A Survey of Perceptions and Professional Boundaries Between Music Therapy and Speech-Language Pathology

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A SURVEY OF PERCEPTIONS AND PROFESSIONAL BOUNDARIES BETWEEN MUSIC THERAPY AND SPEECH-LANGUAGE PATHOLOGY

by

Jennifer Rose Fromius

A thesis submitted to the Graduate College in partial fulfillment of the requirements for the degree of Master of Music School of Music Western Michigan University April 2018

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A SURVEY OF PERCEPTIONS AND PROFESSIONAL BOUNDARIES BETWEEN MUSIC THERAPY AND SPEECH-LANGUAGE PATHOLOGY

Jennifer Rose Fromius, M.M.
Western Michigan University, 2018

The purpose of this study is to examine the relationship between music therapists and speech-language pathologists in order to gain a better understanding of professional boundaries within each profession, frequency of co-treatment between the two professions, and perceptions of referral in clinical practice. Data for this research were collected through two online questionnaires with parallel sets of questions, which were distributed to a sample of board-certified music therapists (MT-BC) and speech-language pathologists (CCC-SLP). Quantitative and qualitative data collected from the survey (N= 283; n = 45 MT-BC, n = 238 CCC-SLP) are analyzed to determine if there are correlations and thematic trends, and suggest that while collaborative treatment is occurring minimally in clinical practice (26.7%, n = 12 MT-BC; 4.6%, n = 11 SLP), there is agreement between the two professions regarding the belief that co-treatment can be effective (100%, n = 45 MT-BC; 74.8%, n = 178 SLP), and openness to referring a client for the other therapy (97.8%, n = 44 MT-BC; 89.1%, n = 212 SLP). The data appears to show some dissonance concerning having ever been consulted for collaboration (60.0%, n = 27 MT-BC; 1.3%, n = 27 SLP). Further research is recommended to explore factors that may impact the ability to co-treat in certain work settings, and how that may affect perceptions and boundaries in clinical practice between the two professions.
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CHAPTER I
INTRODUCTION

Problem Statement

The relationship between music and language has been a topic of interest to scholars and authors for ages. Did these two facets of communication evolve separately or come from the same origin? What similarities do they share and how can one transfer to the other? It stands to reason that the therapies that focus on music and speech, should deal with the same questions. Are there similarities between music therapy and speech therapy? Can clinical techniques used in one transfer to the other? If so, when is it appropriate, and when is it an overstepping of professional boundaries?

Music and language are connected on a very basic level. Both music and language use cognitive functions and subsystems such as memory and attention. Both musical and grammatical structures have a specific order that must be followed in order to make sense (Levitin & Tirovolas, 2009). Another commonality between music and language is pitch. While music uses specific intervals, and speech uses intonation and contour to assign meaning to words or statements, they are built from the same element. Music and speech are intrinsically related. Both music and speech are natural pathways for expression (Cohen, 1994). A melodic line may often reflect speech prosody, and words are required to sing lyrics. This intertwined relationship at the fundamental level leads to the potential for obscured boundaries at the therapeutic level.

Rationale for the Research

Both music therapy and speech-language pathology require Board Certification in order
to practice professionally. A primary aspect of board certification is complying with professional boundaries as established by professional associations. The American Speech-Language-Hearing Association (ASHA) published the Scope of Practice for Speech-Language Pathology (ASHA, 2007), which defines the required qualifications and framework for clinical practice, policies, and professional roles, as well as expectations for advocacy, education, and research in the field of speech-language pathology. The use of an evidence-based practice in speech-language pathology is emphasized in the document, which states, “Clinical decisions are based on best available evidence…high-quality research evidence is integrated with practitioner expertise and the individual’s preferences and values…” (ASHA, 2007, p.3). Within professional roles, it is stated that, “typical and atypical communication and swallowing may be addressed” (AHSA, 2007, p.5), and includes extensive lists under the following domains: speech sound production, resonance, voice (pitch, loudness, phonation, respiration), fluency, language comprehension and expression, cognition, and feeding and swallowing (ASHA, 2007, p.5). Furthermore, “collaborating with other professionals” (ASHA, 2007, p.7) is included within the speech-language pathologist’s scope of practice, though it does not specifically mention collaboration with a music therapist.

Similarly, the Certification Board for Music Therapists (CBMT) and the American Music Therapy Association (AMTA) published the Scope of Music Therapy Practice (CBMT, 2015), which outlines the required qualifications and standards of clinical practice, the knowledge and skill-set to practice safely and effectively, as well as expectations for advocacy and continuing education within music therapy practice. The use of an evidence-based practice in music therapy is emphasized in the document, which states, “clinical practice is guided by the integration of the best available research evidence, the client’s needs, values, and preferences, and the expertise of
the clinician” (CBMT, 2015, p.1). Within standards of practice, there is an extensive list of interventions and areas of clinical practice, as well as assessment, development, implementation, evaluation, and termination of a treatment plan (CBMT, 2015, p.2). The scope of practice includes professional collaboration, and as members of an interdisciplinary team, music therapists may collaborate to support treatment goals with other professionals, including speech-language pathologists (CBMT, 2015, p.2). Because of the unique role of a music therapist, there may be an overlap in services provided by multiple professions in order to benefit the clients being served. The CBMT Scope of Practice includes the acknowledgement that “other professionals may use music, as appropriate, as long as they are working within their scope” (CBMT, 2015, p.1).

At the state level, all speech-language pathologists need to meet additional requirements for licensure and credentialing (Hedge & Davis, 1999). Music therapy task forces have only more recently started legislative efforts to gain licensure for the profession. Since 2005, CBMT and AMTA have collaborated on the State Recognition Operation Plan (SROP), a national initiative for music therapists to attain official recognition, which also provides guidance to state-based task force groups as they seek professional, statewide recognition (AMTA, 2018). Licensure is currently required for music therapists in the following six states: Georgia, Nevada, North Dakota, Oklahoma, Oregon, and Rhode Island (CBMT, 2018). Though some states have not achieved licensure, there have been gains with state title protection (Connecticut), state certification (Utah), and state registration requirements (Wisconsin).

The music therapy task force in Georgia experienced a significant opposition from ASHA during the process of trying to gain licensure (Sawyer, 2016). This information comes from a thesis examination (Sawyer, 2016), for which the researcher interviewed music therapists, and
specifically inquired about the reactions form other professional fields in the quest for licensure. Transcripts from the interviews include a participant who was on the Georgia music therapy task force (Sawyer, 2016, p.90), and reported that one of the main hurdles of the process was this backlash from ASHA. While licensure was gained for music therapists in the state of Georgia, this resistance from ASHA continues with other states in which music therapy is trying to achieve licensure.

This opposition is evidenced by an Issue Brief (ASHA, n.d.), in which ASHA states that music therapy licensure is viewed as an infringement of the speech-language pathology professional scope of practice, as well as a conflict of interest in terms of billing for services. It should be mentioned that billing codes do not belong to any one profession. Additionally, sample advocacy letters (ASHA, 2016) from the current ASHA President to health care representatives of states in which music therapists are seeking licensure, describe ASHA’s reasoning for why they believe music therapists lack the qualifications to address speech and communication disorders, and therefore should not gain state licensure.

However, licensure for music therapists at the state level does not aim to infringe upon the speech-language pathologist’s scope of practice, rather, it would protect clients from harm, give clients greater access to music therapy services, increase awareness of music therapy, and align music therapy with other comparable health care professions (CBMT, 2015). This friction at the organizational level has been seen at an increasing rate, and consideration should be given as to whether or not it is impacting professionals at the clinical level.

Research exploring professional boundaries, perceptions, and collaboration specifically between music therapists and speech-language pathologists, is non-existent. One survey study was found (Register, 2002) that examined the consultation and general collaboration practices of
board-certified music therapists. The researcher found that of the 695 music therapists surveyed, 44.6% were collaborating specifically with a speech-language pathologist (Register, 2002). Less than half of the surveyed music therapists reported acting as a consultant. While the survey aimed to gain a better understanding of the overall collaboration in the field of music therapy, it did not delve further into the other variables of professional collaboration.

A more specific thesis study was conducted to examine professional boundaries between music therapy and counseling (Sehr, 2011). Sehr inquired about perceptions between the two professions and whether or not ethical boundaries were being crossed in clinical practice. Results for the study indicated that the two professions were more conjunctive than dichotomous, and gave implications for future research and replication studies.

Because no current published research specifically examines the frequency of co-treatment between music therapy and speech-language pathology, nor the professional perceptions and boundaries in clinical practice, the Sehr (2011) study was used a template for this preliminary examination.

Research Questions

Research questions for this survey analysis were grouped into the following categories and sub-questions:

1. What is the frequency of co-treatment between music therapists and speech-language pathologists in clinical practice?
   
   (a) How many professionals are currently co-treating with the other surveyed therapeutic discipline?
   
   (b) How many professionals have co-treated with the other surveyed therapeutic discipline?
(c) How many professionals are not currently co-treating with the other surveyed therapeutic discipline, but have in the past?

(d) How many professionals are co-treating with other professional disciplines, but not with the other surveyed therapeutic discipline?

2. What are the therapists’ perceptions of co-treatment, referral, and consultation with the other surveyed discipline?

   (a) Does population served effect professional perceptions?

   (b) Does work setting effect professional perceptions?

   (c) Does years in practice effect professional perceptions?

3. Can professional boundaries be obscured in clinical practice?

   (a) Does population served effect professional boundaries?

   (b) Does work setting effect professional boundaries?

   (c) Does years in practice effect professional boundaries?

Summary

Given the limited amount of research examining collaboration trends between music therapy and speech-language pathology, as well as the disjunction between the two professions at the organizational level, it was of interest to explore the frequency of co-treatment in clinical practice, and whether or not professional perceptions were being impacted on the clinical level. The purpose of this study was to gain a better understanding of the professional boundaries and perceptions between music therapists and speech-language pathologists in clinical practice.
CHAPTER II
REVIEW OF LITERATURE

Addressing Speech Goals Within Music Therapy

Music, while credited as a tool for healing since the time of Aristotle, became a recognized therapy in the mid-20th century. Music therapy is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program (American Music Therapy Association, 2005). Music therapists are trained to adapt specific musical elements, such as rhythm, harmony, melody, phrasing, and tempo in order to address non-musical goals. Because of the neuroplasticity of the brain, music may aid speech in the production of phonemes, words, or phrases, and act as a vehicle to help rehabilitate speech. Melodic Intonation Therapy (MIT), Musical Speech Stimulation (MUSTIM), Rhythmic Speech Cueing (RSC), Symbolic Communication Training through Music (SYCOM), and Oral Motor and Respiratory Exercises (OMREX) are examples of neurological music therapy (NMT) techniques that focus on speech and language disorders (Thaut & Hoemberg, 2014). Music may also help facilitate nonverbal forms of communication and often surpasses physical, cultural, intellectual, and emotional limitations (Zoller, 1991).

Music therapists who address speech and language goals may incorporate a variety of techniques to develop and improve speech and communication skills (Thaut, 1999). Music has been found to be beneficial for developing receptive and expressive language skills, and improving articulation skills (Zoller, 1991). In clinical practice, Neurological Music Therapy
(NMT) techniques (Thaut & Hoemberg, 2014), such as Rhythmic Speech Cuing (RSC), Vocal Intonation Therapy (VIT), Therapeutic Singing (TS), and Developmental Speech and Language Training Through Music (DSLM), have been shown to be effective in improving speech intelligibility (Thaut, McIntosh, McIntosh, & Hoemberg, 2001; Tamplin, 2008), fluency (Brendel & Ziegler, 2008) speech language production (Yamador, Osumi, Masuhara, & Okubo, 1977; Straube, Schulz, Geipel, Mentzel, & Miltner, 2008; Schlaug, Marchina, & Norton, 2008; Tamplin, 2008; Lim, 2010), respiration (Engen, 2005; Tamplin et al., 2013), and function of the speech apparatus (Thaut et al., 2001).

