Ticcing to the Beat of My Own Drum

By

Anne McGoldrick, MT-BC

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Ticcing to the Beat of My Own Drum

Anne McGoldrick

State University of New York at New Paltz

We, the thesis committee for the above candidate for the Master of Science degree, hereby recommend acceptance of this thesis.

Dr. Kathleen Murphy, Thesis Advisor
Department of Music, SUNY New Paltz

Dr. Jingwen Zhang, Thesis Committee Member
Department of Music, SUNY New Paltz

Submitted in partial fulfillment of the requirements for the Master of Science degree in Music Therapy at the State University of New York at New Paltz
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This study design and procedure is modeled directly from Vinson’s 2011 master’s thesis on Tourette’s and the art-making process to identify a possible decrease in tics. This study would not have been formulated or come to fruition without the initial research from Vinson, and my gratitude from the author is expressed to Evangeline Vinson for this inspiring study.

This thesis is dedicated to my fiancé, Samuel, and my family who both held me up during my music therapy journey and believed in my heart and my abilities as I walk this journey.
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Abstract

This arts-based, heuristic inquiry explores how music therapy, specifically receptive and improvisational music therapy experiences affected my Tourette’s Syndrome symptoms over the course of six sessions, following the Expressive Therapies Continuum. Reflexive journaling was paired with each music therapy session conducted by myself, exploring in writing the process of each session and how that even relates to my tics. Each session was recorded and later used to create graphs of how my tics progressed over each session. The qualitative and quantitative data was then interpreted through an arts-based project of a musical composition to better understand and uncover the meaning behind these results. By examining how music therapy experiences affected my tics, I was able to better understand where my personal, musical and Tourette’s self-converged and I was able to identify and process many themes regarding myself and my neurological disorder, such as shame, guilt, grief, embarrassment, insecurities and my intramusical self.
Chapter I
Initial Engagement

Tourette’s Syndrome

If I were to ask an everyday person what they knew about Tourette’s Syndrome (TS), I would most likely receive a few murmurs of uncertain attributes, some closer to the truth, while others closer to stereotypes. TS is typically known for being the ‘cursing disease’, but what if I were to tell you that only few of us with Tourette’s have coprolalia, the cursing tic? Tourette’s is defined in its most basic form as a neurological disorder characterized by uncontrollable motor and vocal movements called tics. To be diagnosed, you must present at least two motor tics and one vocal tic for a year before the age of 18 (Davis et al., 2004). The origin of TS is unknown, though its symptoms and what makes us tic, continue to be studied today. Tourette’s is unique and sort of like snowflakes. You might know someone with Tourette’s who jerks their head or clears their throat, but the most important thing to know about Tourette’s is that each person’s tics are different and cannot be controlled.

Tourette’s Syndrome Treatment

The most common first-line methods of treatment for Tourette Syndrome include behavioral, permanent or medicative options.
Table 1

Partial Compiled List of Tourette Syndrome Treatment Options from

“Treatment of Tics and Tourette Syndrome” by Harvey S. Singer, MD (2010)

<table>
<thead>
<tr>
<th>Treatment Option</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Behavioral</td>
<td></td>
</tr>
<tr>
<td>Cognitive Behavioral Therapy</td>
<td>Cognitive behavioral therapy focuses on the functional analysis and management of environmental contingencies, using approaches such as psychoeducation, awareness training, a high/low risk situational/activity profile, relaxation and muscle discrimination exercises, modification of activity planning, and development of alternative competing responses using cognitive and behavioral strategies (Singer, pp. 543)</td>
</tr>
<tr>
<td>Comprehensive Behavioral Intervention for Tics (CBIT)</td>
<td>Comprehensive behavioral intervention for tics (CBIT) incorporates several approaches described above (psychoeducation, functional intervention, reward system, relaxation training, HRT), with the primary component being HRT (habit reversal training) (Singer, pp. 544)</td>
</tr>
</tbody>
</table>
Clonidine

Clonidine is an α2-adrenergic receptor agonist that primarily activates presynaptic autoreceptors in the locus coeruleus and reduces norepinephrine release and turnover. Despite its frequent use there is a paucity of evidence for the use of clonidine in TS or other tic disorders (Singer, pp. 545).

Surgical Approaches

Deep Brain Stimulation

Deep brain stimulation (DBS) is an elective surgical procedure in which electrodes are implanted into certain brain areas. These electrodes, or leads, generate electrical impulses that control abnormal brain activity. The electrical impulses can also adjust for the chemical imbalances within the brain that cause various conditions. Stimulation of brain areas is controlled by a programmable generator that is placed under the skin in the upper chest (Pillitis et al., n.d.).

Note: Taken from: Singer, H. S. (2010, pp. 542-556). Treatment of Tics and Tourette Syndrome

Behavioral Approaches

Various behavioral approaches are being used for TS treatment, including Cognitive Behavioral Therapy, Cognitive-Behavioral Interventions for Tics, Habit Reversal Training Relaxation
Ticcing to the Beat of My Own Drum

