guitarist who has influenced me as a musician more than any other non-bass player), hearing bass players such as Shahzad Ismaily and Trevor Dunn helped me to conceptualize the role of the bass in a way that integrated all of my previous influences. I realized that there are no fixed rules and that a bass player must be

able to intuitively adapt to each musical situation as well as other players. Bass players contribute to the aesthetic experience as it develops, whether through an assertive lead role, sitting back on a groove, deconstructing then rebuilding a groove, or creating a mood through double-stops, roots and inversions, and variations in tone.

In my clinical musical development as an undergraduate music therapy student, I devoted most of my practice time to developing my skills on piano, guitar, and singing (which are necessary skills for a music therapy student). However, it did not occur to me how to realistically implement the bass in music therapy until I was introduced to the work of Ken Aigen and Alan Turry in *Playin' in the Band* (Aigen, 2005b). Their use of popular musical styles in clinical improvisation opened my eyes to the possibilities of clinically using these types of music, as well as the potential of using one's own musical identity and influences in a positive way in therapy. This inspired me to seek lessons from Frank Wagner, a Nordoff-Robbins Music Therapist who also identified as a bass player, during my undergraduate studies, focused on improvising on the bass utilizing modes. These lessons had a very meaningful impact on my understanding of improvisation and clinical use of the bass.

I first began using the bass in music therapy during a clinical internship from 2012 to 2013 at Imagine Academy (where I would later become a full-time staff member). I initially began using it to engage with a difficult client with whom I felt unable to connect to, musically. Throughout the year, our musical and therapeutic relationship gradually progressed, ultimately changing my view and understanding of music therapy and inspiring me to further explore both music-centered work and ways of implementing the bass. After I completed the internship, I found myself working multiple

consulting/home-visit jobs that required constant travelling, making it difficult and unrealistic to have a bass present for my sessions – unfortunately delaying my inquiries.

In the summer of 2014, I was asked to return to Imagine Academy to work full-time while simultaneously pursuing training in Nordoff-Robbins Music Therapy at the Rebecca Center for Music Therapy at Molloy College. I gradually began to use the bass at both settings while finding ways to apply Nordoff-Robbins principles to my work and challenging myself to connect them with my use of the bass. As I completed this training, I found myself truly aligning with the improvisational, music-centered nature of this approach (Aigen, 2005a; Bruscia, 1987; Kim, 2004).

I did my final presentation for the Nordoff-Robbins training with a focus on my use of the bass at Imagine Academy in individual therapy with a boy with severe emotional and neurodevelopmental challenges – another difficult client with whom I could find no way of connecting at the beginning of the year. My experiences with this client in music, as well as my own personal growth throughout the year and the interest and feedback received from that case presentation, inspired me to pursue this thesis research.

I decided on the topic of this study because as a bass player, I feel that there is value to understanding the potential contributions of this instrument in a much deeper way than what I have been doing intuitively thus far in my career. This thesis is relevant in that it adds to the literature of research on the use of a primary instrument other than piano or guitar in clinical practice, and can give guidance to bass players on how the bass can be utilized in their work. It may also provide some insight into how other therapists might use the bass in sessions.

As I prepared to undergo this research project, I found myself being very aware of my history with the bass and what led up to the decision to conduct this research, as previously described. Pursuing this study led me to use the bass at times when I would not typically use it or with clients who may or may not be best suited for its clinical use. However, with such limited existing research it is difficult to decipher when these appropriate moments would be, other than using my own intuition, which is what I have thus far used. Undoubtedly, playing my primary and personal instrument directly influenced all of the raw data, which is a bias in this research study.

There are positive aspects to the multiple roles I held as researcher and clinician in this study. I have an ongoing relationship with the participants in the study, which gave me insight into how they present outside of music and what their experiences and relationships are like in their life.

I came into this research project with an open mind as to what findings the data and results might illuminate. My clinical experiences in my work up to the point in which I began this research led me to expect that differing styles of playing, including musical styles and idioms, creating a groove, creating a less conventional aesthetic atmosphere, use of chords and double stops as opposed to single note bass lines, and use of different tones would play a significant role in the results.

In order to remain open to all possibilities and adhere to qualitative and inductive approaches, I took measures to address the above stated bias and expectations. I kept a reflective journal in order to provide transparency and facilitate reflexivity of my process throughout the study.

Review of the Literature

Research documenting the clinical use of the bass in music therapy is sparse. In fact, only one publication addresses the role of the bass within documented clinical work, and bass is not the primary focus of the study (Aigen, 2005b). Other papers have explored the potentials of the bass in music therapy but do not utilize actual clinical sessions with clients as data (Aigen, 2013; Rose, 2011). Due to the lack of music therapy research, when reviewing the literature I had to focus on sources from disciplines outside of music therapy, including the areas of musicology, ethnomusicology, and music psychology. While these are not rooted in clinical contexts, music-centered practice establishes that there are continuities between clinical and nonclinical uses of music, and that there is value in developing music therapy theory based on general theories of music from the above stated areas of study (Aigen, 2014). They are relevant to the topic of the bass and offer us information in understanding the instrument's aesthetic qualities and its role in playing within performing ensembles, a necessary step in understanding its role in music therapy. Drawing from these areas allowed me to study and understand how the bass functions in musical processes and experiences, which is applicable to implementing the bass in musical processes with clients as it relates to music-centered work.

This literature review will address multiple aspects of the bass relevant to this study such as listeners' perception of bass in music, the role of the bass in jazz and rock/popular music, the musicianship of bassists, and the use of the bass in clinical practice in music therapy.

Listeners' Perception of Bass

Quantitative research in music psychology has provided evidence that the presence of bass in music has effects on the psychological and physiological experience for the listener. Conducting research on undergraduate students' responses to listening to music, Hsu, Huang, Nordgren, Rucker, and Galinsky (2014) found that music with more bass (as measured in decibels) produced a greater sense of power in listeners than identical music with less bass. The music in these experiments was solely instrumental, to rule out the effect of lyrics. An additional relevant finding from this study is that the level of bass did not have any direct effect on positive emotions. These results may contribute to therapy in that clients can feel empowered when the bass is used in session without simply making them feel relieved or happy, which would take away from the emotional challenges they are processing. This could mean that the bass may empower clients to have more active participation in working through a variety of emotional themes in session. While this research was not conducted in a clinical context, the effect of the bass on listeners further demonstrates that it is worth exploring as an instrument in music therapy.

A quantitative study by McCown, Keiser, Mulhearn, and Williamson (1997) found that gender and personality of listeners may play a role in preference of higher levels of bass in music. The study found a connection between males, higher levels of personality traits of psychoticism and extraversion in listeners, as measured by the Eysenck Personality Questionnaire, and preference of more exaggerated levels of bass when listening to music. The study found these three qualities (male gender, psychoticism, and extraversion) to be independent of one another in their relation to

preference. This could mean that utilizing the bass in therapy with clients who exhibit these characteristics may make it easier to engage them in the therapeutic process.

A study on rhythmic perception conducted by Hove, Marie, Bruce, and Trainor (2014) found that there is a low-voice superiority effect for timing in humans. Hove et al. state that the results of the study “indicate that the lower tone has greater influence than the high tone on determining both the perception of timing and the entrainment of motor movements to a beat” (pp. 10384-10385). This is consistent with the common role of the bass, and other low toned instruments, in providing the rhythmic foundation across multiple genres of music. Furthermore, in clinical work, the bass can provide more rhythmic grounding than higher pitched instruments, and clients may be able to process rhythmic phrases offered by the therapist on the bass.

Role of the Bass in Popular Music

In order to look at how to effectively use the bass in improvisational music therapy with clients, we have to understand what the role of the bass has been in non-clinical musical settings that encourage spontaneity, expression, and communication within the musical process. Jazz and rock music are genres that feature the bass and maintain a culture of improvising (or jamming) amongst musicians in ensembles.