There has been an increasing interest in research to understand the effects of music on a child’s early language development. When compared with a no-treatment control group, infants who were exposed to structured music in a social environment were more likely to predict auditory patterns in speech and music (Zhao & Kuhl, 2016). This use of music exposure during infancy for learning has the potential to result in an earlier understanding of musical elements and speech prosody. Because music is enjoyable and provides a positive, non-threatening stimulus, music therapy may help to facilitate the enhancement of early childhood language development (Standley & Hughes, 1996), and verbal or speech skills with school-aged children with disabilities (Braithwaite & Sigafoos, 1998).

A minimal, but growing amount of research exists to examine the efficacy of music therapy treatment programs for children with specific communication disorders. Findings from a recent case study for children with specific language impairment indicated that song cues could be as effective as speech therapy cues for a syntax intervention (Tan & Shoemark, 2017).

Lim (2010) examined therapeutic programs for children with Autism Spectrum Disorder (ASD). The participants were randomly assigned to a speech therapy, music therapy
(Developmental Speech and Language Training Through Music), or no-treatment control group. Speech and music treatments were not administered by a therapist, rather, videos of speech and music therapy interventions played over the course of three days to increase verbal output. Results indicated that participants in both the music therapy and speech therapy groups showed improvements in language output, when compared with the control group who did not receive treatment. Positive outcomes were observed after both speech and music therapy group treatments with the children who were considered higher functioning. However, children who were considered lower functioning produced a larger number of target words following the music therapy group when compared with the speech therapy group (Lim, 2010).

Tamplin (2008) conducted a pilot study to examine the use of a music therapy program for adult individuals with dysarthria due to acquired neurological damage from a stroke or Traumatic Brain Injury (TBI). The small sample of participants in this study received three weekly individual music therapy sessions, for eight consecutive weeks. Using pre-post test assessments, the researcher found improvements in speech intelligibility for read sentences, as well as communication improvements with spontaneous speech intelligibility. This study corroborates a larger body of research (Cohen, 1992; Pilon, McIntosh, & Thaut, 1998; Haneishi, 2001; DiBenedetto et al., 2009; Yinger & Lapointe, 2012; Kim & Jo, 2013; Stegemöller, Radig, Hibbing, Wingate, & Sapienza, 2017), which concludes there are improved speech and communication outcomes for individuals with acquired or degenerative dysarthria, when a higher frequency of music therapy sessions is implemented over a shorter period of time.

Using the pilot study as a foundation, Tamplin and Grocke (2008) designed and presented a music therapy protocol to treat acquired dysarthria following stroke or brain injury, which aims to improve speech intelligibility, rate of speech, and communication fluency, naturalness, and
efficiency. The published study provides a task analysis for the protocol design (Tamplin & Grocke, 2008), which outlines specific exercises to use for muscle, oral motor, respiratory, and articulatory preparation, which are then followed by Rhythmic Speech Cuing (RSC), Vocal Intonation Therapy (VIT), and Therapeutic Singing (TS) (Thaut & Hoemberg, 2014).

A music therapy protocol to improve articulation and speech prosody for individuals with non-fluent aphasia was designed and presented by Kim and Tomaino (2008). This protocol, which was administered to the seven participants, thrice weekly, for the duration of four weeks, consisted of singing a familiar song, breathing into syllable sounds, musically assisted speech, dynamically cued singing, rhythmic speech cuing, and vocal intonation. Though all seven participants relied heavily on therapist cuing, improved outcomes in articulation, fluency, and prosody were observed. Considering the small sample size for this study and use of the protocol, the researchers recommend the protocol be tested using a larger sample size in order to support these findings.

The Use of Musical Elements in Speech-Language Pathology

With the first professional organization beginning around 1925, speech-language pathology is a field of expertise that specializes in the evaluation and treatment of communication disorders and swallowing disorders. At a master’s level entry, in order to become a certified Speech-Language Pathologist (SLP) one must complete an approved graduate educational program, which includes coursework, practicum, and a Clinical Fellowship (American Speech-Language-Hearing Association, 2014). Extensive knowledge of communication disorders and the correlating clinical methods is imperative to the education of a SLP. A textbook used within these programs, Clinical Methods and Practicum in Speech-Language Pathology (Hedge, & Davis, 1999), does not reference any clinical methods that use
Conversely, a speech therapy book outlining The Kopp Method for stutter rehabilitation, specifically mentions that musical sounds are prevalent in natural environments, and because rhythm is an essential aspect of sound, it is as important in speech as it is in music (Anderson, 1970). Anderson elaborates that familiarity with basic sound patterns and rhythms are necessary for the development of speech therapy techniques. The author stresses the importance of rhythm and conscious respiration control for the successful rehabilitation of a stutter, both of which are present in music. Furthermore, the American Speech-Language-Hearing Association (ASHA) website (2014), makes reference to the use of Melodic Intonation Therapy (MIT), a neurological music technique developed by Albert, Sparks, and Helm (1973), as a rehabilitative treatment for Broca’s aphasia. This technique is used in practice by both music therapists and speech-language pathologists.

Wilson, Parsons, and Reutens (2006) conducted a case study to examine the efficacy of Melodic Intonation Therapy (MIT) in a male singer with severe Broca’s aphasia. After five weeks of therapy, the researchers concluded that MIT was effective for long-term phrase production. Additionally, the participant was more likely to answer questions with a sung phrase and execute rehearsed MIT phrases without a prompt. Researchers of this study credited the success of this study to the inclusion of rehearsal for the participant, and proper training for the therapist administering the treatment. The participant’s past experience with singing may have also contributed to the positive outcomes observed. Though many are single case studies, there is a body of research (Albert et al., 1973; Sparks & Holland, 1976; Baker, 2000; Schlaug et al., 2008; Hough, 2010) to support the use of Melodic Intonation Therapy (MIT) for the improvement of language.
Music Therapy and Speech-Language Pathology Collaboration

With speech and singing so closely related, there has been an increasing interest in research that focuses on the benefits of a collaborative therapeutic approach. In the book, *Voicework in Music Therapy*, de Bruijn, Hurkmans, and Zielman (2011) introduce an interdisciplinary technique called, Speech-Music Therapy for Aphasia (SMTA). SMTA is a therapeutic treatment for aphasia or apraxia of speech that combines principles of both speech-language pathology and music therapy, and is implemented by both a music therapist and a speech-language pathologist. SMTA is grounded in the idea that rhythm and melody can facilitate speech production, and is based on MIT as seen in earlier foundational research (Albert et al., 1973), as well as continued research of this specific music therapy technique (Cohen & Ford, 1995; Baker, 2000; Schlaug et al., 2008; Tomaino, 2009; Norton, Zipse, Marchina, & Schlaug, 2009; Hurkmans et al., 2015).

What makes SMTA unique, is that the implementation involves the collaboration of a music therapist and a speech therapist in one session, instead of alternating therapy sessions. SMTA is individualized with specific objectives for the individual client. The therapists work in conjunction with one another to stimulate speech, and use music to support the client’s phonation and articulation through singing. In SMTA, the speech therapist uses assessments and SLP methods as a basis for selecting the sounds, words, and sentence levels for rehabilitation. The music therapist uses pitch, rhythm, tempo, meter, timbre, and dynamics to stimulate the production of these speech elements. This interwoven treatment is repeated as needed, and the music is eventually faded out or removed. The speech therapist can then assess the client’s improvement. Each therapist remains in his/her own scope of practice, so it appears no ethical boundaries are being crossed. Although research on this specific collaborative technique is
limited, this type of co-treatment appears to be effective for individuals with communication disorders (Brandt, Nieuwkamp, Kerkdijk, & Verschuur, 2014; Hurkmans et al., 2015).

Geist, McCarthy, Rodgers-Smith, and Porter (2008) investigated the collaborative process between music therapy and speech-language pathology for a child with severe speech impairments. The aim of this case study was to have a better understanding of best practices for a collaborative Augmentative and Alternative Communication (AAC) intervention. Following speech and music therapy assessments, the therapists determined a common goal for the child was to increase social greetings, as well as engagement during story time. Because the child responded well to music, treatments began with individual music therapy sessions, and the speech therapist was present to consult on use of the voice output device. After three individual music therapy sessions, the treatment graduated to a small music group, which lasted for four sessions. The same interventions were used in each treatment, with additional social and attention control challenges present in the group setting. Over the course of the study, the child’s on task behaviors and ability to wait for a turn increased. Furthermore, the child was more engaged in classroom activities. It was reported that repetition of the music offered the child many opportunities to practice and succeed, and also elicited positive behavioral responses as a secondary gain. Both therapists taught the child’s teacher the proper techniques to use the voice output device combined with a music experience, so that the success could continue for that child in the regular classroom setting.

In further support of music therapy and speech therapy collaborations, Kennelly, Hamilton, and Cross (2001), reviewed successful case studies for children with acquired brain injury as a result of a collaborative treatment. The researchers agreed that combined intervention could lead to improved outcomes in communication and language skills. Such positive outcomes
may be possible because language is housed in the left hemisphere of the brain, while music activates the entire brain. However, while related, the neural pathways for music and language skills differ (O’Callaghan, 1999).

Therapists out of Auckland, New Zealand, have developed a collaborative program, Tune In, which combines music and speech therapy sessions in a group setting for children with special needs and their parents (Ryckaert & Kenworthy, 2016). After short-term group therapy, the children exhibited improved social interaction strategies, as well as increased development of improved language and listening skills. The co-therapists were able to provide many opportunities for parent-child bonding in a safe and enjoyable environment. Short-term outcomes were positive with this program, and follow-up research is desirable in order to show long-term growth for the children and their parents who participate.

Lim et al., (2013) compared the effectiveness of Neurologic Music Therapy (NMT) and speech-language therapy for individuals with chronic or sub-acute, non-fluent aphasia due to a stroke. For the duration of one month, twenty-one participants, in two different university hospital settings, received either individualized music therapy (Therapeutic Singing and MIT) or speech therapy (language-oriented), twice weekly, for 60-minute sessions. Following speech therapy treatment, post-test results showed significant improvements in repetition for participants with chronic, non-fluent aphasia, and no improvements for sub-acute participants. Following music therapy treatment, post-test results showed significant improvements in their overall aphasia quotient, repetition, and understanding for participants with chronic, non-fluent aphasia. For participants with sub-acute, non-fluent aphasia, music therapy post-tests showed significant enhancements in the overall aphasia quotient, spontaneous speech, understanding, and naming. Findings suggested that both speech therapy and NMT yield significant outcomes for participants
with chronic, non-fluent aphasia, and that NMT may be more effective than speech therapy for the rehabilitation of sub-acute, non-fluent aphasic individuals.

A case study conducted by Magee, Brumfitt, Freeman, and Davidson (2011), examined the effectiveness of music therapy on an individual with Parkinson’s Disease who remained unresponsive to conventional speech therapy. The participant received music therapy for six sessions over a span of two weeks. Results showed immediate improvement in the selected speech parameters being assessed. Following the study, the individual went back to speech therapy and it was noted that the SLP used vocal warm-ups prior to starting a session with this individual, as well as with other individuals who have similar acquired levels of dysarthria.

