Spring 5-20-2023

Using Vignettes to Change Music Therapists' Attitudes Toward Research

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USING VIGNETTES TO CHANGE MUSIC THERAPISTS' ATTITUDES TOWARD RESEARCH

A DISSERTATION
(submitted by)

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In partial fulfillment of the requirements
For the degree of
Doctor of Philosophy

LESLEY UNIVERSITY
May 20, 2023

Graduate School of Arts & Social Sciences
Ph.D. in Expressive Therapies Program

DISSERTATION APPROVAL FORM

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Dissertation Title: *Using Vignettes to Change Music Therapists' Attitudes Toward Research*

Approvals

In the judgment of the following signatories, this Dissertation meets the academic standards that have been established for the Doctor of Philosophy degree.

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ACKNOWLEDGEMENTS

I am fortunate to have traveled through this degree with much support. My deepest gratitude to my advisor, Dr. Robyn Flaum Cruz, for imparting her wisdom with expertise and patience, for encouraging me in moments of uncertainty, and for guiding me through this process. Your influence will forever be in my teaching, and I am profoundly grateful. Thank you to my committee members, Dr. Jason Frydman and Dr. Eugenia Hernandez Ruiz, for inspiring me through their own research, and for engaging in dialogue to help think through many aspects of this study from its inception through to the end. I am also grateful to the members of the music therapy community who took the time to participate in this study.

To my amazing husband, thank you for your patience and humor, for making space in our life for me to reach this goal, for brewing coffee each morning, and for taking our children skiing on weekends so I could work. To our beautiful children, who have grown up so much during this process, thank you for your encouragement and grace. I hope you, too, believe you can achieve what you dream. To my parents, thank you for nudging me to begin a doctoral degree, for planning summers to provide childcare so I could study, and for providing generous support and encouragement each step of the way. And to my brother, my dear friend, thank you for cheering me on and offering perspective while reminding me that I would get there.

A heartfelt thank you to my friend and editor, Heather Wax, for stepping in near the end, giving time, and paying careful attention to details in order to edit this study. And to Cohort 13, thank you for your connection, art, and care. Not even a pandemic could stop us.

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ABSTRACT

This study used a three-condition experimental design to determine which was more effective in changing music therapists' attitudes toward research: a vignette demonstrating positive outcomes of using research to inform clinical work (PO), a vignette showing negative outcomes of not using it to inform clinical work (NO), or a research summary (RS). The outcome measure had three subscales, focused on perceptions of usefulness, anxiety, and positive predispositions.

Respondents (N = 656) included students and professionals. Findings indicated that anxiety decreased more for the RS than the NO condition, $F(2, 653) = 4.0$, $p = .02$, $\eta^2 = 0.01$. Perceptions of usefulness increased more for the NO than the RS condition, $F(2, 653) = 5.83$, $p = .003$, $\eta^2 = 0.02$. Those with undergraduate or master's degrees had greater overall increases in positive attitudes than did those with doctorates, $F(2, 607) = 8.13$, $p < .001$, $\eta^2 = 0.26$. There was an interaction effect on predispositions based on years in the field and experimental condition $p = .009$, those with 10 or fewer years in the field had more improvement in the RS than the PO condition ($p = .047$), while those with 11 or more years in the field had more improvement in the NO than the RS condition ($p = .040$). Recommendations focus on applications in education and in continuing education.