Jazz. In jazz, the bass player must maintain an awareness of multiple aspects of the music at all times. Monson (1996) states, “It is important that the [bass] player understands that his musical position is to ascertain the pulse, the harmony and rhythm all in one” (p. 29). Bass players have a responsibility to maintain these connections within their singular part as the rest of the band listens to the bass for guidance.

The bassist and drummer are the core members of the rhythm section of an ensemble. In jazz, the relationship between the bass and the drums in defining the beat creates the rhythmic foundation for the rest of the band. Monson (1996) explains:

The basic rhythmic hookup, or synchronization between the drummer and the bass player, in this sense is a function of how well the walking bass line locks or is in the pocket with the ride cymbal rhythm. A drummer's preference for working with particular bass players is often a function of how easily and naturally this hookup occurs. (p. 56)

Monson (1996) goes on to state that there is a variety of musical factors that influence this relationship; the bass player and the drummer navigate the pulse with one another (one may play ahead of or behind the beat while the other is located in the center of it) and the bassist's phrasing style directly affects this process. Keil (1995) describes these "participatory discrepancies" (p. 2) between bass and drummer as "controlled imperfection, incessant split-second negotiation, constant give-and-take" (p. 12), which go beyond simply playing the right notes. There is a spontaneous, conversational aspect to this exchange that acts as much more than functioning as a metronome; the musicians are working to make the music interesting and exciting, both for each other and the audience.

In addition to negotiating with the drummer to establish the pulse, the bass player takes on the role of supporting and challenging the soloist (Aigen, 2013). By changing his or her own approach, the bass in turn affects the soloists, supporting their expression or inspiring them to change their playing. According to Aigen (2013), the bass player has three choices of how to do this: playing time or walking, interacting melodically or

rhythmically with the soloist, or playing pedal points underneath the ensemble. Tasteful and creative uses of changing register can also have a profound effect on the sound of the entire ensemble in a performance (Monson, 1996).

Rock/pop. According to Freeman (2000), the typical role of the bass in rock music is to keep their playing minimal, providing the rhythmic pulse and outlining the song's progression by primarily highlighting the chord roots and staying in the lower register. Yet, there have been successful bass players in critically and commercially successful rock bands that have moved beyond this role but do not lose the essence nor the appeal of the bass (e.g., John Entwistle of the Who, Flea of the Red Hot Chili Peppers, Les Claypool of Primus).

In the documentary film, *Rising Low*, Mike Gordon studies and interviews 25 of the most renowned bass players to find answers to questions that include: "What makes a great bass player?" "What is the appeal of the bass?" and "What goes on in the bass player's mind while playing?" (Gordon, 2002). One commonality, according to Gordon (2002), is the ability to maintain connections with the drummer while interacting with the other melodic instruments in the ensemble. This is comparable to the description by Monson (1996) regarding the role of the bass in jazz.

Another common theme is that well-recognized bass players have been able to find their own voice on the instrument, allowing their personalities and authentic selves to come through in their playing (Gordon, 2002). While Gordon is mostly referring to bassists in rock genres, Chevan (1989) made a similar statement regarding jazz bassists who were able to develop and highlight the presence of the bass in jazz ensembles, moving the instrument beyond the conventional role of simply keeping time. Therefore,

within improvisational types of playing (e.g., sub-genres of rock and jazz), the development of a unique style in which one can truly express themselves through the music is essential.

According to Gordon (2002), it was difficult for the interviewees to pinpoint the appeal of the bass. Many referred to the physical vibrations the bass, which give a feeling of power to the player and listeners. This is backed up with quantitative evidence in the aforementioned study conducted by Hsu et al. (2014). Others discussed that the bass contributes to a groove, providing security and safety, while still facilitating both space and dialogue among other voices in the musical experience (Gordon).

Musicianship of the Bassist

There are certain qualities of musicianship that are unique and essential to being a bass player. Understanding this musicianship from the perspective of a bass player may provide insight into how to transport these qualities into clinical work using the bass.

In response to his thought process while playing bass in a higher register, Mike Watt, bass player of FIREHOSE and Minutemen, stated, “I want to freak people out... I want to make them wonder a little bit” (as cited in Gordon, 2002). On returning to holding a deeper note: “I want to bring them back in... [and create the feeling of] a womb” (as cited in Gordon, 2002). While Watt is a performer and not a clinician, there is relevance in these statements. The first statement is reminiscent of elicitation and differentiating techniques of improvisation (Bruscia, 1987), in which the therapist will begin to challenge the client musically in order to provide a new musical-emotional experience (Nordoff & Robbins, 2007) or assess levels of musical engagement and musical interrelatedness (Carpente, 2013). Watt’s (as cited in Gordon, 2002) idea of

supporting the listener and enveloping them in the sound of the bass is an example of using container schema (Aigen, 2005a). Within this small example, there is merit to the idea that when applied to a clinical setting, the aesthetic qualities of the bass utilized by the mindset of a bass player can provide therapeutic value.

Another relevant theme from Gordon's (2002) film is that bass players feel they accomplish their best work when they move beyond consciously thinking about what they are playing. Gordon (2002) states that, as a bassist, when one can achieve a trance-like state, surrender to openness, and stop thinking about what they are playing, they have reached their optimal level of playing. Other bassists felt that when conscious thinking stops, a higher force is channeling the music, and that the player simply needs to get out of the way. These descriptions can describe a flow state, in which an individual, through immersing themselves in a motivating experience where the challenge of the task properly balances with their skill level, operates at their optimal level of focus, organization, and creativity (Nakamura & Csikszentmihalyi, 2002). The clinical value of achieving a state of flow in music therapy includes creating opportunity for development of self, identity, sense of achievement, spontaneity, regulation and attention (Aigen, 2014; Baker & MacDonald, 2013; Mondanaro, 2008).

The Use of the Bass in Clinical Practice

Aigen (2005b) first recognized the important role the bass can play within an ensemble in a clinical context. In his qualitative study, *Playin' in the Band*, Aigen (2005b) often played bass in his role as the co-therapist (sometimes alternating with the primary therapist) in the long-term treatment of an adult with developmental disabilities. Aigen pointed that having a bass player in sessions contributed to a sense of community

in the band and allowed the clinicians to move into more effective and authentic uses of contemporary styles of music, which contributed to the client's treatment process. In this study, through his use of the bass, Aigen noticed how using the bass within popular musical styles facilitated the dynamics of musical processes between the therapists and the client such as participatory discrepancies as described above by Keil (1995) and Monson (1996).

In an article that focuses on social interaction in jazz, Aigen (2013) discussed the parallels between the role the bass player takes in a jazz band to that of the music therapist: keeping the pulse, making connections in the music between group members, and changing registers to alter the feel of the music and inspire others to alter their participation. Additionally, the rhythm section, of which the bass is a member, takes on a dual role in both supporting and challenging the soloist's musical expression, as stated earlier, which can be similar to the way a music therapist may approach improvising with a client. In describing the clinical relevance of the bass, he states,

The bass is the glue – especially in a music therapy setting – that holds everything together. The bass establishes the tonal center. It can also take other sounds that might be piercing, brittle or thin on their own and provide a warm context against which those sounds acquire greater expressive potential. When bass tones are present, the music feels complete, whole and authentic. (Aigen, 2013, p. 199)

Here, Aigen (2013) maintains his findings from his earlier study (Aigen, 2005b) in valuing the presence of bass in bringing authenticity to a variety of styles, as well as adding that there are aesthetic qualities of the bass that facilitate expanding the capacity

for meaningful expression from clients' sounds and maintaining cohesion within musical settings. This begins to give more merit to the bass as having clinical value in contexts beyond groups with a co-therapist.

Piccinnini, Pizziolo, and Preston (2015) contributed the only published literature that is solely dedicated to the clinical use of the bass in music therapy. Each of the contributing authors provides brief case vignettes of his work using the bass. As this chapter is a basic overview, some of the descriptions are vague, but it nevertheless shows the importance of examining the work with the bass on a deeper level through research. Rigorously analyzing clinical work with clients would be more beneficial than drawing general conclusions from brief vignettes. It also shows that there are therapists using the bass in their work, internationally, with various populations.