A dual practitioner in music therapy and speech therapy stated that there might be some overlap in clinical practice between the two professional fields when it comes to communication disorders, but there is also a significant difference (North, 2014). North elaborates to say that the musical elements act in a very specific way to elicit emotional and communicative responses, while speech therapy can be beneficial by focusing more on intentional communication. The researcher presented case studies and evaluated them separately from the different clinical perspective of a speech and music therapist. The dual practitioner highlighted the use of language development through music therapy interventions, but also stressed the importance of gaining consistency through speech interventions. The reflections from this case study provide implications for collaboration of the two therapies.

With a focus on the collaboration of music therapy and speech-language pathology for the treatment of neurogenic disorders, Hobson (2006) outlined the different models for collaboration, provided examples for application of the models, and also addressed strengths and weaknesses for the different types of collaboration. The author elaborated that a
multidisciplinary approach is beneficial for bringing in multiple areas of expertise with no crossing of disciplinary boundaries, but may lack in consistencies of the treatment plans that each discipline creates. For example, the MT and SLP would create separate goals, and contribute to the client’s growth through separate treatment in their respective fields. Hobson (2006) also detailed the interdisciplinary model, in which the MT and SLP would work toward a shared goal, but during their own respective therapeutic sessions. The trans-disciplinary approach would involve both the MT and SLP working during the same session toward the same client goals. In a collaborative environment, the author stressed the importance of a clear understanding of each therapists’ own scope of practice, code of ethics, and standards of clinical practice, as it is essential to the integrity of the collaboration so that disciplinary boundaries are not crossed (Hobson, 2006).

**Summary**

Music, nor speech, are owned. It is within a music therapist’s scope of practice to address speech goals, and within a speech-language pathologist’s scope of practice to use trained speech techniques that use musical elements within them. Since singing and speaking are so closely related, there is a growing interest in collaborative research between the two therapeutic fields. Success within this research supports SLP/MT-BC collaboration in clinical practice when executed by two, certified professionals, in their respective fields.

The purpose of the study was to examine the relationship between music therapists and speech-language pathologists in order to gain a better understanding of professional boundaries within each profession, frequency of co-treatment between the two professions, and perceptions of referral in clinical practice, in order to answer the following research questions:

1. What is the frequency of co-treatment between music therapists and speech-language
pathologists in clinical practice?

(a) How many professionals are currently co-treating with the other surveyed therapeutic discipline?

(b) How many professionals have co-treated with the other surveyed therapeutic discipline?

(c) How many professionals are not currently co-treating with the other surveyed therapeutic discipline, but have in the past?

(d) How many professionals are co-treating with other professional disciplines, but not with the other surveyed therapeutic discipline?

2. What are the therapists’ perceptions of co-treatment, referral, and consultation with the other surveyed discipline?

(a) Does population served effect professional perceptions?

(b) Does work setting effect professional perceptions?

(c) Does years in practice effect professional perceptions?

3. Can professional boundaries be obscured in clinical practice?

(a) Does population served effect professional boundaries?

(b) Does work setting effect professional boundaries?

(c) Does years in practice effect professional boundaries?

It was the intention of the researcher, that this robust survey data analysis could provide a better understanding of professional perceptions between music therapy and speech-language pathology in clinical practice, and hopefully create a conversation and foundation for continued collaborative research.
CHAPTER III
METHODOLOGY

Participant Recruitment Process

The focus of this thesis is to examine the relationship between music therapists and speech-language pathologists in clinical practice, by conducting an in-depth analysis of data (N = 283) that had been collected to fulfill requirements for a graduate research course. Two parallel electronic questionnaires were collected from a sample of music therapists (n = 45) (See Appendix A) and speech-language pathologists (n = 238) (See Appendix B). Respondents identified themselves as male or female, ranged in age from at least their early 20s to over 60-years old, and would have had access to the appropriate technology in order to take the online questionnaire.

Initial acquisition of the potential respondents used a sample of convenience. This particular recruitment method was chosen because lists of speech-language pathologists (SLP) were not publicly available through ASHA, and it was not allocated within the researcher’s budget to purchase a list of contacts. The initial speech-language pathologist survey invitation was emailed to 40 SLPs, who were professional contacts of a SLP known to the researcher, and were practicing in the state of Michigan. In order to maintain consistency, the initial music therapist survey invitation was emailed to 50 MT-BCs who were currently working in the state of Michigan, as obtained through the American Music Therapy Association’s (AMTA) member directory. A minimal amount of responses (n = 24) were received within a two-week period.
The second acquisition for participants was acquired from closed social media groups, comprised of professionals in the fields of music therapy and speech-language pathology, which yielded more responses ($n = 277$).

Each email or closed social media group invitation contained a cover letter (See Appendix C) with a corresponding link to the specific professional’s questionnaire. Within the cover letter, participants were provided information pertaining to the survey. Participants were notified that by filling out and submitting the survey, they were providing informed consent to act as a participant in this research. Participants were also informed that the 18-item questionnaire would take 5-10 minutes to complete, participation was voluntary, and they were able to withdraw from the study at any time without penalty. The emails of the student investigator and faculty advisor were included in the cover letter in the event that any participants had questions or concerns regarding the survey. An incentive was offered for any respondents who wished to be included in the randomized drawing for two gift cards total, one for each professional field.

*Instrumentation*

The online program, Google Forms, was used to create both questionnaires. The questionnaire created for the Sehr (2011) thesis study was used as a template, and modified to examine professional boundaries between music therapists and speech-language pathologists. Additional changes to the questions were made as new ideas emerged from research, as well as after feedback was given from a pilot of the survey. The questionnaires were reviewed and approved by the graduate research instructor prior to being administered. The questionnaires included demographic questions, background questions based on current clinical practice, co-treatment, a scenario, and questions of opinion to gauge professional perceptions.
Data Collection

Of the initial 90 total potential participants, 24 individuals completed the questionnaires, resulting in a total response rate of 26.7%. From those 24 respondents, there were 7 SLP respondents, which reflected a 17.5% response rate, and 17 MT-BC respondents, which equated to a 34% response rate.

In an effort to gain more respondents, the invitations were posted onto four social media groups, whose members specifically included SLPs and MT-BCs. These closed Facebook groups included the following: “Michigan Speech Language Hearing Association” (330 members); “School-Based Speech and Language Therapy” (18,868 members); “Early Intervention SLPs~ Birth-3” (4,530 members); “Music Therapists Unite!” (3,929 members). After this sampling, the number of individuals who completed the questionnaires increased to a grand total of 301 respondents. Data collection took place over a period of two and half weeks on the student researcher’s password-secured, personal computer. A secondary password was required in order to access the survey data responses via Google Forms.

Inclusionary criteria for respondents were professionals in the field of music therapy and speech-language pathology who had earned the required certification to practice in their respective professions. Based on the certifications stated in each field’s scope of practice (ASHA, 2007; CBMT, 2015), a mandatory checkbox response section was included at the beginning of the questionnaire in order to identify the respondent’s credentials or certifications. Eligible responses included Certificate of Clinical Competence for Speech-Language Pathology (CCC-SLP), Speech-Language Pathology Clinical Fellowship (CF), Board-Certified Music Therapist (MT-BC), Registered Music Therapist (RMT), and Certified Music Therapist (CMT). Responses not fulfilling credential compliancy (n = 4), such as students without the proper
certification in either field, were excluded. All returned questionnaires were cross-referenced for duplicates and further ineligibility. Responses that were incomplete \((n = 5)\) were discarded, as well as responses that reflected exact duplication from the same respondent \((n = 9)\). The latter were identified by exact responses from the same email address, as well as from direct emails from participants who reported a technological difficulty while submitting the questionnaire. These issues were rectified and the participants were able to submit a questionnaire successfully. The multiple attempts from the same participants were discarded from the data set. Once the responses had been deemed eligible \((N = 283; n = 45 \text{ MT-BC, } n = 238 \text{ SLP})\), all identifiers were removed from the data prior to starting analysis.

**Data Analysis**

Data collected from this survey were initially stratified by, and reported based on professional field of practice (MT-BC or SLP). For this more robust analysis, MT-BC and SLP data were combined in order to run statistical tests with the SPSS Statistics software, and gain a better understanding of possible thematic trends. Descriptive statistics are presented in the next chapter for the majority of the demographic questions, as well as between-group comparisons when appropriate. Data that more closely pertains to the research questions were put through a more rigorous data analysis. To determine if there was any statistical significance, Pearson Chi-Square Cross Tabulation tests were used to examine the relationship between subject experiences and their professional perceptions. Most of the independent and dependent variables from the survey consisted of binomial data, and therefore the Pearson Chi-Square Cross Tabulation was the most appropriate statistical tool for this analysis. Qualitative data from open-ended responses were mined in an attempt to uncover any patterns or themes that persist in participant responses.
CHAPTER IV

RESULTS

Demographic and Background

A total of 283 responses were eligible for data analysis, which consisted of 238 SLP responses and 45 MT-BC responses. Inclusionary criteria required all participants to have certification in their respective fields. Respondents listed their professional credentials as Board-Certified Music Therapist (MT-BC) (15.5%, n = 44), Music Therapist Accredited (MTA) (.4%, n = 1), Certificate of Clinical Competence Speech-Language Pathology (CCC-SLP) (81.3%, n = 230), and Clinical Fellowship for Speech-Language Pathology (CF) (2.8%, n = 8). There were two respondents who were certified as Registered Music Therapists (RMT) in addition to having their MT-BC.

Music Therapist Accredited (MTA) is the required credential to practice by the Canadian Association of Music Therapists (Canadian Association of Music Therapists, 2018) and was accepted for purposes of this study. Clinical Fellowship (CF) pertains to the first year of professional practice under the mentorship of a CCC-SLP, for persons who have already earned a graduate degree from an approved accredited program by the Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA), and was accepted for purposes of this study.

Additional credentials or certifications that the surveyed therapists identified were: Certified Brain Injury Specialist (CBIS), Neurologic Music Therapy (NMT), NMT Fellow, Activity Director Certified (ADC), VitalStim Certified, McNeil Dysphagia Treatment Protocol
(MDTP) Certified, Early Childhood Care and Development (ECCD), Accent Modification, Assistive Technology Professional, Autism Certificate, Clinical Rehabilitative Services Credential, Certified Early Intervention Specialist, Special Education Leadership Specialist, and Vocology Certification.

Participants ranged in age from their 20s to over 60 years old, with the highest percentage of participants (33.6%, n = 95) who reported they were between the ages of “20 and 29”. The remaining responses were reported as follows: (27.2%, n = 77) were between the ages of “30 and 39”; (20.8%, n = 59) were between the ages of “40 and 49”; (14.5%, n = 41) were between the ages of “50 and 59”; and 3.9% (n = 11) reported they were age “60 or above”.

The highest percentage of participants (40.6%, n = 115) indicated they have been practicing professionally for “Less than 5 years”. The remainder of the surveyed therapist responses reported practicing for “5-10 years” (15.2%, n = 43), “11-15 years” (12.0%, n = 34), “16-20 years” (9.9%, n = 28), and “21 + years” (22.3%, n = 63).