Keywords: Music Therapy, Vignettes, Research Attitudes, Research Usefulness, Research Anxiety

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CHAPTER 1

Introduction

Research helps clinical professionals make informed decisions that guide their work (Baker & Young, 2014; Burns & Meadows, 2014; Bellman et al., 2010). To that end, there is consensus that it is important for students and professionals to develop the ability to grasp research methodology, decipher statistical analyses, and apply research findings in clinical contexts (Blumberg, 2013; Earley, 2014; Leach & Tucker, 2018; Wagner et al., 2011). The same is true in music therapy, where researchers, the American Music Therapy Association (AMTA), and the Certification Board for Music Therapists (CBMT) affirm that music therapists should use research to inform their work (AMTA, 2013a; AMTA, 2013b; Burns & Meadows, 2014; CBMT, 2020a). In the field of music therapy, there exists a rich body of qualitative, arts-based, and quantitative research that is useful to those in clinical, supervisory, educational, and research and/or academic positions. Research can be *consumed*, requiring the ability to decipher published studies and stay abreast of new findings, and it can also be *produced*, requiring the skills to conduct research studies (Earley, 2014). Music therapy clinicians are tasked with consuming research in order to apply it to their clinical work. The majority (69%) of board-certified music therapists have bachelor's level training (B. Dalsimer, personal communication, January 5, 2022), and very few (4%) of the studies in music therapy journals are conducted by music therapists with that level of training (Garwood, 2013), supporting the importance of music therapists focusing on developing the skills needed to consume research to inform their clinical work.

Music therapy is reflexive and designed to support wellbeing (Bruscia, 2014), and as such, its practitioners are best served by drawing from a variety of sources to meet a variety of needs (Aigen, 2015), integrating the best sources of knowledge from a variety of methods. Aigen (2015) provided an important critique of evidence-based practice, reminding music therapists of the flawed yet commonly accepted medical model and underscoring the inadequate integration of a wide range of knowledge bases into clinical practice. In line with this critique, the use of the term *research* in the current study implies that all methodologies are important, the randomized controlled trial should not be perceived as the most elite study as it does not suit all inquiries, and music therapists should identify the best sources of knowledge to inform a multitude of clinical contexts. In fact, this broad understanding of research and evidence provides foundational tenets for this study.

The uses, trends, and importance of research in music therapy have all been examined (Nicholas & Gilbert, 1980; Murphy & Wheeler, 2016; Waldon & Wheeler, 2017; Wheeler, 2014). Music therapy scholars have studied attitudes toward research (Nicholas & Gilbert, 1980) and perceptions of its relevance (Waldon & Wheeler, 2017); written books dedicated to its history, the relationship between theory and research, and considerations for conducting research (McFerran & Silverman, 2018; Murphy & Wheeler, 2016; Wheeler & Murphy, 2016); and examined research utilization habits (Waldon, 2015). Despite this, music therapy students and professionals demonstrate low engagement with research, and many do not place high value on research (Waldon, 2015; Waldon & Wheeler, 2017). There is existing research on strategies that promote positive attitudes toward research among music therapy students (Dvorak & Hernandez-Ruiz,

2019; Hernandez-Ruiz & Dvorak, 2020), but other successful tools to help music therapists develop positive attitudes toward research are not well understood. Given the importance of research knowledge when making clinical decisions (Abrams, 2010; Aigen, 2015), more information is needed regarding how to promote positive attitudes toward research among music therapy students, interns, and professionals.

Attitudes have been studied extensively (Aguilera & Perales-Palacios, 2020; Albarracin & Shavitt, 2017; Bakanauskas et al., 2022; Bohner & Wanke, 2002; Burns, 2014; Cook et al., 2020; Forgas, 2010; Habineza, 2018; Kakupa & Xue, 2019; Lei, 2008; Lorenz et al., 2021; MacArthur, 2020; Mellor & Duff, 2019; Nicholas & Gilbert, 1980; Steptoe et al., 2002; Yamashita et al., 2018). They signal beliefs, perceptions, and assessments (Forgas, 2010), and they guide our actions in the present while simultaneously shaping future behavior and planning. Attitude formation and change are characterized by an interplay between cognitive and affective processes. Cognitive processes represent what a person thinks about a topic or object. Affective processes involve feelings, emotions, and sentiments. They are central to attitudes, it has long been accepted, and affective responses can dominate attitudes about a variety of topics (Zajonc, 1980).