Only one research article on the use of the bass in music therapy was located. Rose (2011) conducted a phenomenological inquiry, in which he interviewed three music therapists who have used the bass in their clinical work. Themes that came up in the results from these interviews include the aesthetic value of the bass in creating groove (i.e., versatility, tone, simplicity), the musical role of the bass in incorporating popular music styles and the feeling of a full-band experience, and descriptions of interventions that the participants had used (including group improvisations, free jazz improvisation, structured improvisation, collaboration in group therapy with other creative arts therapists, and teaching clients to play songs on the bass). The common themes of groove, authentic use of contemporary music styles, and focus on creating the feel of a community band connect with the themes discussed in the work and research conducted by Aigen (2005b).

The results of this study support further examination on the bass in music therapy to understand its potential for use in a musical and clinical context.

Method

This study aimed to explore and analyze the process of implementing improvisational music therapy utilizing the bass guitar as a primary clinical instrument with children and adolescents with emotional and neurodevelopmental challenges. Data consisted of videotaped individual music therapy sessions where I am the primary music therapist. Three clients participated in the study. Four sessions with each client were analyzed using thematic analysis in order to better understand the musical interactions between therapist and client in sessions involving the bass. Themes were derived to define, develop, and inform methods for intervention. This was achieved by analyzing sessions and developing codes for certain interactions and events, such as approaches to playing the bass, client responses, and different ways of interacting within the musical groove. These codes were ultimately collated into themes that were defined.

There are multiple approaches to using thematic analysis in research. These include applied thematic analysis, inductive thematic analysis, thematic discourse analysis, and theoretical thematic analysis (Boyatzis, 1998; Braun & Clarke, 2006; Guest, MacQueen, & Namey, 2012). Inductive thematic analysis was used for this project in order to allow the process to have the freedom of “coding the data without trying to fit into a pre-existing coding frame, or the researcher’s analytic preconceptions” (Braun & Clarke, 2006, p. 83). This applies to the context of the research study as it lends itself to analyzing video of improvisational music therapy with limited verbal and non-verbal clients, as opposed to applied thematic analysis which is focused more exclusively on text data (Guest, MacQueen, & Namey, 2012). The inductive method of analysis is driven by the data, rather than by the theory of the researcher or prior research, as theoretical

thematic analysis would be (Boyatzis, 1998). Thematic analysis can be located within more positivist or constructivist paradigms (Braun & Clarke, 2006). I align with a constructivist view, as I view my work as a process that will continuously be informed by my experiences throughout the study.

Inductive thematic analysis has been used in music therapy research to study music therapy and symptom management in cancer care (Potvin, Bradt, & Kesslick, 2015) and to analyze lyrics of songs written in individual music therapy with bereaved preadolescents (Roberts & McFerran, 2013). Both of these studies bring an open-ended approach and value the underlying subtext in the clinical experiences with clients. This study will utilize inductive thematic analysis, carrying the same value of understanding the full process rather than exclusively observing results.

Participants

Once the proposal for this study received IRB approval (see Appendix A), three participants were chosen from my caseload at Imagine Academy. All potential participants needed to have the following inclusion criteria: (a) aged between 5 and 21, (b) already receiving individual music therapy sessions at Imagine Academy, and (c) parental consent to participate. For ethical reasons and to best inform the study, purposive selection was used to include participants who were most responsive and appropriate for clinical work with the bass. This was assessed based on my previous clinical experience with these participants. Due to an initial potential participant leaving the school for reasons unrelated to this study, a student who had not previously received individual music therapy but was in a weekly music therapy group was added to my caseload. He participated in the study. I contacted parents of potential participants and presented them

with detailed information about the purpose and method of the study, the topic of investigation, and the need for video recording the sessions. In addition, parents of participants were informed that they could withdraw from the study at any time without any negative consequences on the quality of music therapy services their son or daughter was receiving and would continue to receive. All participants had consent forms signed by their parents (see Appendix B). Pseudonyms will be used throughout this thesis to protect participant identities.

It is important that the reader be provided with a basic understanding of the participants in order to understand the context and significance of the descriptions and excerpts in the results and discussion sections.

Participant profile: Travis. Travis is a 20-year-old, tall, heavyset male. He has diagnoses of autism and profound global developmental delays. He presents as hyporeactive with sensory processing delays. He does not have expressive language and has limited receptive language. Travis tends to withdraw from social interactions, particularly in groups and when loud noises are present. When overstimulated, Travis sits down and covers his face with his hands or moves to the corner of the room to avoid others. When dysregulated, Travis makes loud, distressed vocalizations, as opposed to when he is regulated, he sometimes hums or makes softer vocalizations. In his classroom, recorded music is often used as both a reward and as an aide for regulation, which he enjoys. His goals in music therapy included to increase the use of vocalizations within two-way communication, develop regulation and affect modulation within music, and to increase self-expression within the musical process.

Participant profile: Ezra. Ezra is a 10-year-old male diagnosed with autism and developmental disabilities. He is a playful, sensory seeking child. His need for motor stimulation can make it difficult for him to maintain attention to one task for an extended period of time. Ezra has capacities in expressive language but does not speak often. Ezra occasionally displays aggressive tendencies, towards both peers and adults, when he is dysregulated. He has difficulty navigating relationships and intimacy, sometimes requesting physical closeness and then hitting the person he initiated contact with, visibly feeling upset afterwards. He experiences significant shifts in emotional extremes throughout his school day at times, going from happily skipping around the classroom, to screaming and crying, or hitting others and throwing objects. His goals included to increase capacities for self-regulation and develop coping strategies, to explore a range of emotional themes within play, and develop ability to build off of and elaborate on others' ideas in musical-play.

Participant profile: Alex. Alex is an 11-year-old male with a diagnosis of autism. Alex can verbally express simple phrases. He enjoys reading books and art activities. Alex can quickly become dysregulated by peers who are being loud or engaging in disruptive behavior, which causes him to repeatedly run into the wall. Alex has a repeated history of trying to run away (both at home and at multiple school programs), which has contributed to his dynamic with authority figures keeping a very watchful eye on him. Possibly as a result of this, Alex is very prompt dependent and has a difficult time initiating within social interactions. Alex's goals included to develop capacities for self-regulation, to increase initiation of original ideas with the intent to relate to the others, and to develop the ability to maintain engagement in music for extended periods of time.

Materials

During the music therapy sessions in this research project, the music therapist used a Fender Blacktop Precision Bass played through an Ampeg BA-110 combo bass amplifier (10" 40 watt speaker). This combination offered the best balance regarding durability, quality, and price in the research setting. The Fender Blacktop Precision Bass has dual high gain humbucking pickups with three knobs (one for each pickup and one for master tone), which allow for greater variation in tone on the bass in order to create a desired aesthetic experience.

Instruments available for the participants included one upright piano, one acoustic guitar, one tambourine, one snare drum, one crash cymbal, one small djembe, two maracas, a small xylophone tuned to C, one large rain stick, two reed horns, and an ocean drum. These options were left out in the room and available to allow the participants to freely engage in the musical process with whichever instrument they chose, if any. As the music therapist, I would sometimes encourage a participant to play a specific instrument if I felt this would benefit their involvement in the clinical situation.

Clinical Procedures

All sessions for this study were individual sessions, lasting from 30 to 40 minutes. Throughout the sessions, I used the bass as my clinical instrument in therapy, with the occasional addition of my use of voice or percussive instruments, as clinically appropriate.

The method of music therapy used throughout this study was clinical improvisation. Clinical techniques used within these sessions were based on Bruscia's (1987) 64 clinical techniques, which are grouped into categories that include techniques

of empathy, structuring techniques, techniques of intimacy, elicitation techniques and redirection techniques. The categories that I have just listed are the most relevant to the client population in this study, as the cognitive, social, and verbal capacities of these participants were limited. While using these techniques in sessions I treated each response that the participant offered, whether intentional or reflexive in nature, as musical offerings to be placed within a musical framework (Carpente, 2013).