*Populations Served by Surveyed Speech and Music Therapists*

Respondents were asked to indicate the population(s) with whom they primarily serve in clinical practice. This question was required and formatted as an open-ended response. Some respondents identified more than one population in the response box. Using a conceptual categorization, answers were placed within the following six categories (see Figure 1): “Neuro TBI NeuroRehab” (3.2%, n = 9), “Early Childhood PreSchool” (25.8%, n = 73), “School-Aged Children” (45.6%, n = 129), “Autism ASD” (11.6%, n = 33), “Geriatric Dementia Alzheimers” (5.7%, n = 16), and “Misc or Multiple Populations” (8.1%, n = 23).
Figure 1: Populations Served by Surveyed Speech and Music Therapists

Note. See Appendix D for a list of full responses with categorization.

Work Settings of Surveyed Speech and Music Therapists

Respondents were asked to indicate the clinical setting(s) in which they primarily work. This question was required and formatted as an open-ended response. Many respondents identified more than one work setting in the answer box. Using a conceptual categorization, answers were placed within the following six categories (see Figure 2): “Medical Hospital Rehab SNF” (10.2%, n = 29), “Early Intervention PreSchool” (4.2%, n = 12), “School Setting”
(58.3%, n = 165), “Private Clinic Practice Agency” (11.0%, n = 31), “Home-Based Visits” (12.4%, n = 35), and “Misc or Multiple Settings” (3.9%, n = 11).

Figure 2: Work Settings for Surveyed Speech and Music Therapists

Note. See Appendix E for a list of full responses with categorization.

Co-Treatment

Participants were then asked to respond to a series of yes/no questions regarding co-treatment in their current clinical practice. Data were collected in the following areas: Current co-treatment with other therapeutic disciplines; History of co-treatment with the other surveyed
profession; Current co-treatment with the other surveyed profession. Research question 1 inquired about the frequency of co-treatment between music therapists and speech-language pathologists in clinical practice. The following data analysis addresses this overall inquiry by looking more in-depth at the research sub-questions.

Research question 1a aimed to understand whether or not co-treatments were occurring in clinical practice, and if so, what was the frequency of surveyed SLPs and MT-BCs who were currently co-treating with the other surveyed discipline. When the participants were asked, “Do you currently co-treat with the other surveyed discipline?”, respondents answered: “Yes” (8.1%, \( n = 23 \)), and “No” (91.9%, \( n = 260 \)). Although there were unequal sample sets of SLP and MT-BC respondents, a greater percentage of MT-BCs (26.7%, \( n = 12 \)) reported they were currently co-treating with SLPs, as opposed to SLPs (4.6%, \( n = 11 \)) who reported they were currently co-treating with MT-BCs (see Table 1).

### Table 1

<table>
<thead>
<tr>
<th>Professional Discipline</th>
<th>SLP</th>
<th>MT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently Co-treat with the Other Surveyed Discipline?</td>
<td>Yes</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>227</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>238</td>
<td>45</td>
</tr>
</tbody>
</table>

The SLP and MT-BC respondents who reported that they are currently co-treating with the other surveyed profession were then asked to estimate the average weekly frequency of these co-treatment experiences within a short-answer, open-ended response box (see Table 2).

Research question 1b investigated the number of surveyed professionals who have ever co-treated with the other surveyed therapeutic discipline. When surveyed therapists were asked,
Table 2

Estimated Weekly Frequency of Co-Treatment With the Other Surveyed Profession

<table>
<thead>
<tr>
<th></th>
<th>&lt; 1x/week</th>
<th>1-2x/week</th>
<th>3-4x/week</th>
<th>15+ x/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT-BCs who Co-Treat with SLPs</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SLPs who Co-Treat with MT-BCs</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Note. Answers falling under <1x/week were typically reported to be 1-2x/month, or once every few weeks. There were no reported frequencies ranging between 5-14.

“Have you ever co-treated with the other surveyed therapeutic discipline?”, surveyed SLPs and MT-BCs responded: “Yes” (29.3%, n = 83), and “No” (70.7%, n = 200). When the responses were separated into answers from the separate therapeutic disciplines, 75.6% (n = 34) of the surveyed MT-BCs reported they have ever co-treated with an SLP, and only 20.6% (n = 49) of surveyed SLPs reported they have ever co-treated with an MT-BC.

Research question 1c addressed the frequency of how many surveyed SLPs and MT-BCs are not currently co-treating with the other surveyed therapeutic discipline, but have participated in co-treatments in the past (see Table 3). A reported 8.1% (n = 23) of survey respondents were currently co-treating with the other surveyed discipline, while 21.2% (n = 60) had formerly co-treated, but were not currently co-treating with the other surveyed profession.

Table 3

Current and Past Co-Treatment Experiences of the Surveyed Therapists

<table>
<thead>
<tr>
<th>Currently Co-treating with the Other Surveyed Discipline</th>
<th>Ever Co-Treated with the Other Surveyed Discipline</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>83</td>
</tr>
</tbody>
</table>
When asked “Do you currently co-treat with other therapeutic disciplines such as Physical Therapy, Occupational Therapy, Speech Therapy, Music Therapy, or other Creative Arts Therapies?”, surveyed SLPs and MT-BCs responded: “Yes” (54.1%, \( n = 153 \)), and “No” (45.9%, \( n = 130 \)). These survey responses were then stratified into therapeutic discipline in order to answer research question 1d, which was a probe to explore how many professionals are co-treating with other professional disciplines, but not with the other surveyed therapist. Of the 46.7% \( (n = 21) \) of MT-BCs who reported they were currently co-treating with other professional disciplines, 57.1% \( (n = 12) \) were currently co-treating specifically with a SLP. Of the 55.5% \( (n = 132) \) of SLPs who reported they currently co-treat with other professional disciplines, only 8.3% \( (n = 11) \) were currently co-treating specifically with a MT-BC.

**Professional Perceptions**

Participants were asked to respond to a series of statements about their professional perceptions regarding co-treatment with the other surveyed discipline in clinical practice. Research question 2 delved into the surveyed therapists’ perceptions of co-treatment, referral, and consultation with the other surveyed therapeutic discipline.

When given the statement: “I believe a co-treatment with the other surveyed profession can be an effective way to help a client reach his/her goals”, surveyed therapists responded: “Yes” (78.8%, \( n = 223 \)), “No” (1.1%, \( n = 3 \)), and “Undecided” (20.1%, \( n = 57 \)). When the responses were stratified into the questionnaires from each separate therapeutic discipline, 100% \( (n = 45) \) of surveyed music therapists reported they believed co-treatment with a SLP may be an effective way to help a client reach his/her goals, and 74.8% \( (n = 178) \) of surveyed speech-language pathologists reported they believed co-treatment with an MT-BC may be an effective way to help a client reach his/her goals.
In response to the statement, “I am open to referring a client for the other surveyed therapy if services are available”, participants responded: “Yes” (78.1%, \( n = 221 \)), “No” (3.5%, \( n = 10 \)), and “Undecided” (18.4%, \( n = 52 \)). When the responses were stratified into therapeutic discipline, the overwhelming majority (93.3%, \( n = 42 \)) of music therapists were open to referring a client to speech therapy, and 75.2% (\( n = 179 \)) of speech-language pathologists therapists were open to referring a client for music therapy if services were available. Of the “Undecided” responses, 96.1% (\( n = 50 \)) were from speech-language pathologists.

Participants responses to the statement, “I am open to consulting the other surveyed therapist about an SLP/MT co-treatment if it would be beneficial to the client”, were reported as: “Yes” (90.4%, \( n = 256 \)), “No” (1.1%, \( n = 3 \)), and “Undecided” (8.5%, \( n = 24 \)). These responses were separated into the questionnaires from each separate therapeutic discipline and determined that 97.8% (\( n = 44 \)) of MT-BC respondents said “Yes”, and 89.1% (\( n = 212 \)) of SLP respondents said “Yes”.

When asked to respond to the experience statement, “I have been consulted in the past by the other surveyed professional who has a client that he/she believes is an eligible candidate for an SLP/MT co-treatment”, participants responded: “Yes” (19.1%, \( n = 54 \)), and “No” (80.9%, \( n = 229 \)). In order to determine if there was a trend with either of the surveyed therapists, responses were broken down into therapeutic discipline, and indicated that 1.3% (\( n = 27 \)) of surveyed SLPs reported they had been consulted in the past by a MT-BC for a co-treatment, and 60.0% (\( n = 27 \)) of MT-BCs reported they had been consulted in the past by a SLP for a co-treatment.

Research question 2a focused on whether or not population served affected the surveyed therapists’ professional perceptions. A Pearson Chi-Squared Cross Tabulation test determined
that there was no statistical association, $\chi^2 (10) = 11.289, p < .335$, between population served and the surveyed therapists’ professional perceptions in clinical practice (See Table 4).

**Table 4**

*Population Served and Perceptions of Co-Treatment Effectiveness*

<table>
<thead>
<tr>
<th>Is Co-Treating</th>
<th>Population with Whom You Currently Work</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undecided</td>
<td>Neuro TBI</td>
<td>Early Childhood</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>73</td>
</tr>
</tbody>
</table>

*Note.* 9 cells (50.0%) have an expected count less than 5. Statisticians recommend using a Fisher’s Exact test when there are more than 5 cells with an expected count less than 5. However, a Fisher’s Exact test requires a 2x2 table. Because this data set could not be condensed into a 2x2 data table, it was decided by the researcher to use the Pearson Chi-Squared Cross Tabulation table to report data.

To address research question 2b and examine whether or not the surveyed therapists’ work setting had an effect on professional perceptions, a Pearson Chi-Square Cross Tabulation test determined there was no significant association between work setting and whether or not the surveyed therapist believed co-treating with the other surveyed therapeutic discipline was effective, $\chi^2 (10) = 18.168, p < .052$. While this test was not statistically significant, the $p$-value is only .002 more than what is considered statistically significant, which could indicate that work setting, may affect the perception of an effective co-treatment (See Table 5).

Additionally, a Pearson Chi-Squared Cross Tabulation revealed there was a significant association, $\chi^2 (5) = 19.626, p < .001$, between current work setting and whether or not the surveyed therapist had been consulted by the other surveyed discipline regarding a SLP/MT-BC co-treatment (see Table 6). Not accounting for the “Misc or Multiple Settings” category, the
Table 5
Work Setting and Perceptions of Co-Treatment Effectiveness

<table>
<thead>
<tr>
<th>Setting at Which Surveyed Therapists Currently Work</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Hospital Rehab SNF</td>
<td></td>
</tr>
<tr>
<td>Early Intervention PreSchool</td>
<td></td>
</tr>
<tr>
<td>Schools Private Clinic Home Agency Visits Multiple Settings</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Is Co-Treating with the Other Surveyed Discipline Effective?</th>
<th>Undecided</th>
<th>Yes</th>
<th>No</th>
<th>Undecided</th>
<th>Yes</th>
<th>No</th>
<th>Undecided</th>
<th>Yes</th>
<th>No</th>
<th>Undecided</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>4</td>
<td>25</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>39</td>
<td>124</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>26</td>
</tr>
</tbody>
</table>

Note. 8 cells (44.4%) have an expected count less than 5. Statisticians recommend using a Fisher’s Exact test when there are more than 5 cells with an expected count less than 5. However, a Fisher’s Exact test requires a 2x2 table. Because this data set could not be condensed into a 2x2 data table, it was decided by the researcher to use the Pearson Chi-Squared Cross Tabulation table to report data.

data appears to illustrate that the therapists working in a “Medical Hospital Rehab SNF” setting have the highest percentage (41.4%, n = 12) of having been consulted for co-treatment with the other surveyed professional. Therapists working in “Early Intervention PreSchool” have the lowest percentage (8.3%, n = 1) of having been consulted for co-treatment by the other surveyed profession, which also happens to be the same work setting that yielded similar “Yes” and “Undecided” answers for effectiveness of a co-treatment (Table 5).