The current study used a three-condition experimental design to determine which was more effective in changing the attitudes of music therapy students and professionals toward research: a vignette showing positive outcomes of using research to inform clinical work, a vignette showing negative outcomes of not engaging with research to inform clinical work, or a fabricated research abstract. Insufficient knowledge about how to instill perceptions of research relevance is a barrier to research engagement among

music therapists, impacting music therapy education, affecting the clinical services that clients receive, and creating a hurdle to clinician engagement with broader research activities within the field. This study aimed to reach music therapy professionals, interns, and students across levels of education and years in the field to understand how attitudes toward research are influenced and the roles that level of education, years in the field, and other personal characteristics play in these attitudes.

CHAPTER 2

Literature Review

The practice of music therapy is governed by the American Music Therapy Association (AMTA) and the Certification Board for Music Therapists (CBMT). Both bodies have highlighted the importance of research in the field. At present, AMTA's standards for bachelor's-level training require that undergraduate study is divided between musical foundations (45%), clinical foundations (15%), music therapy (15%), general education (20-25%), and electives (5%; AMTA, 2021). Music therapy research is but one of eight topics that fall under the *music therapy* area of study, leaving little time for dedicated research methods courses. Within the given parameters for training, music therapy program directors have explained that courses have more content than can be taught, which risks interfering with learning (Lloyd et al., 2018).

Nonetheless, the Professional Competencies dictated by AMTA (AMTA, 2013a) and CBMT's Board Certification Domains (CBMT, 2020a) specify that professional-level, undergraduate-entry clinicians must have certain proficiencies that are consistent with those needed to consume research, such as how to interpret research literature, a basic understanding of methodology, the ability to perform literature searches, and the skills to integrate research into their clinical work. Further, the field mandates continuing education to maintain certification (CBMT, 2020b) via 100 continuing education credits during each five-year cycle. This means that professionals continue to engage with opportunities to maintain and enhance their knowledge and skills. Notably, however, research-specific credits are not required for recertification.

Helping professions, like music therapy, are burdened by the false perception that research is not very relevant to clinical work (Earley, 2014; Johnson, 2018; Safazadeh et al., 2018; Waldon, 2015; Waldon & Wheeler, 2017). Researchers in many fields have studied the disconnect between research, theory, and practice (Bellman et al., 2010; Conklyn, & Bethoux 2013; Kern, 2010; Leach & Tucker, 2017; Safazadeh et al., 2018; van Katwijk et al., 2019). One factor that contributes to the difficulty of blending theory and research with service delivery is that classrooms and instructors are considered academic environments, whereas service delivery spaces are considered clinical educational environments (Safazadeh et al., 2018). The misconception that research is not relevant to clinical work has been found to compromise the quality of service, impacting outcomes (Safazadeh et al., 2018). Poor attitudes toward research are characterized by three elements: the view that research is not useful or relevant to clinical work, anxiety about the subject, and low interest or motivation (Blumberg, 2013; Earley, 2014; Gunn, 2017; Lin et al., 2016; MacArthur, 2020, Maloney & Beilock, 2012; Wagner et al., 2011; Waldon, 2015). This is true in music therapy despite the availability of music therapy textbooks about research (Burns & Meadows, 2014; Jacobsen et al., 2019; Wheeler & Murphy, 2016).

While research learning begins in music therapy training programs (AMTA, 2021) and may continue in continuing education opportunities (CBMT, 2020b), it is important to understand the status of attitudes toward research among students, interns, and professionals and the factors that contribute to those attitudes. Attitudes are complex and have cognitive, affective, and behavioral components (Bakanauskas et al., 2022). In general, they are formed by information from individual experiences; summary

information about groups, ideas, or topics; emotional responses; and actions or intended actions (Bakanauskas et al., 2022). It is especially difficult to change attitudes toward topics that require actions or efforts by the individuals who hold those attitudes (Albarracin & Shavitt, 2018). Attitudes do evolve over the lifetime, however, and managing negative feelings can reduce negative attitudes (Albarracin & Shavitt, 2018).