Improvisation followed a structured protocol, as described below. The interaction at the start of each session began with following the child's lead in order to bring them into a "shared world" (Greenspan & Weider, 2006, p. 65), creating an environment that fostered engagement, trust, and intimacy in the session, and utilized the child's interests in order to facilitate joint attention. To achieve this "shared world" (Greenspan & Weider, 2006, p. 65) in music, I implemented techniques of empathy based on the participant's behaviors, such as vocalizations, instrumental play, body movements, or facial expressions (Bruscia, 1987). This facilitated musical and emotional attunement between me and the participant, establishing a framework for shared experiences and social reciprocity in musical-play (Geretsegger et al., 2015). Once joint attention and engagement had been established, the interaction became therapist-led, in which I began to implement structuring techniques, which help to organize a client's musical participation and support their expression (Bruscia, 1987). This supports the participant in becoming involved in musical-play. Once the participant became involved in musical-play, I implemented elicitation techniques, which were used to both support and assess two-way purposeful music making (Bruscia, 1987; Carpenete, 2013). Throughout this process, I would scaffold the flow of musical interaction, modeling and encouraging

ways to be more deeply involved in the musical process (Bruscia, 1987; Geretsegger et al., 2015). If the participant remained engaged in the musical interaction, I implemented redirection techniques or techniques of intimacy, in order to challenge the participant with new opportunities of musically and emotionally relating in the interaction, including development of capacities for musical adaption and social problem solving within a musical context (Bruscia, 1987). At any point during the session, if the participant had difficulty remaining engaged in the musical interaction, for instance due to dysregulation, lack of interest, cognitive or motor challenges, emotional difficulties, or the complexity of the music I was offering, I would return to the earlier steps stated above, or provide extra-musical support (e.g., verbal, gestural, partial physical, full physical), as needed, that is, following the child's lead. As sessions progressed, I was able to "tap into the shared history of musical interaction" (Geretsegger et al., 2015, p. 272) of improvised songs and musical themes in order to facilitate safety and predictability as well as provide opportunity for growth in the areas of flexibility and coping with change.

Data Collection and Analysis

Sessions were recorded utilizing a video camera. Following each session, video recordings were uploaded to a computer that was password protected and could only be accessed by the researcher. Video files required a password to be accessed, providing double-password protection to preserve confidentiality.

An adapted version of the steps described by Braun and Clarke (2006) was used to analyze the data. The adaptation was necessary in order to analyze musical interactions with individuals who have difficulty verbally communicating, such as those who participated in this study

1. Data were reviewed multiple times, while noting down initial ideas for codes;
2. Initial codes were created from interesting features of data, which refer to “the most basic segment, or element, of the raw data that can be assessed in a meaningful way regarding the phenomenon” (Boyatzis, 1998, p. 63), across the entire data set;
3. Codes were collated into potential themes;
4. Themes were checked to confirm that they formed a coherent pattern in relation to the coded extracts and the entire data set to generate a thematic map of the analysis;
5. Analysis continued in order to refine the specifics of each theme and the story being told by the analysis, creating clear definitions and names for each theme;
6. A report was produced; vivid examples were selected, and the final analysis was presented as it relates back to the research question and literature.

Results

The following themes were identified after analyzing the transcripts and videos of the sessions with the three participants: (a) following the client's lead, (b) grounding, (c) client/therapist as rhythm section, (d) client/therapist as soloist/accompanist, (e) co-creative thematic development. Descriptions matched with accompanying audio excerpts (see Appendix C) have been chosen that effectively illustrate contributions of the bass in improvisational interventions within each theme.

Theme 1: Following the Client's Lead

In each of the three cases, following the client's lead was an essential step towards engaging the client in music. This can include interacting musically with their movements, vocalizations, instrumental play, words, and reflecting their presenting affect in music. Working in this way facilitated the development of musical interventions that were based around aspects of the client's interests and incorporated their natural way of being into the improvisations. This theme contains the initial points of contact between therapist and client in music. Subsequent themes consist of musical experiences that built off of these points of contact emanating from following the client's lead. The clinical technique utilized most often was that of empathy.

Example 1 (Travis, Session 3). Travis is hunched over sitting in a chair, looking down at the floor. I am improvising a mezzo-piano medium tempo bass line in E mixolydian (vamping between I-VII) with a smooth attack while dragging the beat, reflecting Travis' affect. Travis is vocalizing in a manner that initially does not appear organized or intentionally related within the interaction. Travis vocalizes the line E-F#-G,

which is mostly within the mode of the bass line (other than the minor third). Within the next string of vocalizations, there is one phrase that stands out: a swung phrasing with a G# as a quarter note tied with an eighth note, moving to a D eighth note, followed by F# and D eighth notes. I incorporated this phrase into my bass playing, working it into the line I had already established. I also start to use my voice to encourage Travis to continue using his. After 10 measures, Travis softly hums a C#, the sixth of the E mixolydian scale, on the upbeat leading into the fourth beat, placed rhythmically on a rest within the phrasing of the bass line. Five measures after the related hum, Travis repeats the vocal phrase from earlier, with slight variation in timing. Four measures later, I played a fill in the bass line, sixteenth notes B-C#-B-B (the first B played staccato). A beat later, Travis softly hums B-C#-B. As I continue to play, Travis' vocalizations continue to be rhythmically interactive, placed within small rests between my playing and soft singing, as they rise in dynamic. Travis becomes more confident and expressive in the articulation of his vocalizations. His vocalizations begin to incorporate the syncopated accents of the bass at times.

Role of the bass. In the above example, the bass followed the client's lead in multiple ways. At first, the bass line was produced to musically reflect the tired, stationary, reserved affect displayed through Travis' body language, breathing, and demeanor. The aesthetic characteristics of the bass, namely the low register, warm tone, and amplified sound, combined with the smooth articulation potentially allow the sound of the bass to be present in the room without being intrusive to the client. The music met Travis' needs and preferences and gave him a feeling of safety and trust in the session, demonstrating that he would not be pushed into an overstimulating situation. Next, once

this was established and Travis began to vocalize, the bass incorporated and connected to one of his sung phrases that stood out as musically intriguing and relevant. The register of the bass and its warm tone matched the timbre and articulation of Travis' voice. The bass line also built a musical structure providing a tonal center and shaping the phrase to make it communicative and interactive. Syncopation, with purposeful rests and accents to create space for Travis, was incorporated into the bass line. Once the therapist repeated the phrase within the newly developed musical structure, and the natural movement of the music was continued to allow for necessary processing time, Travis repeated it back to the therapist. The bass line continues, subtly incorporating and responding to vocalizations and changes in body posture. Travis continues to contribute to the flow of the musical interaction in spontaneous ways. As Travis does not typically repeat vocalizations with this level of intentionality, relatedness, and focus, this example shows that following his lead, both musically and emotionally, contributed to making a connection between Travis and the therapist. This was facilitated by the warmth of the tone and the register of the bass being able to match Travis' voice, as well as the flexible use of articulation to create phrases that could both connect to the vocal phrases and set up the beginning of a dialogue, leaving accents that implied upcoming rests.

Theme 2: Grounding

The theme of grounding describes how the bass guitar deepens the client's participation in the musical process. This includes the clinical technique of rhythmic grounding, but also refers to placing the client's contributions within the aesthetic context of the musical relationship. In the process of grounding, the client starts to become immersed in the musical experience, gaining intentionality and expressiveness in their

actions through supported exploration, as they relate to the therapist and the music. The clinical techniques utilized were those of structuring and empathy.