To investigate research question 2c and determine whether there was an association between the reported number of years in professional practice and the belief that co-treatment with the other surveyed profession is effective, the Pearson Chi-Square Cross Tabulation revealed there was no statistical significance (see Table 7). The majority of surveyed therapists (78.8%, n = 223) agreed that co-treatment with the other surveyed profession was beneficial,
Table 6
Work Setting and Previous Consultation for Co-Treatment

<table>
<thead>
<tr>
<th>Setting at Which you Currently Work</th>
<th>Medical Hospital</th>
<th>Early Intervention</th>
<th>Schools</th>
<th>Private Clinic Practice</th>
<th>Home Based Visits</th>
<th>Misc or Multiple Settings</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Hospital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Early Intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Private Clinic Practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Home Based Visits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Misc or Multiple Settings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Been Consulted by the Other Surveyed Discipline for Co-Treatment</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting at Which you Currently Work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Hospital</td>
<td>12</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>Early Intervention</td>
<td>1</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Schools</td>
<td>24</td>
<td>141</td>
<td>165</td>
</tr>
<tr>
<td>Private Clinic Practice</td>
<td>8</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Home Based Visits</td>
<td>4</td>
<td>31</td>
<td>35</td>
</tr>
<tr>
<td>Misc or Multiple Settings</td>
<td>5</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

| Total                                                            | 54  | 229| 283  |

Note. 2 cells (16.7%) have expected outcomes less than 5.

while 20.1% ($n = 57$) were Undecided, and 1.1% ($n = 3$) did not think a co-treatment was beneficial. The largest number of “Undecided” responses came from those who reported practicing “Less than 5 Years” ($n = 25$) and “21 or More Years” ($n = 14$).

Table 7
Years of Practice and Perceptions of Co-Treatment Effectiveness

<table>
<thead>
<tr>
<th>Years of Practice</th>
<th>Less than 5 Years</th>
<th>5-10</th>
<th>11-15</th>
<th>16-20</th>
<th>21 or more years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is co-treatment effective?</td>
<td>Undecided</td>
<td>25</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>88</td>
<td>37</td>
<td>28</td>
<td>21</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| Total              | 115  | 43  | 34   | 28   | 63               | 283   |

Professional Boundaries

After reading a scenario describing professional boundaries within the participant’s professional field of practice, the surveyed therapists were asked, “Do you believe Sue was acting within her profession boundaries of clinical practice?”. Participants responded: “Yes”
(56.2%, n = 159), “No” (15.5%, n = 44), and “Undecided” (28.3%, n = 80). Respondents were then given the option to submit comments regarding the scenario. Various opinions regarding the scenario were submitted within an optional, open-answer response box. Thematic trends included a large number of comments that included: “consultation”, “evidence-based practice”, “Melodic Intonation Therapy is a shared technique”, and “modification/adaptation is alright as long as the therapist is not claiming to administer the other (surveyed) therapy”. Qualitative responses ranged from those who believed a concise boundary of professional practice was being crossed, to others reporting there is an overlap and some grey area.

The final questions collected data in the following areas: Addressing goals in clinical practice; Elements of the other surveyed profession in clinical practice; Receptiveness to learning more about the other surveyed profession.

Participants were asked about the use of music to address speech goals in clinical practice. When surveyed therapists were given one of the following parallel statements: “I address (or have addressed) speech goals in my music therapy sessions”, or “I use (or have used) music in my speech therapy sessions”, participants answered: “Yes” (84.8%, n = 240), and “No” (15.2%, n = 43). It was reported that 100.0% (n = 45) of MT-BC participants address or have addressed speech goals in music therapy sessions, and 81.9% (n = 195) of SLP participants use or have used music in speech therapy sessions.

When given the statement: “I use (or have used) songs with specific phonetic sounds or words in a session to help a client address speech goals”, participants responded: “Yes” (75.3%, n = 213), and “No” (24.7%, n = 70). It was reported that 95.6% (n = 43) of MT-BC participants reported “Yes”, and 71.4% (n = 170) SLP participants reported “Yes”.

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When asked to respond to the statement, “If resources were available, I would participate in workshops/advanced training to learn how to better (‘address speech goals’ or ‘use music’) in my clinical practice”, participants responded: “Yes” (86.2%, \( n = 244 \)), “No” (2.8%, \( n = 8 \)), and “Undecided” (11.0%, \( n = 31 \)).

Research question 3 aimed to determine whether or not professional boundaries can be obscured in clinical practice. When further analysis was conducted to determine if population (question 3a) or work setting (research question 3b) had an effect on responses to questions regarding professional boundaries, there was no statistical significance.

There was a statistically significant association between years of professional practice (question 3c), and whether or not the surveyed therapist perceived the scenario to be within professional boundaries, \( \chi^2 (8) = 18.605, p < .017 \). The majority of surveyed participants (56.2%, \( n = 159 \)) believed the therapist in the scenario was acting within the scope of professional practice, 28.3% (\( n = 80 \)) were Undecided as to whether or not the scenario was within professional boundaries, and 15.5% (\( n = 44 \)) did not believe the therapist was acting within the scope of professional practice (see Table 8). Regardless of years of practice, most participants answered “Yes”. The majority of the “No” responses came from those practicing “Less than 5 Years” (65.9%, \( n = 29 \)), as well did the majority of the “Undecided” responses (40.0%, \( n = 32 \)). When stratified into professional field of practice, MT-BC (\( n = 11 \)) and SLP (\( n = 33 \)) answered “No”; and MT-BC (\( n = 15 \)) and SLP (\( n = 65 \)) reported “Undecided”. 
<table>
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<th>Scenario</th>
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<th>Total</th>
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Note. 1 cell (6.7%) has an expected count less than 5.
CHAPTER V
DISCUSSION

Before discussing outcomes of the survey, it should be mentioned again that lack of specificity within the sampling frame made it difficult to generalize the conclusions of the study. The initial sampling frame included only therapists currently working in the state of Michigan, with the intention that conclusions could be made for a distinct, professional region. However, the sampling frame became less defined when the secondary acquisition of respondents was opened up to include social media groups. While the results offer much for discussion, it was difficult to know how to generalize the findings of the broader, unknown sampling frame.

The purpose of this study was to examine the relationship between music therapists and speech-language pathologists in order to gain a better understanding of professional boundaries within each profession, frequency of co-treatment between the two professions, and perceptions of referral in clinical practice. Data indicated there was agreement between the two professions regarding ethical boundaries, perceptions for referral and consultation, and the use of music to address speech goals. While music therapists and speech-language pathologists were found to be minimally co-treating in clinical practice, they were generally open to consultation, referral, and collaboration for a co-treatment. There was agreement between the two professions that components from the other surveyed profession may be utilized, while still remaining within their respective field’s scope of practice. Populations served by the therapists do not appear to have an effect on professional perceptions, though work setting and years in practice may contribute to a therapist’s perceptions of co-treatment, which is explored further in this section.
Demographics and Background

Prior to administering the survey, the intention of the demographic questions was to determine if there was a correlation between the demographic answers and the professional perceptions. Because the large majority of professionals within both fields of practice are predominantly female, responses gained from gender were not deemed to be strong indicators for the research questions in this study, and were omitted from the analysis. Likewise, responses in the demographic section regarding age, were deemed to be of lesser importance than ‘years in clinical practice’ for answering the research questions, and were also omitted from this analysis.

Upon reading and analyzing the results of this survey, the number of surveyed therapists, especially SLPs, who reported working in a school setting appeared to be so great that the researcher thought this factor may bias some of the results. However, these uneven results align with the number of SLP professionals who currently work in the school setting. A recent workforce analysis confirms that 52% of speech-language pathologists reported “School” as their primary employment facility (Rogers, 2017). This trend is also supportive of the Register (2002) study, in which the largest number of music therapy survey participants (38.8%) identified a school or educational facility for the location of service.

Categorization of Population and Work Setting Responses

Data regarding population and work settings were analyzed after the survey had been closed. It was the intention of the researcher to use the same categories for both sets of data collected. However, MT-BCs and SLPs do not always serve similarly stratified or titled populations in clinical practice, which was reflected when individual answers consisted of multiple populations and work settings. It is worth noting, again, that survey questions eliciting this information were in free-response format, so respondents were free to use whatever language
they deemed best described the populations with whom they worked. This created a limitation in being able to compare populations between music therapy and speech-language pathology respondents. With the spectrum of answers submitted, as well as the different wording used for similar responses, categorization became difficult. Each population was taken into consideration during the categorical analysis. The researcher determined categories primarily by the most prevalent, singular population responses, such as autism, neuro-rehabilitation, school children, and geriatrics. Once the most frequent responses were placed into specific categories, the remaining multiple population responses were evaluated and placed into an existing category. For instance, if a respondent answered stroke or traumatic brain injury, these responses were placed into the neuro-rehabilitation category. The small amount of responses that could not be categorized or contained three or more populations, were placed together under a miscellaneous or multiple populations category. The following provides further justification of the classification system.

The researcher created the following categories for populations served: “Neuro TBI NeuroRehab”, “Early Intervention PreSchool”, “School-Aged Children”, “Autism ASD”; “Geriatric Dementia Alzheimers”, and “Miscellaneous or Multiple Populations”. Responses categorized as “Neuro TBI NeuroRehab”, included any answer that specifically mentioned Neuro, TBI, or Neurorehab, whether alone or with any other population. Other responses in this category included adult neuro, brain injury, head injury, stroke, TBI, and CVA. Responses categorized as “Early Childhood PreSchool” included pediatric, early intervention, pre-school, 0-3, birth-3, and Pre-K. Responses categorized as “School-Aged Children” included school children, children, elementary, middle school, high school, adolescents, college, school districts, special education, K-12, Pre-K to 5. Responses categorized as “Autism ASD” included any
answer that specifically mentioned Autism Spectrum Disorder, Autism, ASD, whether alone or with any other population. Responses categorized as “Geriatric Dementia Alzheimers” included geriatrics, dementia, Alzheimers, older adults, or elders. Responses categorized as “Miscellaneous or Multiple Populations” included singular responses that could not be categorized otherwise, or responses of three or more populations (see Appendix D).

The researcher created the following categories for work settings: “Medical Hospital Rehab SNF”, “Early Intervention PreSchool”, “Schools”, “Private Clinic Practice Agency”, “Home-Based Visits”, and “Miscellaneous or Multiple Populations”. Responses categorized as “Medical Hospital Rehab SNF” included any answer that specifically mentioned medical facilities, hospitals, intermediate care facilities, rehabilitation facilities, skilled nursing facilities (SNF), and nursing home facilities, whether alone or with any other population. Responses categorized as “Early Intervention PreSchool” included Early On, early intervention, pre-school, 0-3, birth-3, and infants. Responses categorized as “Schools” included schools, public schools, school districts, elementary, middle school, high school, special education, K-8, University, and Therapeutic Day School. Responses categorized as “Private Clinic Practice Agency” included any answer that specifically mentioned agency, self-employed, clinic, or private practice, whether alone or with any other population. Responses categorized as “Home-Based Visits” included any answer that included home health, client’s home, homes, in-home, home care, home-based intervention, and home visitor, whether alone or with any other population. Responses categorized as “Misc or Multiple Settings” included singular responses that could not be categorized otherwise, or responses of three or more populations (see Appendix E).

The subjectivity of the categorization was seen as a limitation. Depending on the researcher, data may have been categorized differently, thus creating conflict in the
categorization. It would be recommended for future research to set up any questions regarding population served and work setting as a forced, multiple-choice response option, with populations pre-selected by the researcher. An option to provide a short-answer response for an “Other” category would be optimal.