Therapy, Awareness Training and Diaphragmic Breathing. Cognitive Behavioral Therapy and its similar counterpart, Cognitive-Behavioral Interventions for Tics (CBIT) is often seen as the first-line behavioral approach for treating Tourette Syndrome. CBIT includes interventions to make clients more aware of their tics and how to implement a competing behavior to push past those tics. Piacentini et al. (2010) conducted a randomized, control trial that included 126 children with impairing tics to test the efficacy of Comprehensive Behavioral Interventions for Tics (CBIT) and found that “a comprehensive behavioral intervention (including habit reversal training, relaxation therapy and functional interventions of identifying antecedents and the appropriate behavioral strategy to reduce the tics) compared with supportive therapy and education, resulted in greater improvement in symptom severity among children with Tourette and chronic tic disorder” (pp. 1029). However, wearable devices and even Relaxation Therapy, or a variety of different procedures, such as progressive muscle relaxation, deep breathing, visual imagery, autogenic training (i.e., repetition of statements suggesting a relaxed state), and producing postures and activities characteristic of a relaxed person (Bergin et al., 1998), are also beginning to be utilized more. Bergin et al. (1998) conducted a behavioral relaxation study consisting of two groups: a relaxation group and control group with 16 individuals with Tourette’s Syndrome. The relaxation group consisted of behavioral interventions including awareness training, diaphragmic breathing and electromagnetic biofeedback, to name a few. At the end, it was found that there was no statistical significance between the relaxation group and control group.

**Pharmacological Treatment**

Clonidine, Guanfacine and Topiramate are used as first tier oral psychotropic medications (Singer, 2010). While these medications, specifically clonidine, are seen as the first line of treatment and recent literature has been in support of its use, there are many side effects along
with these medications, including sedation, dizziness, fatigue, difficulties concentrating and memory impairment. More recent and experimental methods have been piloted, though slow to grow traction, including cannabinoids.

**Surgical Approaches**

Other therapeutic treatments also include partial lobotomies and Deep Brain Stimulation and are increasing in prominence, though further research is required to study the optimal location of electro lobe placement and stimulation (Singer, 2010).

**TS & Social-Emotional Identity**

Many individuals with Tourette’s face stigmas for their symptoms, including being accused of faking their condition, or stereotyped for coprolalia, the cursing tic. In fact, Davis et al. (2004), described the public and personal perceptions of Touretters. They noted that Touretters appeared out of control to others, which can be seen as an issue in a society where control is valued and the standard (Davis et. Al, 2004). Marokva (2012) researched the effects of those with Tourette’s on their personal identity. The results suggested that fears of social rejection and a limit in freedom and intent harmed study participant’s ability to effectively construct their own personal identity and narrative. Currently there is not a treatment that addresses the holistic needs of individuals with Tourette’s or acknowledges the social-emotional components that are related to this diagnosis and impact identity. For these reasons, more holistic treatment options, such as music therapy, should be explored.

**Music Therapy**

The American Music Therapy Association (AMTA) defines music therapy as: “an established health profession in which music is used within a therapeutic relationship to address physical, emotional, cognitive, and social needs of individuals” (AMTA, 2005). Bruscia (2014) offers this definition of music therapy: “music therapy is a reflexive process wherein the
therapist help’s the client to optimize the client’s health, using various facets of music experiences and the relationship formed through them as the impetus of change” (p. 36).

There is a paucity of literature related to music therapy and Tourette’s. However, there is literature to suggest that the symptoms and issues related to Tourette’s such as (and list the symptoms where there is research to support the use of music therapy) may be addressed with music therapy. Therefore, I am investigating the relationship between my tics as an individual with Tourette’s Syndrome and the music-making process. Musical engagement is often seen as an outlet for solace and relaxation for many individuals in the Tourette’s community, though most first-line treatments do not include noninvasive, non-pharmacological, nonsurgical, or holistic options. I took inspiration from an art therapy master’s thesis I read, in which the author studied her relationship between the art-making process and reported a decrease in tics as a result (Vinson, 2011). I am hoping to study the effects of a different artistic modality, namely engagement in music experiences to learn if I will experience a decrease in both motor and vocal tics. This thesis is an arts-based, heuristic inquiry into my Tourette’s symptoms relationship and responses to improvisational and receptive music experiences. I conducted six music therapy experiences based on the Expressive Therapies Continuum (ETC) and recorded my results through personal journaling and video session recordings. This study is as much about my personal identity, comfortability, and relationship with Tourette Syndrome in music therapy, as it is about exploring creative means of decreasing Tourette Syndrome tics.
Chapter II  
Literature Review  

Creative Arts Therapy  

There is little research related to creative arts therapy as treatment for symptoms related to TS. According to the National Coalition of the Creative Arts Therapies Associations,  

Creative Arts Therapists are human service professionals who use arts-based interventions and creative processes for the purpose of ameliorating disability and illness and optimizing health and wellness. Treatment outcomes include, for example, improving communication and expression, and increasing physical, emotional, cognitive and/or social functioning. (n.d.)  

Creative arts therapists work across the developmental continuum with individuals who have a wide variety of health concerns. Very few creative arts therapists work with individuals who have been diagnosed with TS. The limited research and clinical papers do suggest that creative arts therapies may be helpful in the management of symptoms related to TS. As an example, Heenan (2000) whose son has TS noted that participating in a dyadic music therapy session with her son created a bridge to reach the core of her son and "enabled me to see who my son really was, beneath his confusing disorder" (pp. vii-viii). Additionally, an art therapy student in 2011 (Vinson) conducted a thesis utilizing art therapy experiences to track her Tourette’s Syndrome tics. She used video recording and journaling to record her experiences and then analyzed them using the components of the Expressive Therapies Continuum.  

The concept of the ETC provides an opportunity to approach artistic expression on a systemic basis.... The ETC consists of three stepwise levels of visual expression that echo
the stepwise progression of visual information processing in the brain. (Lusebrink et al., 2013, p. 76).