Example 2 (Ezra, Session 2). Ezra is at first moving about the room, touching the tuning knobs on the bass, tapping a drum, strumming the guitar, playing the piano, while making vocalizations that sound to move between frustration and a type of whimpering. These do not seem to be in any intended tonality at first, and most likely start as an isolated expression of frustration. I provided a walking bass line centered around D, with mostly chromatic movement (D-Ab-G-Ab), and a recurring chromatic walk up to D every four measures. Ezra's vocalizations start to become less isolated, more interactive, and musically expressive in rhythmic phrasing, timbre, and melody. Ezra holds his vocalizations for longer durations to match the therapist's singing, then begins to interact with the bass line, vocalizing on beats one and three. When I walk up to an F in the higher octave and hold the note, building anticipation, Ezra sings a B and slides the pitch down, punctuating the phrase and bringing us back to the initial musical theme (e.g., chromatic walking line). Here, Ezra's vocalizations become more rhythmically and tonally related to the bass line and more aesthetically expressive in the timbre of his voice, as he consistently sings a D on the first and third beats for two measures in a row. I responded by mirroring the vocal phrase. Ezra initiates the use of a reed horn for several measures, deepening his participation in the music. After briefly interacting with the reed horn, he plays an interval on the piano (Ab-D) that relates to the tonality of the bass line and contributes to the evolving aesthetic. At this point, Ezra is regulated and engaged to the point where he is able to initiate a move to the guitar, which

he strums and explores the sounds of expressively as the bass begins to support this new exploration within the musical process.

The role of the bass. In this example, the client is initially unable to sustain his attention long enough to engage meaningfully in the musical process. The bass provides a grounding presence for Ezra to co-regulate within the music, through both the elements of harmony and rhythm. The recurring diminished fifth (Ab) as well as the technique of vibrato that is used on the G creates a mood that reflects the chaos of Eli's unorganized movements and the unsettled feeling he is emoting in his vocalizations. The steady rhythm of the walking bass line provides a predictable rhythmic structure that Ezra can attach himself to and find a way to participate in the music. Once Ezra was able to co-regulate, the bass initiates a new section in the music, walking up to an F and leaving a rest, providing space for Ezra to vocalize and become more engaged within musical-play, providing more of a feel for what he can contribute within the interaction. When the bass returns to the same walking line, Ezra is now able to participate more expressively because he is grounded in the experience. He eventually moves on to functionally initiate new ideas with the intention to contribute to the musical interaction with the therapist: blowing the reed horn and strumming the guitar.

Example 3 (Alex, Session 1). Alex initiates blowing a reed horn tuned to E. Initially, I provide melodic phrases with abrupt rests to encourage Alex to fill the spaces with his reed horn. Alex appears to be exploring the sound of the horn, alternating between holding long tones (two to three beats) and shorter tones (eighth notes), and finding ways to vibrate the pitch just below an E, at times. Rather than limiting this exploration in order to elicit a specific response, I provide a repetitive bass line as a

grounding presence over which Alex can explore his sounds. To achieve this, I provide an E pedal tone and develops a riff of repeating E in higher octave and moving up to F# on the second beat and G on fourth beat of each measure. This prompts Alex to begin to vocalize a melody singing eighth notes of E for a measure and a sixteenth note to move up to G and then down to D for a measure, maintaining the minor tonality the bass has established. I vocally repeated the melodic pattern, holding the notes as whole notes rather than singing eighth notes, and Alex repeats the melodic theme with variations. Alex also taps on the reed horn rhythmically in eighth notes when not vocalizing. Alex returns to blowing the reed horn in rhythmic phrases of two eighth notes and one quarter note. I develop a new descending melody on the bass (E-D#-C-B) over the E pedal, and Alex moves to the ocean drum sliding it in measure-long phrases with the bass riff as we both decelerate in tempo.

The role of the bass. In the above example, the bass line provides a context for Alex to explore a variety of sounds within aesthetic form. Although he is switching his instruments (e.g., vocal, reed horn, ocean drum,) they are all utilized in an expressive manner that is related to the musical interaction. The tone of the bass with the minor scale, along with the ongoing low E pedal tone, envelops the room, while Alex's contributions are placed in a highlighted role in the higher register. Most significantly, the bass provides a grounding, containing presence for Alex and the therapist to interact vocally. The harmony developed with the vocal melody creates an affective experience for Alex to connect with the therapist in a shared, intimate manner. The slow tempo and deep presence of the vibrating bass sound also appear to keep Alex grounded in a physical sense. Alex is often bouncing off the walls, picking at his fingers, or looking for a way to

escape. But in this excerpt, he is calm, regulated, and able to fully take part in this musical experience, engaging his whole self, physically and emotionally.

Overall, from these excerpts we can learn that the role of the bass in grounding is to organize and provide structure rhythmically with its deep tones, which can include a low pedal tone or a simple walking line, while using the harmony and tone to contribute to a mood within the aesthetic. This combination immerses the client further in the music, assisting them in finding a way to participate and contribute to the process.

Theme 3: Client and Therapist as Rhythm Section

The theme of conceptualizing the client and therapist as members of a rhythm section occurred in two of the cases (Ezra and Alex). Within this theme, the client is on a percussive instrument, typically drum and/or cymbal, and maintaining the basic beat or a groove with the bass line. The clinical techniques utilized included structuring, elicitation, and redirection.

Example 4 (Ezra, Session 4). I begin the interaction with playing a harmonic G-D as grace notes, then hitting a B on the downbeat of a new measure. Ezra hits the crash cymbal in unison with the bass, displaying his engagement in the music. I incorporate a variety within the rhythmic patterns of the bass line, but always land on a clear downbeat of each new measure. In the beginning of each of the first three measures, Ezra strikes the cymbal on the downbeat with the bass, intermittently adding eighth notes on the snare drum. In the fourth measure, I play a staccato F natural as the downbeat and then rest. Ezra completes the measure and leads into the next measure with an eighth note and two sets of eighth note triplets on the third and fourth beats on the snare drum. Ezra's rhythmic pattern leads into the re-entrance of the bass. The drums and the bass continue

to play separate rhythms at times, Ezra mostly playing eighth notes and triplets on the snare and me accenting the first and third beats of measures, but the groove maintains, as we remain synchronized in tempo and meter. Ezra occasionally fills in the space with a crash on the second beat, in between the bass beats. When the connection in the music begins to drag, I accelerate the tempo, to which Ezra adapts within two beats, actually pushing the tempo, slightly. I adjust and meet him at his accelerated tempo. I leave spaces at the end of measures, setting up Ezra to alternate providing eighth note beats on the snare and crashes on the cymbal to lead into the next measures. This continuous flow shows the maintenance and development of the groove between the drums and bass. When I move to a walking bass line, Ezra stays on the cymbal, at times playing it like a ride and matching the quarter notes of the bass, giving the music an authentic jazz feel.

The role of the bass. The bass must initially make a connection with the client's percussive playing by following their lead. Once the connection has been established, the goal is on creating and maintaining a groove, which means that the bass will create variations in the pulse (e.g., slightly ahead of or behind the pulse, extending measures beyond time signature, or incorporating syncopation) in order to create a sense of urgency in the music and inspire the client to adapt their participation within the rhythmic dialogue between drums and bass. While the focus is on rhythmic patterns, harmony can be utilized to contribute to the aesthetic structure of the groove and to build anticipation and signal a change (as in the above example, using an F natural, which was not in the key of the improvisation). Maintaining a predictable spot in the music, particularly the first downbeat of each measure, provides a clear check-in point that can be felt within the pulse of the groove where the client and therapist can sync up in the music to maintain

connection. Providing space also creates opportunities for exchange, which keeps the client engaged in the spontaneity of the interaction and contributes to a continuous flow in the music. Characteristics of the bass that facilitate this process include, the amplified tone and low register which make it rhythmically compatible with percussive instruments in that both players can feel the groove as it develops. The tendency to play one note at a time on bass also contributes to a focus on rhythmic movement, and a clearer sense of direction in the bass line, rather than guitar or piano, which are designed for and more commonly used with chords to create a harmonic structure.