Co-Treatment

Similar to what the author thought prior to the onset of the study, the overwhelming majority of surveyed therapists were not currently co-treating with the other therapeutic discipline. However, with a growing body of research that supports the collaboration of speech and music therapists in clinical practice with positive outcomes (de Bruijn et al., 2011; Geist et al., 2008; Kennelly et al., 2001; Ryckaert & Kenworthy, 2016), it was surprising to find such a small number of speech and music therapists who were co-treating with one another. Reasons for the limited number of reported collaborations are unknown, but could be attributed to a myriad of confounding variables. For instance, with such a large number of participants who reported working in the school setting, federal and state mandates for an Individualized Education Program (IEP) need to be taken into account, which may create restrictions and ultimately impact the ability for co-treatment to occur in the school setting. Other possible factors include therapists sharing insurance billing codes, which could make it impossible to split or share billing time for a collaborative session. Perhaps some work settings do not employ music therapists, the field of music therapy is considerably smaller than speech-language pathology. Furthermore, it is unlikely that a therapist who owns a private practice would be collaborating with other therapeutic disciplines in that particular clinical setting.

Though the sample size of the two surveyed professions were admittedly unequal, a greater percentage of MT-BC respondents reported they were currently co-treating with SLPs, as
opposed to SLP respondents who reported they were currently co-treating with MT-BCs. Once again, this may be attributed to the ability to co-treat in certain work settings. One speculation to explain this difference may be attributed to the fact that the vast majority of survey respondents, especially SLP, work in school settings. Perhaps this specific workplace does not allow for co-treatment unless it is specified in a student’s Individualized Education Program (IEP). School settings were not a focus of this current research, and details about the use of therapies in school systems are unknown to this researcher.

Contrary to the author’s high expectation of SLP and MT-BCs who have co-treated in the past, the number of surveyed therapists who formerly co-treated with the other surveyed discipline was surprisingly small. This overall lack of reported co-treatment could indicate either a lack of experience with a successful collaboration, or a lack of knowledge about the benefits of an effective collaboration. Positive outcomes have been observed when speech therapy and music therapy collaborate (Schlaug et al., 2008; Geist et al., 2008; Tomaino, 2009; Norton et al., 2009; de Bruijn et al., 2011; Brandt et al., 2014; Hurkmans et al., 2015; Ryckaert & Kenworthy, 2016). It is important that students in both fields of study have exposure to this type of research during their early training, especially since both professional fields use an evidence-based practice (CBMT, 2015; ASHA, 2007). Perhaps academic requirements for these programs of study do not currently include collaborative work or research, or perhaps, instructors have negative biases regarding collaboration due to the legislative friction between the two professional fields. Consideration should be given as to whether or not this disjunction at the organizational level is impacting training and professionals at the clinical level.

Furthermore, there needs to be more education on how to create and implement a successful collaboration during pre-professional training, including practicum, fieldwork,
internship, and fellowship placements. The more knowledge that is provided in academia, and
the more opportunities students have to experience positive and successful collaborations, could
only create more successful collaborations in clinical practice, and therefore increase positive
outcomes for the clients served.

There are a limitless number of factors that could contribute to the minimally reported co-
treatment from the separate disciplines. However, because the initial aim of the study was to gain
a primary understanding of collaborations in clinical practice, the questionnaires were not set up
to explore underlying factors. The need to explore confounding variables was not anticipated by
the researcher, but would be highly recommended for future surveys that are similar in nature.

*Professional Perceptions*

Prior to this study, the researcher hypothesized that years of professional practice may
affect perceptions about a co-treatment, due to either positive or negative experiences of those
who have worked in their fields longer, or the lack of collaborative exposure that may be evident
with a newer professional. However, the reported years in professional practice did not appear to
have any significance on current co-treatment trends.

Aside from one exception in which participants who reported working in “Early
Intervention” almost equally responded “Yes” and “Undecided” to the belief that a co-treatment
is effective, there appeared to be an overall agreement between the surveyed therapists for the
effectiveness of co-treatment, openness to referral, and consultation for co-treatment. When the
surveys were separated into therapeutic discipline, it appeared that music therapists were more
open for co-treatment than speech-language pathologists, but once again, with the unequal
sample set and the small sample size of music therapist respondents, this statement cannot truly
be generalized.
The researcher was curious if background or demographic factors would affect professional perceptions. No significant perceptions were identified based on population served, years of practice, or work setting. However, a statistically significant effect was observed, in which the highest percentage of therapists being consulted for a co-treatment, reported working in the “Medical” setting. It is the experience of this researcher that many medical facilities allow for co-treatment without obscuring any billing boundaries, especially if positions are endowed. Another possible reason medical facilities may surpass billing issues could be the treatment of automobile accident cases. Michigan is currently a no-fault state, which means the insurance company covers all medical expenses. This topic is outside the scope of this paper, however, it is mentioned to stress the many possible variables that may impact consultation for, and implementation of, a co-treatment between the two therapeutic professions.

Professional Boundaries

The clinical scenario was intended to probe ethical boundaries in clinical practice. To see the exact wording of the parallel clinical scenarios, see Appendices A and B. The highest percentage from each group of surveyed professionals believed that the clinician in the scenario was acting within her scope of practice. In the original written scenario, which was piloted to a graduate research class, the researcher described Melodic Intonation Therapy (MIT) (Albert et al., 1973) without calling it by name. All of the sample test-takers stated that it seemed the researcher was trying to elicit a certain response to the scenario, and thus were hesitant to answer freely. A decision was made by the researcher to make the scenario more vague in order to get the most honest and unbiased data regarding ethical boundaries. Ironically, what manifested were many participants from both surveyed professions who responded with an “Undecided” answer, and included a comment that it would depend on the specific technique the professional
was utilizing.

Many of the SLP participants who responded that the scenario was within the professionals scope of practice, commented that a music therapist should be consulted, and/or the client referred for music therapy if the music probe was successful. It is interesting to note that four SLP participants identified themselves as having a highly rich musical background, an undergraduate degree in music, or a master’s degree in music. All four of these participants commented that they felt especially competent in using music and absolutely felt they should incorporate music into their practice because of their specialized training in music. Additionally, many therapists validated the scenario as being within the professional’s scope of practice because they were using MIT, which is included in training for both professional fields.

An overarching theme, about knowing one’s own scope of practice, became evident in these responses, which supports existing research that emphasizes the importance of having a keen knowledge of one’s own scope of practice in order to maintain professional boundaries in collaborative approaches (Hobson, 2006).

Because of the significant legislative opposition experienced by music therapists in Georgia, it was of interest to this author that one SLP participant identified having Georgia state licensure. Due to the tension at the organization level between ASHA and AMTA, the researcher was curious if that would be reflected in the individual’s response. The participant, who was between the age of 50 and 59, reported practicing professionally for 21 or more years, and was currently working in a school setting, had never co-treated with a music therapist. However, the SLP respondent was open to referring a client for music therapy if services were available, open to consulting a music therapist for co-treatment if appropriate, and stated she would be interested in attending advanced training to better incorporate music into her clinical practice. While there
was a clear struggle at the organizational level between the two professions in this participant’s state of practice, this did not appear to be evident in this individual respondent.

Furthermore, personal communication between this writer and a member of the Music Therapy Association of Georgia confirmed that licensed music therapists continue to address speech and communication goals either independently or by co-treating with SLPs using interventions that fall specifically within the music therapy scope of practice. It appears that despite the resistance, therapists are collaborating in clinical practice, and the friction appears to be more at the organizational level than the professional membership level.

The following text boxes contain a variety of direct quotes from surveyed music therapist (see Figure 3), and surveyed speech-language pathologists (see Figure 4).

“Observing a technique in a co-treat does not qualify one to administer it on his/her own. I would not try this new technique unless I had the SLP explain it to me.”

“I think it is outside the professional boundaries, though you could modify the general idea and implement it within an MT technique.”

“As clinicians, we often have to be resourceful about using therapeutic interventions and our own selves as therapeutic tools to meet a client’s needs. As long as she does not call this speech therapy, I believe she is acting within professional boundaries. That said, I think it would be wise to consult with an SLP or refer the person to an SLP if it seems like that is the direction the client needs to go (i.e. MT techniques not useful).”

“It depends on the technique. There is some overlap between music therapy and speech therapy techniques. The scenario seems to imply that this was not a typically used music therapy technique.”

“There is a technique, originally an SLP technique, which is appropriately used by NMT-trained MTs, named Melodic Intonation Therapy. NMT has other speech-oriented MT protocols, which would be appropriate for use by NMT trained MTs. Other than that I have facilitated production of sounds and vocal techniques recommended by SLPs, in music interventions.”

Figure 3: Open-Ended Scenario Responses From Surveyed MT-BCs
“She is not a certified music therapist, and the scenario didn’t mention that she is a musician either. Sue should stick to evidence based speech techniques and request MT consult.”

“It depends on the technique, as some ‘music therapy’ techniques also cross over into SLP techniques and vice-versa, for example: Melodic Intonation Therapy (MIT). If the intervention is evidence based and does not require special certification, then it would fall within the SLP’s scope of practice.”

“I’d be concerned that music therapy is working with word retrieval. I’d be more concerned with music therapy claiming they can improve communication without the use of a SLP.”

“If the SLP was probing for successful techniques I believe it was within her boundaries. If the probe was successful, the SLP should contact a music therapist to co-treat or refer the client to a music therapist.”

“I am not a music therapist, but have musical training and my undergraduate degree is in music. I feel comfortable using music in speech therapy, but would not claim it to be music therapy. Music belongs to everyone. If I were Sue, I would want to consult with the music therapist as often as necessary and keep the music therapist updated on my client’s progress.”

“All specialists should learn from each other and utilize any technique which may benefit their clients as long as the treatment is not harmful to the client. In this particular scenario, I may contact the music therapist for consultation.”

“I have been recommended to use music as a therapy tool in the past. The research article at the time did not include a music therapist. Also, I do not have access to a music therapist. I often wish all the professionals had more time to work together. Hopefully one day educational settings will have access to music and behavioral therapists.”

Figure 4: Open-Ended Scenario Responses From Surveyed SLPs

Limitations and Recommendations for Future Research

The primary limitations of this study were the unequal sample sizes between professions, and the potential bias of responses due to acquiring data via a sample of convenience. Although these samples appear vastly different, it could be arguable that these uneven numbers were indicative of the difference in total number of professionals working in each respective field.

The most recent statistics reported there were 145,100 speech-language pathology jobs (Bureau of Labor Statistics, U.S. Department of Labor, 2016), and 7,541 credentialed music therapists (CBMT, 2015). Regardless of the difference in overall professional numbers, the sample set was
skewed, and the results of this survey analysis could not be accurately generalized. A more equal amount of responses from each professional field would be desired for future replication studies.

Acquisition of the sample set was seen as another limitation. Given that the highest percentage of survey participants were in the “20 to 29” age group, and practicing “Less than 5 years”, it is possible that the convenience, appeal, and accessibility that social media offers, especially with younger generations, may have created answer bias by acquiring younger or newer professionals.

Further limitations were seen in the sampling set, as evidenced by the highly unequal responses for “population served” and “work setting”. The largest number of surveyed music therapists and speech-language pathologists reported working with student, special education, or school-aged populations, and a large number of surveyed music therapists and speech-language pathologists reported their current work setting was in a school. The first set of survey invitations were sent by electronic mail and did not yield a significant amount of responses. Since the second set of survey invitations were posted on multiple, closed Facebook groups, the high response rate from speech-language pathologists in school settings may be due to the fact that the survey invitation was posted in the group, “School-Based Speech and Language Therapy” (18,868 members), and contained the largest amount of professional members than any other group in which the survey invitation was posted.