Vinson (2011) also indicated that many of the experiences she engaged in seemed to decrease her tics in both frequency and severity and leaving hope for the future of creative arts therapy clinical treatment for Tourette’s Syndrome.

**Clinical Use of Creative Arts**

Research on the effectiveness of creative arts therapy for TS by credentialed creative arts therapists is extremely limited. However, some work has been published on the clinical use of creative arts, through various music and dance interventions by researchers of other allied health professions. Scataglini (2017) investigated the effects of environmental music listening and direct stimulation of music listening through earphones, among other nonmusical variables (testing location, examiner presence). It was found that while tics increased 80% in front of the examiner utilizing environmental music, tics decreased 54% through direct earphones with patient concentrating on the music itself (2017). Devlin et al. (2019) completed a review of current research which examines the efficacy of music therapy and music-based interventions for movement disorders. Their review included results from two studies on music and Tourette’s Syndrome. They concluded that the research was promising, though limited.

To date there have been 3 studies exploring the effect of music engagement on tics. Bodeck et. al (2015) investigated the effects of potential decrease of tics through self-reported data analysis in a two-part study. The first study was a questionnaire design, in which participants self-reported the effects of instrumental and vocal music performance, mental imagery of playing music and music listening on their tics. Results for the explorative analysis for music listening included 8 of 18 items and 15 of 20 items in music performance results in a significant decrease
of tics. The second study used experimental design to confirm the results, in which the researchers recorded participant music activity and its effects on tics using video recordings and an additional questionnaire. Results of the questionnaire included a self-reported decrease in tics when engaging in both music listening or performance, and factors for decreasing tics include activities with elevated levels of concentration (Bodeck e. al, 2015). There, it was found that all interventions decreased tics significantly, but music performance led the tics to stop completely (Bodeck et. al, 2015). Brown (2017) studied the effects of music performance on tics through a self-reported questionnaire and analysis. Participants were asked to provide their instrumental music background, their background on their Tourette’s diagnosis and the nature of their tics and how or if any changes occur in their tics while engaging in instrumental play, on a 5-point Likert scale. It was found then there was a mean decrease of 4.45 out of a possible 5.0 decrease in tics when engaging in instrumental play. Dina et. al (2020) investigated the effects of a music-based motor intervention called “Imagine, Tourette” on tics, in comparison to the same movements without music. Results from this study indicate that “music played a specific effect on the manifestation of tics and on the patients’ mood, confirming its potentially positive role in motor interventions addressed to TS” (p. 188). Each study yielded positive results noting that musical engagement to a decrease of tics and provided a promising outlook for future related research, including my study.

**Personal Use of Creative Arts**

Music and the arts are often utilized within the Tourette community as an informal method of treatment to reduce tics, relax and offer a means of self-expression. Gardiner Comfort premiered a play titled “The Elephant in Every Room I Enter” (n.d.), expressing his experiences feeling understood and heard for the first time in meeting others with Tourette’s at a conference. Similarly, an opera, “Opera-TIC,” premiered in the UK in 2021, and was co-created by 15
individuals with TS to raise awareness and explore the lives of those with the condition (Second Movement, 2022).

There are many notable creative figures who have publicly shared their Tourette diagnosis and the positive impact music has had, including singers Billie Eilish and Lewis Capaldi, pianist Nick van Bloss, jazz pianist Michael Wolff, drummer David Aldridge, composer Tobias Picker and opera singer Jason Duika. Oliver Sacks (2018) wrote of Nick van Bloss in his book “Musicophilia: Tales of Music and the Brain”:

van Bloss estimates he has over forty thousand tics a day, but when he plays the piano, he shows scarcely a hint of this… It was not, he felt, that his Tourette’s had disappeared, but it was now being ‘harnessed and focused’ (p. 230).

Both Wolff (2022) and Aldridge (2014) detailed similar experiences in their own respective books, noting the need to move and jerk and tic would disappear when playing their respective instruments of piano and drums; it was an escape and salvation. For these artists, music is their solace and their reprieve from their daily life. This may allow a sense of normalcy to seep through to their being.

Journals and documentaries suggested that Mozart himself had Tourette’s, and instead of harnessing his tics to deplete them, he expressed them tenfold. Ashoori and Jankovic (2007) even compared his musical phrasing, repetition, and comic aspects to something or “musical tourettism” (p. 1173), or the concept of instead of using music to decrease your tics, your tics are instead expressed within the music.

Expressive Therapies Continuum

The Expressive Therapies Continuum (ETC) has been used in the art therapy field to explore an individual’s means of artistic expression through a categorical focus on 3 levels based
on how the brain processes information from least to most complex. Each experience is chosen by the art therapist to focus on one or more of the ETC components to work on a specific area or illicit a specific goal or development from the client. The lowest plane holds the Kinesethic and Sensory levels. On the kinesthetic level, there is an emphasis on kinesethic and motor expression (scribbling, scratching), and on the sensory level, there is an emphasis on “sensations and sensory explorations” (absorption in sensory experience, still or slow movements) (Lusebrink, 2010). The next plane holds the Perceptual and Affective levels. On the perceptual level, there is a focus on “form and individual images” (shape and size variations, lines, use of space), and on the affective level, there is a focus on “affective expression” (disintegration of color and form, clashing, large forms) (Lusebrink, 2010). The highest plane holds the Cognitive and Symbolic levels. The cognitive level focuses on “cognitive operations” (words, pictographs, problem solving), while the symbolic level finally focuses on “symbolic expression” (identification of symbolism) (Lusebrink, 2010).