Theme 4: Client/Therapist as Soloist/Accompanist

Conceptualizing the roles of client as soloist and therapist as accompanist was demonstrated with all three participants. When in these roles, the client as the soloist is expressing themselves through melodic media (e.g., vocal, piano, guitar, reed horn, harmonica) in a way that is related to and affected by the bass. The client's music is responsive to changes in the bass line either through rhythm, melody, or dynamics. Although the client is playing the role of the soloist, developing their own ideas with support from the accompanying therapist, a constant dynamic relationship is maintained between the music. The utilized clinical techniques include those of empathy, structuring, and elicitation.

Example 5 (Alex, Session 3). Alex switches from playing the drum to the piano. He is exploring single white keys, initially with a legato feel. I support Alex's exploration by providing a structured bass line, walking up from C to E to F and back down to C, providing syncopation by playing a higher octave or dominant seventh accented on the 'and' of the third beat in each measure, with a passing note on the 'and' of the fourth beat.

This gives the music a feeling of moving forward with each measure leading into the next. Alex is matching my rhythm by matching the downbeat of each measure and following the syncopation of the ‘and’ of the third beat, now staccato. Alex stops and turns to me to ask, “Matt... ready?” I enthusiastically reply, “I’m ready!” then sing, “I’m ready now.” Alex initiates a new tempo by playing quarter notes on C in a higher register. I return to playing the bass line, following Alex’s lead with a straight feel and a slightly accelerated tempo, now playing mostly root notes and passing tones with a new progression of C-E-G-G. I create a new feel with syncopation, now playing on the downbeat of the first beat and the ‘and’ of the second beat. Alex plays a consistent rhythm of quarter notes, though alternating playing against the bass line (on upbeats) and with the bass on downbeats. Alex also alternates between single notes and clusters. The bass line follows Alex’s melodic changes, which are mostly centered around G and other white keys, other than a brief interlude to Bb. After 32 measures of playing, starting on the second beat of the measure, Alex plays a quarter note melody consisting of D-F-B-C, with C landing on the first beat of a new measure, which leads into a new section in which Alex begins to play glissandos up and down the piano, still following the tempo and harmony of the bass line. Gradually, Alex expands the melodic range of his glissandos. On the bass, I provide a balance of responsive glissandos to encourage this idea while maintaining a walking line to provide structure. My phrasing (quarter note – triplet – quarter note – rest) helps to shape Alex’s play – both to encourage expression and contain his musical exploration to avoid perseveration on the slides.

The role of the bass. When the client is in the soloist role, the therapist becomes the accompanist, supporting the client’s expression of a musical idea. The bass creates a

harmonic structure built around the client's idea. In the aforementioned example, the bass line is built around C major because Alex is playing on the white keys of the piano.

Rhythmically, the bass can still challenge the client to further develop his or her idea with subtle changes in phrasing (including playing straight versus swung), tempo, dynamics, and meter. The bass can provide interventions in this way to push the client creatively while highlighting the client's role in the music. It can remain at the bottom of the harmony when careful attention is given to the volume, tone, register, and phrasing to remain in a supportive role. In this example, there are no directives given to Alex that he should take the lead or that he should even play the piano. It is communicated and supported within the music by the presence and use of the bass.

The role of the bass here is not to create an enveloping sound that pulls everything in, the way it is used in grounding. Nor is it to necessarily generate a specific response from the client. Here, the bass is less repetitive, integrating and adapting to what the client plays in order to support and highlight the his or her idea. The characteristics of the bass that inform these interventions are its ability to anchor the client's ideas and shape the harmony and rhythm to highlight the client's contributions and the ability in its tonal presence to both remain under the soloist while cutting through enough sonically that subtle changes can affect the client's musical play.

Theme 5: Co-Creative Thematic Development

The final theme, which came up with two participants (Ezra and Alex), is the concept of mutual co-creative playing. Within these experiences, the client and therapist are both engaged in musical-play without there being a clear sense of who is leading. It presents as more of a dialogue: a collaborative improvisation developing within an

aesthetic relational context. There is more of a sense of musical thematic development, which can include lyrical ideas in improvised songwriting or melodic and harmonic instrumental-play. Within this development there is also the sense that the client and therapist are going somewhere in the music together; they can safely move to a B section and return to the A section without losing the connection in the groove. The bass can also act as the grounding, containing presence on the bottom of the harmony while the client and therapist interact vocally. This differs from the soloist/accompanist theme in that both client and therapist are collaboratively developing a musical theme, rather than one voice constantly being the lead. This differs from the rhythm section in that the therapist is not solely dictating the melodic and harmonic direction of the music. The utilized clinical techniques include those of empathy, structuring, elicitation, and redirection.

Example 6 (Ezra, Session 3). At the start of the session, immediately upon entering the room, Ezra played G-B-C on the piano as two quarter notes and a whole note. This melodic phrase inspired me to sing and play an improvised hello song in C major to Ezra in a similar style to “Stand By Me,” by Ben E. King. Towards the end of the song, where the audio example begins, Ezra stops playing the piano for several measures (he can be heard touching the acoustic guitar behind us) though remains seated, while I kept the bass line going. While the bass line continues, Ezra’s facial affect suddenly becomes very bright as he enthusiastically smiles and sits up. Ezra then pounds down cluster chords on the white keys in tempo on downbeats with the bass as if to count in, “one, two, three, four,” building up a grand entrance into the music. Throughout the improvisation, Ezra and I trade off providing melodic lines based in C major, layering on top of one another’s playing while staying connected in the rhythmic groove. Ezra can be heard

implementing purposeful creative leaps and outlining chord structures to develop melodic lines. At one point, Ezra reaches back towards an acoustic guitar and strums an open E, which I imitate on the bass, providing a deep, booming low E. Inspired by Ezra's change in the music, I outline changes between E minor and A minor, also moving into a straight walk. Ezra's playing reflects this change, as he adapts the rhythmic feel of his playing as well as the mood. These changes in his playing occur as a direct response to the bass line. He starts to hold single notes for longer periods. After about 24 measures in this B section, I initiated a return to the A section, and Ezra can be heard responding to the changes in the bass line, returning to interacting melodically and filling in rests with syncopation.

The role of the bass. Within co-creative thematic development, the overall role of the bass is to keep the collaborative musical process with the client moving forward, keep the music evolving and spontaneous to maintain the client's engagement in the interaction, and encourage social problem solving in the context of the music. This can be achieved through interacting with the client while he or she also plays a harmonic instrument, shaping ideas in a number of ways that include initiating a change to a B section with a different feel (e.g., dynamics, meter). This can also be achieved while the therapist and client are interacting vocally and developing a theme while the bass dictates the harmonic direction and rhythmic feel.

In the above example, the bass initiates a groove with a syncopated feel, whereas Ezra provides the straight beat to enter into the improvisation. The bass actually moves in and out of the strictly supportive role of maintaining the pulse, providing melodic lines to which Ezra rhythmically and melodically responds. When Ezra initiates a change in the

music by plucking a guitar string, the bass line alters to support this idea by moving to a B section with a different rhythmic feel (straight rather than syncopated) and harmonic progression (minor iii-vi vamp). Ezra responds to this change with an understanding that his creative decisions both affect and are affected by his partner's actions in the music. The ability of the bass to hold down a groove and seamlessly move into a more melodic role when necessary is a main contribution to facilitating this theme of co-creative thematic development.

Summary

Five themes were identified: (a) following the client's lead, (b) grounding, (c) client/therapist as rhythm section, (d) client/therapist as soloist/accompanist, (e) co-creative thematic development. Upon reviewing the role of the bass within these themes, certain characteristics of the bass guitar were identified as essential to its role within clinical work. These include: (a) the versatility of the tone to be adjusted to present a warm, comforting bass tone or a brighter, high gain, treble tone with more of an edge to its sound, (b) the low register contributes to both a grounding, containing presence as well as a more subtle sound that can be placed under the client's contributions without being overbearing, (c) rhythmic vibratory presence that can create and maintain a groove and interact directly with percussive instruments, (d) flexibility in attack and articulation, (e) utilizing options in playing approach (walking bass line, single root notes, pedal tone, double stops, melodic phrases).