The attitudes music therapists have toward research is a longstanding question in the field, with research on the topic dating back more than four decades (Nicholas & Gilbert, 1980). To begin to understand attitudes toward research among music therapists at that time, researchers distributed an anonymous survey to 150 randomly selected music therapists and received 66 responses (Nicholas & Gilbert, 1980). Results indicated that respondents generally held positive attitudes toward research but were dissatisfied with its status in the field. There was no relationship found between research knowledge and research attitude, and no relationship found between research knowledge and level of education, type of position held, or research background. More recently, questions surrounding the use of research in clinical practice led the AMTA to host a research summit in 2015, resulting in the creation of Music Therapy Research 2025 (MTR2025; AMTA, 2016), a plan to improve the quality of music therapy research and access to it. The recommendations and conclusions from MTR2025 were numerous; they included building research capacity through better understanding best practices for evidence-based music therapy research education and exploring ways to increase perceptions of research relevance (AMTA, 2015).

Music therapists practice in accordance with the guiding principles stated in AMTA's Code of Ethics (AMTA, 2019). Among those principles is the importance of

providing quality care, striving for excellence through the integration of evidence, and working to improve clinical skills, suggesting that mastering these concepts will serve clinical work. At the same time, professional music therapists in the United States operate in very busy and demanding work environments, including exceedingly robust training curricula, required continuing education, and client services. Among professional music therapists in the United States, two-thirds work 30 hours or more and provide services to an average of 35.6 clients per week (AMTA, 2021). If they are to dedicate the time needed to engage with research, they must see research as relevant, useful, and valuable to their clinical practice. Motivations toward research include its potential for personal development and its contributions to client care (Ommering et al., 2020). A survey of professional members of AMTA using a standardized personality questionnaire revealed that music therapists are emotionally sensitive, reasonable, and open to change (Vega, 2010). These findings suggest that music therapists might strive to learn new concepts, potentially priming them for engagement with materials that are shown to positively influence their ability to provide effective clinical services.

The Impact of Research Attitudes

In general, research education involves teaching learners about the complex and interrelated steps involved in conducting research, as well as teaching them to decipher research to apply it to their professional work (Earley, 2014). Unlike other areas of teaching, however, such as math or nursing pedagogy, research education is not an established field of study and does not have its own journals. As such, its practitioners rely on research articles from various disciplines or on trial and error to determine how to teach (Earley, 2014; Nind & Lewthwaite, 2019). The result is a proliferation of different

approaches that try to help students and professionals develop the skills and confidence to willingly engage with research throughout their careers (van Katwijk et al., 2019). The Theory of Planned Behavior (Boston University School of Public Health, 2022) explains that choices are influenced by attitudes or beliefs regarding the expected outcomes of any given action, pointing to the importance of promoting positive attitudes toward research to increase its usage in the field.

Relevance and Usefulness

To develop positive attitudes toward research among students and professionals, it is important to address how they think about the relevance and usefulness of research in their field or practice. Perceived relevance can initiate short-term, situational interest in a topic and, in turn, increase perceptions of value and engagement (Vanhorn et al., 2019), improving overall attitude. Perceived relevance can come through personal association with a topic (Vanhorn et al., 2019). Utility value (the value of a task due to its connection to a personal or career goal) and attainment value (the value of a task due to its connection to personal or professional competence) are also connected to perceptions of relevance (Priniski et al., 2018).

To increase interest in research and perceptions of its relevance, and to foster positive attitudes toward learning about research, faculty inside and outside of music therapy have used active, problem-based, cooperative, service, hands-on experimental, and online learning tools (Dvorak & Hernandez-Ruiz, 2019; Dvorak et al., 2020; Dvorak et al., 2021; Earley, 2014; Hernandez-Ruiz & Dvorak, 2020; Howard & Brady, 2015; Peterson et al., 2015; Wagner et al., 2019; Wahler, 2019). Active learning that incorporates authentic contexts and reflects real-life situations, multiple perspectives on

materials, and opportunities to reflect on and synthesize information—all important elements in learning—contributes to increased perceptions of how useful research is in the field (Vanhorn et al., 2019).