The ETC has progressed since its inception to be utilized by many art therapists in their research throughout the years for a variety of different client populations and goals. A case vignette by Lusebrink et al. (2013) detailed the art therapy work of a 14-year-old girl in a special education boarding school and a sexual abuse victim, using the ETC framework. Through these categorical and focused experiences and by focusing on one area of her brain and processing during each session, the client became aware and processed her feelings of a traumatic experience and cognitively strengthened her sense of self (Lusebrink et al., 2013). Fernandez et al., (2014) described their use of the ETC as a framework for treating selective mutism in a young boy. The therapists noted that the structured play and framework of the ETC aided their client in addressing the gap in behavior modification in a less threatening and more enjoyable medium of art therapy (Fernandez et al., 2014).
Statement of Purpose and Epoch

I am an individual with Tourette’s Syndrome. Many in the Tourette’s community utilize music of their own for solace and relaxation of their symptoms and I hope to contribute with my own research on this topic. I chose to conduct a heuristic study to explore how engaging in music experiences would impact my ticcing. Overall, the research on music and Tourette’s is very sparse, with clinical music therapy and Tourette’s research being completely nonexistent. The existing literature focuses on whether engagement in music or arts can decrease tics. Vinson’s thesis, however, shifted away from the “whether” to “why”. The blueprint for my study was based on this master’s thesis in which Vinson (2011) studied her Tourette syndrome symptoms in response to different art therapy experiences. All were based on the Expressive Therapies Continuum and included a qualitative journaling component to capture her experience in narrative form.

Previous music therapy and TS literature focused on whether music in general or one intervention can decrease TS symptoms. My aim was to utilize Vinson’s study as a guide for studying several types of music experiences, with a focus on why a music experience was useful in decreasing my TS symptoms or which one(s) would be effective. Additionally, most studies only focused on the presence or absence of TS symptoms during the music-making experience. I was interested in learning if there was a longer-term effect of music engagement on TS symptoms. Previous literature has presented a few forms of evidence for the idea that instrumental and vocal music performance and listening aids in the short-term decrease of tics. However, based on my review I identified the following gaps in the music therapy literature: 1) the effectiveness of participation in different types of music, 2) long-term effects of music engagement, and 3) studies exploring music therapy methods delivered by a credentialed music therapist. Therefore, the purpose of this study was exploring how engagement in (define what
music therapy methods you will be using) will impact my TS symptoms during and following my experiences.
Chapter III

Immersion and Incubation

Research Design & The Heuristic Method

Study Design

I utilized a descriptive case study to explore the effect of engagement in active music making on my tics. A heuristic research methodology as outlined by Kenny (2012) was used to explore how music engagement would affect my tics. I collected both quantitative data (number of tics per music making session) and qualitative data (reflections on my experiences after each music making session). Descriptive statistics and arts-based methods were used to report the results.

Heuristic Research

Heurism is defined as “a generic term that encapsulates a way of thinking and exploring that is shared by such diverse disciplines…. require an understanding of the process that comprises the experience of discovery that preempts the formulation of a hypothesis” (Kenny, p.6) Heuristic research is defined as “a process of internal search through which one discovers the nature and meaning of experience and devel-ops methods and procedures for further investigation and analysis” (Moustakas, p.9).

Moustakas (1990) argued that a deeply felt question will hold the greatest potential for a transformative effect on the researcher. This approach was well-suited for this study. First, there is a lack of research related to music therapy and TS symptom management. Secondly, there is not a universal or common experience of symptoms among those who are diagnosed with TS. Third, severities, frequencies, types of tics and co-morbidities are all unique to each Touretter. As a personal living with Tourette’s, there is no better person to study my own disorder than myself. The heuristic research method is intended to study individual responses to a giving
Arts-Based Research

Arts-based research is the secondary method of research in this thesis, fitting nicely with the creative synthesis step of the heuristic method of study. “Art-based research is defined as the use of personal expression in various art forms as a primary mode of enquiry” (McNiff, p.5). It is dissimilar to pure quantitative and qualitative research, in which your results are displayed in narrative or numerical form. I used the quantitative and qualitative data as the steppingstones for my results, my creative synthesis, my art. In arts-based research, art is the finality and encompasses what true creative arts therapy is all about: the experience and the now of art.

Procedure

Moustaka’s method and procedure for heuristic research as described by Kenny was utilized for this study. The following list presents the steps used to conduct my study on how receptive and improvisational music experiences affect my symptoms.

I. Initial Engagement

II. Immersion
   a. Therapeutic Music Experience & Journaling Session I
   b. Therapeutic Music Experience & Journaling Session II
   c. Therapeutic Music Experience & Journaling Session III
   d. Therapeutic Music Experience & Journaling Session IV
   e. Therapeutic Music Experience & Journaling Session V
   f. Therapeutic Music Experience & Journaling Session VI

III. Incubation

IV. Illumination and Explication
V. Creative Synthesis

Data Sources

The primary data, qualitative data, was collected by narrative journaling entries following each session. The secondary data, quantitative data, was collected by video-recording the sessions. The video recordings were used to graph the frequency and type of tics in google sheets.

Initial Engagement

The initial rise of this question came informally throughout my adolescence. During this time, my tics grew and evolved, protruding into my everyday life. I would often feel tired, anxious, compulsive, obsessive, embarrassed, annoyed, physically pained, and lonely because of my experiences and to this day, I find difficulty dealing with Tourette’s symptoms. I used various forms of medical and self-prescribed treatment to decrease my tics, including learning different things, running, and music. I noticed my tics and symptoms presented differently during music and learned through internet searches that other Touretter’s have similar experiences. Some have had their tics disappear completely when engaging in music. I was curious to see how my tics would respond with music therapy experiences in a formal research setting. In combination with that curiosity and the discovery of the blueprint of Vinson’s thesis, the study was born.