Additionally, due to the nature of social media, it was not possible for the researcher to calculate an accurate response rate following the secondary survey invitation postings. Difficulties presented in knowing how many members of the social media groups were eligible candidates for the survey, as well as how many members in the groups actually viewed the survey invitation, as Facebook algorithms may impact what is viewed in a feed. While this
method of obtaining participants created difficulty in calculating an overall response rate, it proved to be an effective vehicle for attaining respondents and would be recommended as a source for obtaining participants for future survey studies. The number of closed groups for certified professionals has increased within recent years, which foreshadows that future replication studies could have an even greater capability for outreach through this medium.

Furthermore, a very small number of surveyed therapists were currently co-treating with the other surveyed discipline. With so many of the total surveyed participants currently working with students or in school settings, questions arise as to why this is an overwhelmingly low percentage. If this survey were to be duplicated, an additional set of sub-questions would be recommended under the “work setting” questions, specifically to inquire whether or not music therapy is an available service for the surveyed participants. This could help determine whether or not the availability of services were the reason for the low percentage of current co-treatment.

Another possible set of sub-questions could pertain to work setting and how billing is conducted. In an Issue Brief, ASHA has expressed concerns about conflicts of interest between music therapy and speech-language pathology in terms of billing for services (ASHA, n.d.). If a work setting utilized shared Current Procedural Terminology (CPT) codes for MT-BCs and SLPs, then only one professional would be able to bill per day. However, if CPT codes are not shared, there should be no conflict with billing. It would behoove any future researcher to examine the relationship between work settings and billing in order to further understand if this impacts the frequency of co-treatment, or the ability to co-treat in clinical practice.

It is recommended that future survey instruments exclude demographic questions for gender or age, as they were not pertinent to the research questions. Both of these fields contain a high ratio of female professionals, as evidenced by participants in this study identifying as:
“Male” (2.8%, \(n = 8\)) and “Female” (97.2%, \(n = 275\)). Gender may not be a sound indicator for a survey between these two therapeutic disciplines. Additionally, if a future researcher opted to explore gender as a demographic question, it should be expanded to include all gender identities.

Dual practitioners in music therapy and speech therapy could be a great resource for future research and consultation. Both music and speech are natural pathways for expression (Cohen, 1994; Juslin & Västfjäll, 2008; Van Den Stock, Peretz, Grèzes, & de Gelder, 2009; Donnay, Rankin, Lopez-Gonzalez, Jiradejvong, & Limb, 2014), and both have a specific order that must be followed in order to make sense (Levitin & Tirovolas, 2009). While there is a significant difference between a speech-language pathologist’s and music therapist’s scope of practice, there is overlap in clinical practice when it comes to communication disorders (North, 2014). Future studies could be amplified by including interviews with dually certified SLP/MT-BCs.

Although individual subjects did not benefit from participating in this research, the outcomes have hopefully contributed to gaining a better understanding of the perceptions and professional boundaries between music therapists and speech-language pathologists in clinical practice. It is recommended that research continue to explore co-treatment frequency and trends, professional perceptions, and professional boundaries in clinical practice between music therapy and speech-language pathology. Truly understanding how these two professions function together at the clinical level may help create more cohesion at the organizational level, and ultimately benefit the clients served.
REFERENCES


Sehr, A. (2011). Examination of professional boundaries between music therapy and counseling. Master’s Thesis. Texas Woman’s University, Denton, Texas.


APPENDIX A

Questionnaire for Music Therapists
1. Gender
   - Female
   - Male

2. Age
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60 and above

3. How long have you been practicing music therapy?
   - Less than 5 years
   - 5-10 years
   - 11-15 years
   - 16-20 years
   - 21+ years

4. What credentials/certification have you earned?
   - Board-Certified Music Therapist (MT-BC)
   - Registered Music Therapist (RMT)
   - Certified Music Therapist (CMT)
   - Creative Arts Therapist (CAT, ACAT)
   - Other...

5. With which population(s) do you primarily work?
   - (Open Answer)
6. In what setting(s) do you primarily work?
   ○ (Open Answer)

7. Do you currently co-treat with other therapeutic disciplines such as Physical Therapy, Occupational Therapy, Speech Therapy, or other Creative Arts Therapies?
   ○ Yes
   ○ No

8. Have you ever co-treated with Speech Therapy?
   ○ Yes
   ○ No

9. Do you currently co-treat with Speech Therapy?
   ○ Yes
   ○ No

10. If you replied yes to the previous question: On a weekly average, about how often do you participate in co-treatment sessions with a Speech Language Pathologist (SLP)?
    ○ (Open Answer)

11. Read the following scenario and answer the following question.
    *Please note, there is no right or wrong answer. This scenario is presented to gain insight on professional perceptions. Your honest opinion is appreciated.

    “Sue, a Board-Certified Music Therapist, is working with an individual who has difficulty with word retrieval. After an extended period of time, Sue recognizes that the individual is not responding to her current therapeutic techniques. Sue remembers a successful speech therapy technique (that she once saw in a co-treatment session with a speech-language pathologist), and...
decides to try this method with the client in her own session”.

Do you believe Sue was acting within her professional boundaries of clinical practice?

- Yes
- No
- Undecided

Feel free to add any comments you may have about the scenario provided.

- (Open Answer)

12. I believe a co-treatment with speech therapy can be an effective way to help a client reach his/her goals.

- Yes
- No
- Undecided

13. I am open to referring a client for speech therapy if services are available.

- Yes
- No
- Undecided

14. I am open to consulting a speech-language pathologist about an SLP/MT co-treatment if it would be beneficial to the client.

- Yes
- No
- Undecided

15. I have been consulted in the past by a speech-language pathologist who has a client that he/she believes is an eligible candidate for an SLP/MT co-treatment.
16. I address (or have addressed) speech goals in my music therapy sessions.
   o Yes
   o No

17. I use (or have used) songs with specific phonetic sounds or words in a session to help a client address speech goals.
   o Yes
   o No

18. If resources were available, I would participate in workshops/advanced training to learn how to better address speech goals in my music therapy practice.
   o Yes
   o No
   o Undecided

All done! Don't forget to enter your email to be considered for the drawing. A $20 Target or Meijer gift card will be awarded to one randomly chosen respondent. If you would like to be eligible for the drawing, please fill in your email address below. The winner will be contacted via the email you provide here.

***To guarantee confidentiality and ensure anonymity, the contact information you provide here will be removed prior to data analysis of the survey.

Enter email address HERE to be eligible for drawing!

Thank you for participating!
APPENDIX B

Questionnaire for Speech-Language Pathologists
1. Gender
   - Female
   - Male

2. Age
   - 20-29
   - 30-39
   - 40-49
   - 50-59
   - 60 and above

3. How long have you been practicing speech therapy?
   - Less than 5 years
   - 5-10 years
   - 11-15 years
   - 16-20 years
   - 21 + years

4. Which credentials/certifications have you earned?
   - Speech-Language Pathology (CCC-SLP)
   - Audiology (CCC-A)
   - Clinical Specialty Certification
   - Teaching Certificate
   - Other..

5. With which population(s) do you primarily work?
   - (Open Answer)
6. In what setting(s) do you primarily work?
   - (Open Answer)

7. Do you currently co-treat with other therapeutic disciplines such as Physical Therapy, Occupational Therapy, Music Therapy (MT), or other Creative Arts Therapies?
   - Yes
   - No

8. Have you ever co-treated with Music Therapy?
   - Yes
   - No

9. Do you currently co-treat with Music Therapy?
   - Yes
   - No

10. If you replied yes to the previous question: On a weekly average, about how often do you participate in co-treatment sessions with a Board Certified Music Therapist (MT-BC)?
    - (Open Answer)

11. Read the following scenario and answer the following question.

   *Please note, there is no right or wrong answer. This scenario is presented to gain insight on professional perceptions. Your honest opinion is appreciated.*

   “Sue, a Speech-Language Pathologist, is working with an individual who has difficulty with word retrieval. After an extended period of time, Sue recognizes that the individual is not responding to her current therapeutic techniques. Sue remembers a successful music therapy technique (that she once saw in a co-treatment session with a music therapist), and decides to try
this method with the client in her own session”.

Do you believe Sue was acting within her professional boundaries of clinical practice?

- Yes
- No
- Undecided

Feel free to add any comments you may have about the scenario provided.

- (Open Answer)

12. I believe a co-treatment with music therapy can be an effective way to help a client reach his/her goals.

- Yes
- No
- Undecided

13. I am open to referring a client for music therapy if services are available.

- Yes
- No
- Undecided

14. I am open to consulting a music therapist about an SLP/MT co-treatment if it would be beneficial to the client.

- Yes
- No
- Undecided

15. I have been consulted in the past by a music therapist who has a client that he/she believes is an eligible candidate for an SLP/MT co-treatment.
16. I use (or have used) music in my speech therapy sessions.
   o Yes
   o No

17. I use (or have used) songs with specific phonetic sounds in a session to help a client address speech goals.
   o Yes
   o No

18. If resources were available, I would participate in workshops/advanced training to learn how to incorporate music into my speech therapy practice to help address client goals.
   o Yes
   o No
   o Undecided

All Done! Don't forget to enter your email to be considered for the drawing!

A $20 Target or Meijer gift card will be awarded to one randomly chosen respondent. If you would like to be eligible for the drawing, please fill in your email address below. The winner will be contacted via the email you provide here.

***To guarantee confidentiality and ensure anonymity, the contact information you provide here will be removed prior to data analysis of the survey.

Enter email address HERE to be eligible for drawing!

Thank you for participating!
APPENDIX C

Cover Letter to Potential Participants
Hello! My name is Jennifer and I am a graduate music therapy student at Western Michigan University. I am conducting a survey as part of a graduate research class to examine professional boundaries and perceptions between music therapy and speech-language pathology; an area in which there is currently no published research. By conducting this survey, I hope to gain a better understanding of general perceptions between the two professions, as well as how often co-treatment, consultations, and referrals are occurring across different clinical settings.

This is where you can help me! This survey will only take about 5-10 minutes to complete. Any respondent who completes the survey and wishes to be eligible, will be entered into a drawing for a $20 Target or Meijer gift card!

(insert link for survey)

Survey of Music Therapists:
https://docs.google.com/forms/d/1SSBHn4G8aAdvPJieAg69AZ7uNLVyykU2M_vEPVIVME/viewform

Survey of Speech-Language Pathologists:
https://docs.google.com/forms/d/1EpugUNomzVlFD1cFO1smBkB2JN-486wMH1khN55UAc/viewform

By completing and submitting this survey, you are giving your informed consent to act as a participant in this research. There is a potential risk of loss of confidentiality with any email, downloading, and internet transaction. To further protect your confidentiality, survey results stored electronically will be password protected. Only the researcher will have access to password protected electronic data. Only the researcher and her advisor will have access to the
results collected from the surveys. Your participation is voluntary, and you may withdraw from the study at any time without penalty.