Discussion

As I completed the thematic analysis, I came to a realization of how the research question was realistically going to be addressed. Due to the nature of the qualitative methodology that was utilized, there was not going to be a neat prescriptive list of bass interventions that came out of this analysis. If there were, we would no longer be looking at a music-centered or relationship-based approach to the work. The analysis showed the development of roles within the musical process between the therapist (as the bassist) and the clients. These themes highlight clinical techniques and ways of conceptualizing social processes within the musical process, which are present in both non-clinical music (Aigen, 2013; Keil & Feld, 2005) as well as clinical music (Aigen, 2005b). Within these themes, the role of the bass and its aesthetic characteristics can be more closely examined.

Overall, the findings of this study reflect a music-centered view of the social processes that occur between clients and therapists in individual music therapy sessions. These could be viewed as developmental levels of working with the client when using the bass guitar. The different roles the client takes within these themes provide variations of relational experiences in the music (e.g. having lead followed, exploring expressive sounds within organized structure, maintaining rhythmic groove, empowerment through having ideas supported, sharing and responding to others' ideas). This is similar to the experiences described in Aigen (2005b) in which there are different benefits to the client switching between playing drums, guitar, and piano, assuming different roles within a small ensemble.

The first two themes, following the client's lead and grounding, are focused on establishing a "shared world" (Greenspan & Weider, 2006, p. 65) within the music between client and therapist. Within these themes, the bass is used to establish connection, facilitate co-regulation, and instill feelings of safety and trust. The bass establishes the session as an environment in which clients can feel validated and encouraged to initiate and develop their own ideas. These themes are about preparing the client to be able to move into the latter three themes, which are more focused on differing musical roles that establish more of an identity, placing the client and therapist in roles that facilitate musical interaction. Within these themes, the therapist is challenging the client in a playful, musical way in order to enhance his or her abilities to navigate changes and provide a range of experiences to support further exploration and expression. These themes are supported by the ethnomusicological literature, and this study places these concepts within a clinical context.

Following the client's lead (Theme 1) is a technique used in developmental and improvisational approaches to music therapy, as well as developmental therapies from other modalities (Carpente, 2009, 2011; Greenspan & Weider, 2006). Musical characteristics of the bass that contributed to this theme included its warm tone, which can send a message of safety, support, and invitation rather than intrusiveness or overstimulation to vulnerable clients who may have sensitive sensory systems. This relates to interviews in Gordon (2002), in which multiple bass players felt that the bass can provide safety and security through the music within an established groove.

Grounding (Theme 2) incorporates the concept of the bass providing structural support within the music to enhance the client's participation. The idea of providing the

client's sounds with a context to enhance his or her expressiveness relates to Aigen's (2013) description of the potential usefulness of the bass in music therapy. This study provides clinical examples to support this concept. The bass was able to successfully provide grounding due to its low register and deep tones, providing rhythmic and harmonic organization. Due to the versatility in tone with an electric bass guitar, which Rose (2011) pointed out to be a valuable characteristic of the bass in a clinical context, the mood and aesthetic of this organizing force can be individualized to the mood and profile of how a client is presenting in the session.

Monson (1996) discusses the navigation of the pulse between bass player and drummer. This can be compared to what occurs between the client and therapist within the theme of interacting as a rhythm section (Theme 3). Monson writes that the members of the band listen to the bass for guidance, which is congruent with the role the bass took in this clinical theme; pushing the pulse and setting up spaces and clear opportunities for each client to participate in the groove. Similar sentiments were shared in Gordon (2002) by interviewees who expressed that it is the duty of the bass to maintain a groove while facilitating space and dialogue among other voices within the musical experience. This was a key concept to the theme of client and therapist as rhythm section: the constant negotiation of the groove, and being able to provide space within the bass line to have a rhythmic dialogue with the client. One reason the bass may be so associated with groove is the simplistic, intuitive feel it is designed to have in playing the bass guitar. The bassist most often plays only one note, being free to focus more on the rhythmic exchange with the drums, as opposed to piano or guitar, which are designed with the use of harmonies in mind.

Keil and Feld (2005) discuss the multiple combinations of styles among bassists and drummers that can make up a rhythm section, noting the difference between drummers who lay-back behind the beat or play on-top of the beat, and bassists who play with a lighter, more sustained sound against those who play with a heavier, percussive sound. Keil and Feld claim that bassists with a heavy, percussive style match up more naturally with drummers who play on-top of the beat when creating a groove, while lighter bassists match up better with drummers who lay back. This connects with the significance of varying and adjusting the attack and articulation when playing the bass guitar in music therapy, depending on the client's style of playing. I found myself instinctively adjusting my playing style based on how the client played, although with more studying and awareness of this concept, the bass could presumably be used more effectively when working within this theme.

When Alex takes on the role of the soloist (Theme 4), it allowed him to initiate his own idea and take on a leadership role within the music. This experience had a clinical significance for Alex because he struggles with initiating ideas and choices in a constructive and healthy way within most social interactions throughout his school day. Smith (2012) and Fairchild, Thompson, and McFerran (2016) have written about the sense of empowerment that children can feel when they are given the opportunity to take on a position of power within music. Being in a leadership role is vastly different than their usual experiences throughout the day, where they are often told what to do by teachers or parents, and choices are limited by authority figures. For Alex, the musical experience allowed him to embody that role of the soloist. He was not directed by the therapist to take a solo, but rather it was musically communicated to him and he felt it

through the established groove. This concept as it is supported even further through use of the bass as an accompanist in the session, can be connected to findings that the bass can create feelings of empowerment for both the bass player and those listening to the bass (Gordon, 2002; Hsu et al., 2014). The bass is able to support this type of experience by providing a supportive bottom end that harmonically connects with the client while it may rhythmically push the client to adapt their playing in a new, creative way (or vice versa).

The idea of the bass player being in a supportive role while simultaneously challenging the soloist to enhance his or her aesthetic expression is supported by Aigen (2013) in his writing on social interaction in jazz. Aigen writes that there are three approaches the bass player can take when accompanying the soloist. These include playing a walking bass line, interacting melodically or rhythmically with the soloist, or playing pedal points. All three of these approaches were noted in the results of this study. Additionally, Neuman (1977), who studied the roles between soloist and accompanist in North India states, “The soloist is the artist. He is primarily responsible for the total musical performance... The performance, in short, is an expression of the soloist’s creative powers and his particular style” (p. 238). The accompanist is in the role of supporting the soloist in expressing and developing his or her own style and creativity. Giving the client the experience of developing this side of themselves with supportive musical accompaniment can be a powerful and valuable experience for individuals with disabilities. The bass can provide that supportive accompaniment in a minimalist way, as compared to the richer harmonies and vast options of the guitar or piano, which may become intimidating or overbearing for a client’s creative process. The bass allows the

client to explore and feel lifted up in the music while still holding onto their developing identity as the soloist.

In co-creative thematic development (Theme 5), the therapist, on bass, plays with the client as a collaborative partner, challenging them to think creatively and view the therapist as an interactive partner. When playing the bass in this situation, the therapist may move outside of the typical role of the bass player, introducing more melodic lines or playing in a higher register or introduce changes in the harmony or meter. This compares to one of the interviews in Gordon (2002) in which the interviewee, Mike Watt, describes a similar approach he may take when performing (e.g., doing something unexpected in the music) to influence people to think about the music in a different way and provide a novel experience.

The session transcripts included labels of musical genres and styles used to describe the music. The labeling informed the grooves and feel of the music, which in turn gives insight into how to provide opportunities for the client to participate within the music. Aigen (2005b) and Viega (2015) discuss authenticity within specific styles of music; Aigen refers mostly to jazz, rock, and blues, while Viega refers to rap and hip hop. The concept that the style of music being played is integral to the intervention is in line with the findings of this study. As mentioned in the literature review, Aigen (2005b) and Rose (2011) both found that the presence of the bass, when utilizing contemporary styles of music in clinical work, could contribute to a higher level of authenticity to the music. Additionally, focusing on the role the bass plays in a specific idiom or style can contribute to supporting the role the client can take in the music (e.g., rhythm section, soloist, co-creative partner) to have the most beneficial and satisfactory experience in

music therapy. For instance, in audio excerpt 4 (see Appendix C), when Ezra plays the cymbal as a ride, playing the downbeats and locking in with the walking bass, this generates a feeling of an authentic jazz improvisation. This can make the interaction a more meaningful shared experience for both the client and therapist, and gives both of them a potential sense of direction in how the music can move forward and continue to evolve together.