Research Question. “The heuristic process involves getting inside the research question, becoming one with it and living it. In this respect, it is the question that chooses the researcher” (Kenny, p.7). My research question was developed after much soul searching and research: How do my Tourette Syndrome symptoms respond to receptive and improvisation music therapy experiences?
**Research-Participant.** I was the sole participant and engaged in music-making experiences, journaling and video-recording to study the effects of the experiences on my tic patterns, as well as the severity, and frequency of the tics.

**Immersion**

I engaged in six music experiences once a week for six weeks. Each experience contained a specific, identifying component based on the ETC that was the focus of the experience. These included kinesthetic, sensory, perceptual, affective, cognitive, symbolic experiences, all to see the effects of tics in response. The primary focus was on the response to the music, not the music itself. Regardless, all music used was within my preferred genres, with various tempos, timbres, dynamics, and instruments. These included Western classical, Celtic, and pop music.

**Materials.** A laptop and the use of the Spotify app were used to facilitate kinesthetic, perceptual, affective, cognitive, and symbolic experiences, as they all hold a receptive component to them. A physical notebook and pen were utilized for the post-experience journaling reflections in each experience and to notate the composition component of the affective experience. Google was used for the song discussion and analysis experience. Crayons were used for projective drawing. Several instruments including a flute, tubano drum, cabasa, and egg shakers were used for the sensory and affective experiences.

**Limitations and Ethical Considerations.** I acknowledged that my use of myself as the sole participant and researcher offered opportunities for myself to be biased in this process. Limitations include the use of only one participant, as well as a participant who also doubles as a researcher, thus limiting a more objective perspective. Time constraints limited the number of experiences per ETC component I was able to engage in. Instrument choice was limited to those I had in my possession at the time of this study.
Kinesthetic Experience. I engaged in a 30-minute receptive music intervention with a focus on the bodily and kinesthetic experience, the first in the Expressive Therapies Continuum. The experience was a Projective Movement experience, where I listened to music and performed expressive movements in response. I began with an induction to ease myself into the experience, followed by listening to “Le Jardin Féerique” from Ma Mère L’oye” by Valeria Szervanszky and Ronald Cavaye, and “Un Barque sur l’océan from miroirs” performed by Andre Laplante. A journaling reflection session followed the projective movement.

Sensory Experience. I engaged in a 30-minute music improvisation with a focus on the sensory experience, the next in the Expressive Therapies Continuum. In this experience, I engaged in a nonreferential improvisation (Bruscia, 2014) using instruments of different textures, timbres, and sounds, including guitar, djembe, egg shakers, flute, cabasa and voice.

Perceptual Experience. I engaged in a 30-minute music listening experience with a focus on the perceptual experience, the third in the Expressive Therapies Continuum. In this experience, I listened to music and followed a melody line throughout the piece, aware of the music and journey over the piece. First, came an induction to ease myself into the experience, followed by listening to “Misty Corrie” by Charlie Grey and Joseph Peach. A journaling reflection session followed the receptive experience.

Affective Experience. I engaged in a 60-minute multi-method music intervention with a focus on the affective experience, the next in the Expressive Therapies Continuum. The experience included me engaging in all four methods of reception, recreation, improvisation, and composition for 15 minutes each to focus on an expression of feelings. For improvisation, I used my keyboard I already had at home. I listened to Symphony No. 40 in G minor K 550: 1. Molto Allegro. The composition experience was a hard pop song I wrote during this session, which was
sung and played on acoustic guitar with a prerecorded drumbeat playing in the background. The re-creative experience that followed was “Stop This Train” by John Mayer, recreated using voice and guitar.

**Cognitive Experience.** I engaged in a 30-minute receptive music intervention with a focus on the cognitive experience, the next in the Expressive Therapies Continuum. The experience was a Song Discussion and Analysis experience, where I listened to a song chosen by myself of something I would like to communicate, followed by a lyrical and musical analysis of the song. I used the song “Back to December” by “Taylor Swift” and followed the procedure of listening once, analyzing, and identifying the lyrics I found most salient, then finally created my own interpretation as a result.

**Symbolic Experience.** I engaged in a 30-minute receptive music intervention with a focus on the symbolic experience, the last in the Expressive Therapies Continuum. The experience was a Projective Drawing experience, where I listened to music and drew on paper in response. I began with an induction to ease myself into the experience, followed by listening to “Aquarius” and “Round Dance,” both by Quentin Sirjacq. A journaling reflection session followed the receptive experience.

**Incubation**

I understood the impact of engaging in intense musiking for that period of time. I took a break from the project for 4 weeks from October 15th-November 12th to sit in the experiences that just occurred for processing and interpretation next month.