If you have any questions or concerns at any time, you may email me at jennifer.r.fromius@wmich.edu or contact my faculty advisor, Dr. David Smith david.s.smith@wmich.edu

Sincerely,

Jennifer Fromius
APPENDIX D

Open-Ended Survey Responses for “Population Served”
<table>
<thead>
<tr>
<th>SLPs: With which population(s) do you primarily work?</th>
<th>MT-BCs: With which population(s) do you primarily work?</th>
<th>Color-Coded Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>adult neuro</td>
<td>Brain injury rehab and oncology</td>
<td>1: Neuro/TBI or Neurehab mentioned specifically, alone or with any other population</td>
</tr>
<tr>
<td>Ages 3-26 Center based Moderately - Profoundly physically and cognitively impaired</td>
<td>Dementia/Alzheimer's</td>
<td>2: Early Childhood/Birth-3 or Preschool, Birth-PreK</td>
</tr>
<tr>
<td>Preschool-high school</td>
<td>Autism, multiple disabilities</td>
<td>3: School-Aged Children/Prek-High, Children, (0-21)</td>
</tr>
<tr>
<td>Preschool</td>
<td>Individuals with special needs / hospice 50/50</td>
<td>4: Autism mentioned specifically, alone or with any other population</td>
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<tr>
<td>Geriatric, and kids</td>
<td>Medical</td>
<td>5: Geriatric, adult, dementia/alzheimer, or Geriatrics mentioned specifically or with any other population</td>
</tr>
<tr>
<td>5-12 years</td>
<td>Autism, Early childhood</td>
<td>6: Misc population uncategorizable, or multiple populations served uncategorizable with others</td>
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<tr>
<td>Pre-K - high school. Disabilities range from mild articulation delays to non-verbal</td>
<td>head injury</td>
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<tr>
<td>Preschool</td>
<td>Pediatrics</td>
<td></td>
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<tr>
<td>Pediatric</td>
<td>DD, TBI</td>
<td></td>
</tr>
<tr>
<td>Birth-College</td>
<td>early childhood (0-6 yrs) and geriatrics (memory care)</td>
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</tr>
<tr>
<td>Children</td>
<td>School ASD, early childhood special education</td>
<td></td>
</tr>
<tr>
<td>Preschool Early special education</td>
<td>Geriatrics</td>
<td></td>
</tr>
<tr>
<td>Autism, cognitive impairment, physically or otherwise health impaired language delays, arctic/phonological process disorder, aphasia, dysphagia, cognitive retraining, dysarthria and apraxia.</td>
<td>Cognitively Impaired and Autism Sp Dis</td>
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<tr>
<td>high school age students with autism and life skills pragmatics</td>
<td>AI Spectrum</td>
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<td>Autism K5</td>
<td>Children with special needs, oncology, dementia</td>
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<tr>
<td>K-5</td>
<td>Developmental Disabilities</td>
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<tr>
<td>ASD, DD, SLI, Downs</td>
<td>College Special Ed, autism, cerebral palsy</td>
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<tr>
<td>children with language disorders</td>
<td>Adults and children with hearing loss</td>
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<tr>
<td>Early childhood</td>
<td>Special needs</td>
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<tr>
<td>Early Childhood</td>
<td>School aged kids with developmental disabilities</td>
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<tr>
<td>Early Childhood; self-contained classrooms</td>
<td>Special needs</td>
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<tr>
<td>Pediatrics</td>
<td>Cerebral Palsy and other Developmental Delays</td>
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<tr>
<td>School children</td>
<td>Children/adolescents with disabilities</td>
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<tr>
<td>Early intervention</td>
<td>older adults, adults with dementia</td>
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<tr>
<td>pediatrics</td>
<td>Adult/Pediatric Hospital</td>
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<tr>
<td>Early Childhood through high school, as well as adults</td>
<td>Dementia</td>
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<tr>
<td>Pediatrics- many different diagnoses, including autism</td>
<td>Hospice, developmental disabilities, early childhood</td>
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<tr>
<td>School age</td>
<td>Psych</td>
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<tr>
<td>Early Intervention</td>
<td>DD and ID</td>
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<td>School age children</td>
<td>Geriatric</td>
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<tr>
<td>Middle school</td>
<td>Adults and children with developmental disabilities</td>
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<tr>
<td>Pediatric</td>
<td>Pediatrics</td>
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<tr>
<td>elementary students</td>
<td>Special education</td>
<td></td>
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<tr>
<td>Birth -3 years</td>
<td>Developmental Disabilities, eldercare</td>
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<tr>
<td>0-21 school-based</td>
<td>Children with special needs</td>
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<tr>
<td>Pediatric</td>
<td>Hospice</td>
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<tr>
<td>Kids</td>
<td>Medical and mental health</td>
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<tr>
<td>PreK-5</td>
<td>Adults with intellectual and developmental disabilities</td>
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<tr>
<td>Pediatrics and adult aac users and nonusers</td>
<td>Children with developmental delays</td>
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<tr>
<td>Children ages 5-12</td>
<td>Hospice</td>
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<tr>
<td>3 years through 3rd grade</td>
<td>Geriatrics</td>
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<tr>
<td>Early childhood and home health</td>
<td>Alzheimer's, Neurologic Rehabilitation</td>
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<td>Pre-k thru 5th grd</td>
<td>Children</td>
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<td>School district</td>
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<td>students with autism, severe delays, augmentative communication needs</td>
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<td>K-8th grade</td>
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<td>K-5</td>
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<td>Early intervention birth to 3</td>
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<td>School age children</td>
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<td>Grades 5-8</td>
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<td>Birth to 3, preschool</td>
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<td>K-12</td>
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<td>Birth to 21 with autism</td>
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<td>0-3</td>
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<td>Autism, Intellectual Disability</td>
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<td>infants through high school</td>
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<td>School aged pediatrics</td>
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<td>K -12</td>
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<td>Elementary students</td>
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<td>PreK-12th grade</td>
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<td>K12</td>
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<td>Higher Education</td>
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<tr>
<td>All ages, primarily nonverbal</td>
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<tr>
<td>moderate to severe ages 3-21 with multiple disabilities and autism</td>
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<tr>
<td>pre and school age children</td>
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<td>Early Intervention. Birth to 3</td>
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<td>Autism, Deaf and Hard of Hearing, Intellectual Disabilities, Cerebral Palsy</td>
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<td>2 through 21</td>
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<td>K-12 grade</td>
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<tr>
<td>3 to 22 special education: complex communication disorder and multiple handicapped</td>
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<td>Pediatric</td>
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<tr>
<td>PreK thorough 5th grade</td>
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<tr>
<td>2nd - 12th grade, CI, LD, ASD, &amp; gen ed</td>
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<tr>
<td>I primarily work with adolescents &amp; young adults in self contained classes with Specific Varying Exceptionalities (ASD, IND, etc.)</td>
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<tr>
<td>School age PK-12th</td>
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<td>ps - 12th grade, gifted/talented through severe/profound</td>
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<td>3 years - 21 years</td>
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<td>Pediatric</td>
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<td>School age and hospital</td>
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<td>Peds</td>
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<td>School age kids</td>
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<td>Pediatric</td>
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<td>k-12</td>
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<td>1st - 6th grades</td>
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<td>13-Mar</td>
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<td>Age 3-8 years</td>
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<td>3-5 years</td>
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<td>Language/ASD</td>
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<tr>
<td>elementary K-4</td>
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<tr>
<td>3yrs to 11 yrs</td>
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<td>P-K thru grade 8</td>
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<tr>
<td>School Age</td>
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<tr>
<td>Preschool to 5th grade</td>
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<tr>
<td>Autism</td>
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<tr>
<td>School age children &amp; preschoolers</td>
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<tr>
<td>Preschool</td>
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<tr>
<td>PreK through HS</td>
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<tr>
<td>25 years peds, 6 years K-8, (9 years all ages, including adult)</td>
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<tr>
<td>Public school middle school</td>
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<tr>
<td>Birth to 5 years old</td>
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<tr>
<td>preschool</td>
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<tr>
<td>0-3</td>
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<tr>
<td>early intervention &amp; pre-school</td>
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<tr>
<td>geriatric</td>
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<td>Infants/Toddlers</td>
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<tr>
<td>Autism</td>
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<tr>
<td>pediatrics with hearing loss (0-21)</td>
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<tr>
<td>children with hearing loss</td>
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<td>Early intervention birth-3</td>
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<td>BIRTH-7</td>
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<td>Navajo children</td>
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<tr>
<td>Pediatrics</td>
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<tr>
<td>Elementary</td>
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<tr>
<td>Early childhood</td>
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<td>Children</td>
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<td>Pediatrics</td>
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<tr>
<td>Birth to 3 years old</td>
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<td>Pre K</td>
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<tr>
<td>Geriatrics/pediatrics</td>
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<td>pediatric, bilingual</td>
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<td>Prek-8th grade</td>
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<tr>
<td>Children age 3-11 - various speech/language disorders</td>
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<tr>
<td>Age 3-8th grade</td>
<td>Pediatrics</td>
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<tr>
<td>Pediatric 3 - 12</td>
<td>Birth-5</td>
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<td>School Age</td>
<td>Kdg-3</td>
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<td>3 years to 21 years. Mainly 4-10.</td>
<td>Children</td>
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<td>K-8</td>
<td>Children ages 3-14</td>
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<td>adult, neuro (stroke, TBI), general medical</td>
<td>CVA, TBI, head and neck cancer</td>
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<td>Adolescents with autism</td>
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<tr>
<td>school age</td>
<td>Birth - 3</td>
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<tr>
<td>Preschool-6th Grade</td>
<td>Children with autism</td>
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<tr>
<td>Children with autism</td>
<td>Ages 5-11 and 14-22</td>
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<td>Autism &amp; Children with Moderate-Severe Disabilities 2-21</td>
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<tr>
<td>Early Childhood through Elementary</td>
<td>Pre-k through high school</td>
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<tr>
<td>preschool (3 - 5 year olds)</td>
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<tr>
<td>Preschool</td>
<td>School age</td>
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<td>Preschool ages 3-5</td>
<td>Preschool-6th grade</td>
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<td>Pre-K Self Contained class (ECDD)</td>
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<td>Children</td>
<td>Children</td>
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<tr>
<td>Perk to middle school. Various DX</td>
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<tr>
<td>Children</td>
<td>6 mon.-18 years</td>
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<tr>
<td>0-3</td>
<td>Children</td>
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<tr>
<td>Pediatric</td>
<td>Geriatric</td>
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<td>autism spectrum disorders</td>
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<td>6-21 yrs</td>
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<td>Adolescents</td>
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<td>Children (EI, CPSE, CSE)</td>
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<tr>
<td>Birth to three</td>
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<td>Pediatric</td>
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<tr>
<td>school-age, Autism</td>
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<tr>
<td>Preschool</td>
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<tr>
<td>Developmental Disabilities, Intellectual and ASD</td>
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<tr>
<td>Pediatrics</td>
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<tr>
<td>Children</td>
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<tr>
<td>Mostly elementary children, variety of disabilities</td>
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<tr>
<td>Elementary school aged children</td>
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<tr>
<td>Birth-3 years</td>
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APPENDIX E

Open-Ended Survey Responses for “Work Setting”
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<th>SLPs: In what setting(s) do you primarily work?</th>
<th>MT-BCs: In what setting(s) do you primarily work?</th>
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APPENDIX F

HSIRB Approval
Date: October 17, 2017

To: Edward Roth, Principal Investigator
    Jennifer Fromius, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 17-10-20

This letter will serve as confirmation that your research project titled “A Survey of Perceptions and Professional Boundaries Between Music Therapists and Speech-Language Pathologists” has been approved under the exempt category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may only be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., you must request a post approval change to enroll subjects beyond the number stated in your application under “Number of subjects you want to complete the study.” Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

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

Approval Termination: October 16, 2018