Despite the many potential benefits seen in this study, using the bass in music therapy can have problematic issues. Its electronic sound, the external amplifier, and the prominent tuning knobs can all cause distractions for clients, as was experienced with Ezra and Alex. Alex, in particular, would sometimes be engaged in musical-play but then move to the amplifier and start turning the knobs or try to perseveratively pluck the strings, making it difficult for him to maintain engagement within the musical process.

Implications for Clinical Practice

The findings of this study carry multiple implications for music therapists. It provides clinical examples and context for using the bass within individual music therapy sessions with children and young adults with autism and developmental disabilities. These themes provide a way of conceptualizing the music therapy sessions as they relate to roles within the social musical process. This can inform how the therapist can use the bass in facilitating the client's optimal use of their role when in these clinical situations and how the bass can contribute within clinical interventions. It also demonstrates that it could be valuable to study ethnomusicological literature and connect it with clinical work and music therapy research, as it can inform clinical work within a musical context.

Ultimately, this research appears to show that when utilizing the bass guitar in music therapy, there is much more of a focus on concepts such as groove, rhythmic interactions, highlighting the contributions of the client and supporting the expression initiated by the clients themselves. Additionally, the nature of the bass, due to its role in popular music, invites the use of popular musical styles in a clinical context. While this is compatible with music-centered work, it differs from the original view of Nordoff-Robbins Music Therapy (Robbins & Robbins, 1998; Stige, 2001), which was more focused on the use of harmonies and classical music. This further demonstrates the importance of studying the aesthetic qualities and understanding how to best utilize an instrument's role in music when using it clinically. It is also a reminder that the clinician/researcher must reflect on their background as a musician and a person and how this can both inform and limit their views of music and music therapy.

Limitations

The setting of this study, a treatment school for individuals with special needs, was not ideal for music therapy research in the sense that the treatment room was not soundproof. There are distracting and intrusive noises heard in the treatment room, which affected both the sessions and the analysis. Certain audio excerpts were unable to be utilized and included within this thesis as examples due to the presence of non-participants' voices and disruptive sounds. Furthermore, the piano was not in tune and several keys did not make sounds. There were also inconsistencies in attendance, which affected continuity of treatment and extended the data collection stage. Although there were no participants who dropped out of the study, this might have affected the data in the sense that missing sessions with a client has an effect on any therapeutic process.

However, this is a realistic portrayal of working as a music therapist in a school in Brooklyn and, presumably, other settings with limited budgets and resources.

Additionally, the fact that I was both the therapist and the researcher is a limitation of this study. This can create bias in how I view the sessions and my own interventions. To establish trustworthiness, I have included audio excerpts that relate to my findings. This is also why I presented readers with detailed information regarding my own journey as a musician and music therapist and how I came to become interested in this research topic in the beginning of this thesis.

Recommendations for Research

For future research, one could apply these themes to music-centered group work and see if themes occur at the same time within group music making. For instance, do the rhythm section and soloist roles occur simultaneously among clients? Research could examine how this can contribute to client's growth. Additionally, it may be beneficial to analyze improvised sessions using the bass with clients simply as musical recordings or compositions, having the analysis completed by someone other than the clinician, in order to truly gain an understanding of how the bass contributes to the musical process in sessions. It may also be of interest to complete a thematic analysis of using the bass in a different setting with a different population, to observe if the same or similar themes would be present. Future research could also include focusing a specific quality of the bass to study further to gain a deeper understanding of its affect on the therapeutic process, such as register, tone, or attack.

Conclusion

The purpose of this study was to explore the use of the bass guitar as a clinical instrument within music-centered music therapy. In this study, five latent themes were found when an inductive thematic analysis of the twelve sessions was completed. These themes reflect the social process of music within music therapy sessions and how the bass plays a role in shaping these processes. The presence of the bass contributes to both the development of roles the client and therapist take in the music and how the therapist can work within these roles to provide the client with the most meaningful experiences within improvisational music. The characteristics of the bass guitar that contributed most to the musical processes included the versatility of tone, the low register, rhythmic presence and role in contributing to a groove, attack and articulation, and variety in playing approaches.

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Appendix A

IRB Approval



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Tel. 516.323.3801
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Date: January 4, 2016
To: Professor Barbara Wheeler / Matthew Brady
From: Kathleen Maurer Smith, Ph.D.
Co-Chair, Molloy College Institutional Review Board
Patricia Eckardt, Ph.D., RN
Co-Chair, Molloy College Institutional Review Board

SUBJECT: MOLLOY IRB REVIEW AND DETERMINATION OF EXPEDITED STATUS
Study Title: Exploring the Use of the Bass Guitar as a Primary Clinical Instrument
Approved: January 4, 2016

Dear Professor Wheeler / Matthew Brady:

The Institutional Review Board (IRB) of Molloy College has reviewed the above-mentioned research proposal and determined that this proposal is approved by the committee. It is considered an EXPEDITED review per the requirements of Department of Health and Human Services (DHHS) regulations for the protection of human subjects as defined in 45CFR46.101(b) and has met the conditions for conducting the research. Please note that as Principal Investigator (PI), it is your responsibility to be CITI Certified and submit the evidence in order to conduct your research.

You may proceed with your research. Please submit a report to the committee at the conclusion of your project.

Changes to the Research: It is the responsibility of the Principal Investigator to inform the Molloy College IRB of any changes to this research. A change in the research may change the project from EXPEDITED status that would require communication with the IRB.

Sincerely,

Kathleen Maurer Smith, Ph.D.

Patricia Eckardt, Ph.D., RN

Appendix B

Consent Form

Dear Parent or Guardian,

Your child is invited to participate in a research study designed to investigate the use of the bass guitar in music therapy with individuals with special needs. This study is part of my thesis research as partial fulfillment for completion of the Master of Science degree in music therapy at Molloy College. If you give consent for your child's involvement in the study, the weekly music therapy sessions that your child is already receiving will be recorded on video so that sessions can later be analyzed. The data for the study will be based on the clinical musical interactions between the therapist (me) and your child, looking at how different interventions involving the bass contribute to the clinical process. Giving consent will not affect your child's services at the school – he or she will continue to receive music therapy whether or not consent to participate in the study is granted – it will simply give permission for data from the video recording to be included in the research study. Video data will be double-password protected and the name of your child will be kept confidential. There are no direct benefits or foreseen risks to participating in this research. Participation is voluntary, which means your child does not have to participate and will not be penalized for not participating. In addition, your child may drop out of the study at any time without giving reason and without penalty. If you have any questions, you can contact me by phone or email. If you agree to have your child participate, please complete this form and return to the school before January 25, 2016.

Title of study: Exploring the Use of the Bass Guitar as a Clinical Instrument within Music-Centered Practice

I agree to have my child, _____, participate in this research study and be video recorded during the course of the study. I understand that this documentation will be used for research. His/her name will be changed in the thesis to protect confidentiality. All recordings will be kept safe and confidential.

Signature

Date

Appendix C

Audio Excerpt Track Listing

Audio excerpt track 1: Travis, Session 3 (Following the client's lead)

Audio excerpt track 2: Ezra, Session 2 (Grounding)

Audio excerpt track 3: Alex, Session 1 (Grounding)

Audio excerpt track 4: Ezra, Session 4 (Rhythm section)

Audio excerpt track 5: Alex, Session 3 (Soloist/accompanist)

Audio excerpt track 6: Ezra, Session 3 (Co-creative thematic development)

*All participant names have been changed throughout the study to protect confidentiality.