**Illumination and Explication**

I was willing and open to finding new means of understanding my tics, symptoms, and the music-making process. This was explored through post-experience journaling each week, to
see how I could narratively express my sense of self and whatever evolution came from that, following each unique music experience. I returned to the project in mid-November 2023 to begin processing and understanding what just occurred, through thesis writing, reviewing the data of six video-recorded music-making sessions and six post-music journal entries.
Chapter IV

Illumination and Explication

Each music session took place in the office of my home, my office of my church or my childhood bedroom, and lasted anywhere between 19-38 minutes. Sessions were recorded so I could record the type, frequency, and severity of my tics during the sessions. Results are reported numerically and visually in graphic form. Each graph is paired with an excerpt from my narrative journaling, detailing my thoughts and feelings of each encounter. For reference, a complex motor tic for my own tics can be defined by hand clapping, head dancing/shaking, or shaking fists. (Blue) A simple motor tic will be fined by head jerking, shoulder shrugging, head nodding, head shaking, or facial grimaces. (Yellow) A simple vocal tic can be described by my vocalization of the word “fup”. (Magenta) A complex vocal tic can be described by any multi-pitch vocalizations. (Green)

Week Zero

The baseline frequency of my tics over a 30 minute can be seen in Figure 1. During this time, I counted 11 tics during the first two minutes, with a steady single tic around every other minute until minute 9, when I experienced 5 tics, then fell back into pattern of a single tic every other minute. I experienced 0 tics between minutes 13-16 and from minutes 18-25 and 27-29 and experienced a single simple vocal tic during minutes 17, 26 and 30. I experienced a peak number of tics in the beginning of the session, another peak during minute 9, before volleying midway throughout, with an occasional tic only by minute 13 of the session.
Figure 1

Session 0: Baseline Recording of Tics

Week One

Figure 2 represents the number of tics I experienced during the kinesthetic music experience, the first session. I experienced 11 tics, both simple motor and vocal tics in the first five minutes of the experience. Minutes 6-10 indicated 0 tics until minutes 11 and 12, where I encountered a spike of 6 complex motor tics. Minutes 14-22 indicated 5 simple motor and vocal tics, with 0 tics occurring during the final minutes of 23-24. I experienced a high number of tics in the beginning of the session with its peak being towards the middle of the session, before falling into a general rhythm of one tic every minute to every few minutes in the latter half of the session. My tics never fully subsided for a longer period, besides minutes 6-10, but instead possibly aligned with the dynamics of the music during that time.
One excerpt from my journal from this experience is: “I felt the second piece mirror some of my tics in sounds, and so I followed, clapping and shaking my head. It was a tic, but I wonder if it was also musical tourettism, like Mozart. How many ways can I also hear, see, feel, express, interpret or make art from my tics?”

**Figure 2**

Session 1: Kinesthetic Experience Tics

![Session 1: Kinesthetic](image)

**Week Two**

The week two graph below indicates that I suffered from 1 single tic during the first minute of the experience, before experience 9 tics until minutes 8-12. Then, I experienced 10 tics before subsiding and experiencing 0 tics between minutes 13-20. I concluded the experience with experiencing only 2 tics between minutes 21-23. It can be summarized that I experienced a peak number of tics during minutes 8-12 and virtually no tics during the rest of the session.
One excerpt from my journal of that experience is: “the point was texture, timbre and the sensory experience that derived from making new music in cohesion with my tics. Yet again, a rhythmic pulse in my music-making made my tics arise, such as shoulder shrugging and fupping and my vocalizations came out in my singing. I sang a fup accidentally; it combined!”

Figure 3
Session 2: Sensory Experience Tics

Week Three
The week three graph below indicates that I suffered from 3 tics during the first minute of the experience, before experiencing a steady flow of single tics every minute or every few minutes minute from that point on until the conclusion of the experience.

One excerpt from my journal of that experience is: “I felt myself ticking a lot less, maybe due to the stagnant nature of the piece. I felt my head roll with the motif of the melodic line, as if imagining a bird was soaring along a warm and soft lighted lake, occasionally skimming the water. When I ticked, I made it match the slowness and gentleness of the music, singing into each
tic and pausing. I felt I wanted it to match; I wanted to make them beautiful for once...I wish they were fluid and beautiful, not sharp, abrupt and ugly. I wonder if I tried hard enough or another way, I could make them beautiful.”

**Figure 4**

Session 3: Perceptual Experience Tics

Week Four

The week four graph below indicates 12 tics between minutes 1-14 before experiencing only two tics between minutes 15-38. This can be summarized with writing that I experienced a moderate number of tics over the course of 14 minutes, not subdued nor aggravated, before having virtually no tics and no aggravation for the following 2/3rds of the session.

One excerpt from my journal of that experience is: “I realized these sessions are musically therapeutic for me and help me reconnect to my musical self and explore and
challenge and improvise while exploring my issues.” At the bottom of my journal, I wrote in capital letters and underlined the phrase “FULL CIRCLE.”

Figure 5
Session 4: Affective Experience Tics

Table 2
Songwriting Lyrics from Week 4 Experience

Lyrics
Don’t know what I can say, don’t know what I can do
All that I know is that I’ve all but ruined you.
Don’t know what I can say, don’t know what I can do
All that I know is that I’ve all but ruined you.
Don’t know what I can say, don’t know what I can do
All that I know is that I’ve all but ruined you.

No more, I promise I’ll do better this time, no more I just need a little more time.
No more, I’ve worn it out like sleeves on my sweater.
I promise I’ll do better.
When can we separate our problems, when will I just listen, I guess that hasn’t come yet.
No more, I promise I’ll do better this time, no more I just need a little more time. No more, I’ve worn it out like sleeves on my sweater. I promise I’ll do better.

No more I promise, no more I promise. I promise I promise, please don’t let this be a lie. No more, I swear. I’ll patch up my sweater. I can do better. I will be better. I’ll show you better. So, we can be better.

__Week Five__

The week five graph below indicates I experienced 7 tics during minutes 1-2 and 3 tics from minutes 4-7. My tics subsided greatly following that with only experiencing 1 tic from minutes 8-18. I experienced 3 tics between the minutes 19-23 to conclude the session. The graph can be summarized to indicate a moderate number of tics at the beginning of the session with a large lull in the middle, concluding with a slight spike once more at the conclusion.

One excerpt from my journal of that experience is: “This experience was broken up and I didn’t like it. I couldn’t redo it because it was already half-analyzed. I couldn’t pick a new song because this was what I needed. I was frustrated but that was real life, and it will happen with my tics too.”
**Week Six**

The week six graph below indicates a moderate to high number of tics of 6 in the first 3 minutes, before disappearing completely. I then experienced only experienced 2 tics from minutes 4-19 until the conclusion of the experience, only ticking during minutes 13-14.

One excerpt from my journal of that experience is: “I feel so overwhelmed that I am calm in my tics, like runner’s high almost. That happens occasionally. Only thinking of that moment and nothing can escape all the possibilities, all the outcomes, all the floating.”
Figure 7
Session 6: Symbolic Experience Tics
Figure 8

Session 6: Projective Drawing
Chapter V

Creative Synthesis

I reflected upon and interpreted my results by composing a musical work titled “The Make-Believe”. The creative synthesis was an iterative process which was influenced by my interpretation of the quantitative and qualitative results. It took time to truly decipher what these results meant to me, and what were the most salient themes that should be the focal point of the piece. I originally considered expressing this synthesis through a different medium other than music, possibly art or a video skit. However, I realized through reflecting on my journals, that many of the themes revolved around my intramusical relationship and the interpersonal relationship I have between myself and my Tourette’s. I have long considered this an interpersonal relationship between myself, and my Tourette’s as opposed to intrapersonal because I have always felt the Tourette’s as a separate entity from myself. It was a being I met when I was 14 years old, an age when I had already developed so much of myself. I felt this entity attach itself to me and they decided they would never leave my side, hence an interpersonal relationship. My week three journal entry was instrumental in creating this piece. I wondered if my tics could ever be beautiful and if I could ever control them enough to make them beautiful. It is not possible to control my tics in such a way, but I thought of what if I composed a piece in which I made beautiful music from them? I wondered if I could for once find beauty and peace in the music I created. I struggled with this theme for years, for I often find it impossible to feel beautiful with the wild and chaotic nature of my tics. I thought as a young teen, how would any person ever like me one day like this? And even when I got my first boyfriend, he surely wouldn’t like me once he saw just how loud and bombarding, they can be. When I reveal my Tourette’s to new friends, I try to only tic mildly and suppress my louder ones until I was alone, because I worry no one would want to be seen in public with me acting like this. This theme is an
ever-present one in my life, even today, and I knew this journal theme is what I had to create my piece around.

Section A of this piece featured various vocal motor tics I have but structured in such a way melodically and rhythmically that they come together to create a cohesive, attractive, acapella piece. The music was melodic, light, high and flowy. My tics assimilated to the airy nature of the piece and displayed certain moments, both in my qualitative and qualitative data, that I felt my tics and I were converging in music and were working together in harmony. Partway through this production, I realized it was impossible to keep the true integrity of the tic in these recordings. I changed them too much, and none of my tics ever sound this way. It was a fallacy and a dream, and it's just not how Tourette’s works. From there, I knew I had to reveal the true version of how this piece would play out in real life; how my tics phonate and perform.

The piece is bisected by a B section, in which I composed a section completely of my tics. This section was to represent some aspects of my quantitative data, as my thoughts, actions, music, and art were interrupted, occasionally for longer periods of time, and I must submit to them for however long they wish. The moment of total ticking was elongated purposely to create an atmosphere of discomfort in the music, for these moments are not just 4 measures long for me. They are sometimes minutes and minutes of discomfort and display the reality of Tourette’s.

The A prime section of this piece then plays out a similar version of the piece in its composition but performed with the true nature of my tics. There was no manipulation in pitch or rhythm. How my tics come out is how the piece will be played. They represented the many other moments in my data when I was frustrated, alone, and exhausted. Audible frustration was shown in my vocal tics and in my journey in the music, abruptly ending the piece.

YouTube video: https://youtu.be/LV8dm-lUzVQ
Chapter VI

Discussion

This study challenged my relationship with music and with myself. It unearthed issues I had been wrestling within myself but was never quite able to articulate or define what each issue meant, including themes of my relationship with Tourette’s, from internalized ableism to beauty and insecurities, to even musical tourettism. I faced a few challenges in completing this study. It was easier for me to be completely honest and open with myself and in what my experience was as a person with Tourette’s. This thesis was essentially the culmination of my 9 years as a person diagnosed with Tourette’s and I was ready to let that be free and known. However, in that honesty came great exhaustion and a lack of motivation to continue pursuing this project. I gave myself completely to the session and my energy went with it. How much longer could I continue giving all of myself to this? I did continue, though and I pushed through with honesty until the end.

It was interesting in the study to see how many themes emerged in this work that had nothing to do with my Tourette’s at all from first glance, from grief and loss, my commitments as a partner, to even my worth and view of myself as a musician. I realized through my data and journaling that my tics responded to and adapted to the receptive music therapy experiences as passive participants. On the other hand, my tics were active participants actively contributing to the music in the improvisational and active music-making experiences. My musical tourettism unleashed itself while I was improvising. It was fulfilling to see myself and my Tourette’s interacting and converging in some moments, when I had all but thought previously my tics were acting against and diverging from the music. Moments of both musical-ticcing convergence and divergence were evident when I reviewed the video recordings. Musical-ticcing convergence refers to the moments where my tics met in harmony with the music because of the music, with
examples such as beginning to roll my shoulders in time with the music, or my tics beginning to
soften to match the piano dynamics of the music. The tics may not decrease because of the
music, but they do fall into sync, move as one. Alternatively, divergence refers to moments
where my tics might flare up or respond negatively in turn to the music. Regardless, the
introduction of the musical-ticcing convergence was new and enlightening for me. As a result, I
appreciated its moments and contribution to my identity with my Tourette’s, even if these
positive moments were sparse. I aim to now hold onto those moments of musical-ticcing
convergence and cohesion and hope these moments will not be the last.

It was interesting to see the results of my study in comparison with Vinson’s (2011). Vinson completed 12 sessions, with 2 sessions per ETC component, while I only completed 6
sessions, with 1 session per ETC component. Vinson graphed her tics according to each tic
unique to her, while I graphed by the category or type of tic (i.e. complex motor, simple vocal).
Vinson’s narrative journaling held a focus on her state of tics pre-session, throughout the day and
in the moment in the art. I instead solely focused on the current state of my tics and in the
moment in the music.

It was intriguing to review Vinson’s responses to certain experiences in comparison to
mine. For example, I felt myself connected with this music and reached a state of convergence
and peace in my perceptual experience, ticcing consistently, but at low amounts of around 1 per
minute or every other minute. Vinson (2011) “reported feeling more relaxed than before the
session” in her 2nd perceptual session, which surprised her, as she felt her tics were very frequent
in this session.

It is difficult to compare the results of two similar studies for two different individuals
with TS, as Tourette’s is different for everyone. Touretters experience different types of tics,
sometimes unique to their own lived experience, tic frequency, severity levels, and triggers. It
was fascinating to see how the modalities of art and music therapy contribute to the similarities and differences in findings with this in mind. Vinson engaged in a kinesethic clay-making session, while I engaged in projective movement. In this, Vinson (2011) found that in rolling and pounding the clay, her body aches and stress reduced, and she was able to pound larger pieces and put more energy into the session. My kinesethic experience lacked the tactile component and resistance found in clay pounding that my projective movement experience could offer. Hand drumming can offer a similar experience, with the tactile experience and physical pounding, but lacks the messiness and residue of the clay and the textured feeling in our hands and bodies. Alternatively, art as a visual medium might lack the ability to completely connect with our vocal tics through the auditory and vocal experience and release that music can provide. This can be done through singing and vocalizations, which I experienced in session 2; but could this be done in art?

This study challenged my thinking of the other creative arts therapy fields and how we can serve and treat individuals with Tourette’s Syndrome. What could music experiences provide that art might not? Music therapy provides the core tenet of an auditory experience and immersion that art therapy does not. Elements from both practices intersect, from the therapeutic relationship to the benefits of tactile and kinesethic experiences. At its core though, art therapy is the visual experience, while music therapy is the auditory. It is important to come to know what experience and what tenets we need as individuals with Tourette’s, for the betterment of our personal treatment and health journey, and because there is no one singular effective treatment for those with TS. After all, every person with Tourette’s is a snowflake, unique and singular.

**Future Research**

The results of this study left me with several options for continued research on myself, and for those with TS. One option can include a further investigation into the experiences of
musical-ticcing convergence for those with TS. Is there a musical catalyst for my tics adapting, as opposed to diverging? Can I find this “beauty” once more? This can include examining which experiences, methods, genres, or elements of music best bring the tics of those with Tourette’s into the state of musical-ticcing convergence.

In the quantitative data, I ticced a very small amount of only 13 times in the 23 minutes of Session 2: the Sensory experience. It was a music listening experience to a composition of a softer and more stagnant nature. In Session 6: the Symbolic experience, I only ticced 8 times in 19 minutes. While the music was more dynamic and featured different musical elements in this music listening experience, this leads to a question as to how music listening and specific musical elements, such as possibly piano dynamics and/or stagnant flow, might affect ticcing in those with TS. Could different elements of the music compositions and receptive experiences decrease the tics of those with Tourette’s? From there, for how long post-music listening do tics have an average decrease, if at all, to investigate long-term benefits of music therapy. Once those musical elements for decreasing tics are identified, another avenue for research could include investigating the efficacy of the creation of music playlists using those specific musical elements to listen to throughout the day. This could be accomplished through utilizing earphone technology, such as a single airpod. This could make it possible for those with Tourette’s to gain the benefits of the passive music listening through one ear, while still possessing the ability to attend and engage in their everyday life tasks by not having both ears closed off.

**Conclusion**

I began this study to further understand how music affected my tics to hopefully decrease my symptoms. Instead, the heuristic process challenged me to uncover several themes within myself, from intramusical relationships, beauty, insecurities, interpersonal relationships, and loss. I was able to experience periods of congruence between my music and my Tourette’s. I
experienced how beautiful they could be, as well. I also experienced moments of incongruence, frustration and exhaustion between the music and my Tourette’s, leading me to feel more vulnerable than ever in my own skin. This study was able to put names and designations to emotions and issues I did not know I was experiencing. It was a truthful and honest experience. This study made me a more well-rounded person and therapist as I now have a greater understanding of the intramusical experience. I hope to continue this work on myself to better understand this relationship between myself and my Tourette’s. I continue to wonder if it is better to work in congruence with my Tourette’s than attempt to push it down. The themes I identified converged with my Tourette’s and the music as well, to create one larger depiction of my struggles, strengths and my identity as an individual, and a musician with Tourette’s Syndrome.
References


Comfort, G. (n.d.). *The elephant in every room I enter.* (n.p.).