A survey of former students in library information science contributes to the understanding of how perceptions of the usefulness of research might shift early in the career (Alemanne & Mandel, 2018). The survey reported that 60% of former students who had taken a research course within the past five years believed that it was important to their work. Although this survey was outside of music therapy and findings could not be generalized, the study did affirm that general positive attitudes toward research could be maintained several years after a research course.

As part of their training, music therapists take part in clinical placements and internships (AMTA, 2021), and role modeling by clinical placement supervisors has been found to impact students' desire to engage with research (van Katwijk et al., 2019). A survey of music therapy internship supervisors found that they most often addressed research competencies in the middle (44%) and end (38%) of internships, when students are primarily in clinical environments and supervisors can model the utility value and attainment value of research engagement (Rushing et al., 2019).

Anxiety and Other Stressors

To understand strategies for communicating the utility value of a math technique, Canning and Harackiewicz (2015) conducted three experiments and varied whether the participants were required to generate the utility value or whether utility value statements were provided for them. Measures of perceived utility value, task interest, and perceived confidence were taken using pretest and posttest scores on Likert-scale measures.

Findings revealed that participants with low confidence had a moderate increase in interest in the topic when they self-generated the utility value of the task at hand. Conversely, confident participants reported a greater increase in interest when task value was directly provided to them. The researchers suggested that low-confidence respondents might not believe something to be valuable if they doubt their ability to master it. The findings thus support the need to address math, statistics, and research anxiety, as reported in other literature, to prepare learners to engage with research methods education (Earley, 2014; Lin et al., 2016; MacArthur, 2020, Maloney & Beilock, 2012).

Anxiety about academic disciplines, psychological stress, locus of control, and personal characteristics can all contribute to attitudes among learners (Earley, 2014; Hamann et al., 2020; Karaman et al., 2019; Kryza-Lacombe et al., 2019; Lin et al., 2016; MacArthur, 2020, Maloney & Beilock, 2012; Thompson et al., 2019). It has been suggested that managing research anxiety is a path to promoting positive attitudes toward learning and research (Kakupa & Xue, 2019). Research anxiety is negatively correlated with perceptions of self-efficacy in the area. Outside of music therapy, researchers have used the Revised Attitudes Toward Research (R-ATR), a scale developed by Papanastasiou (2014), to examine students' and professionals' attitudes (Bailey et al., 2020; Habineza, 2018; Kakupa & Xue, 2019; Trikoilis & Papanastasiou, 2021). The R-ATR contains three subscales: usefulness, anxiety, and positive predispositions toward research (the tendency to find it interesting or enjoyable). Kakupa and Xue (2019) surveyed graduate students (N = 100) using the R-ATR and found that doctoral students' attitudes toward research were more positive than those of master's students and that a

higher number of research courses completed was associated with lower levels of reported research anxiety. It has been found that older students have better attitudes toward research than their younger counterparts, and that self-efficacy is higher among respondents who had published more research (Rezaei & Zamani-Miandashti, 2013). Doctoral students were found to perceive their research skills more positively than master's students.

Math anxiety, specifically, has been identified as a significant predictor of self-perceptions of learning difficulty for research course topics and statistics (Lin et al., 2016). Learners often equate math and statistics with research even though statistics are but one component of research (Papanastasiou, 2014). Women consistently report significantly greater math anxiety than men (Sokolowski et al., 2019), a fact that is especially important given that the majority (86%) of music therapists in the United States identify as women (AMTA, 2021). Math anxiety may override willingness to engage in and enjoy thinking, exhibiting its powerful effects (Lin et al., 2016). Outside of music therapy, faculty have reported deliberately using non-technical language, discipline-specific data sets, student-centered approaches, humor, and enthusiasm to combat anxiety (Nind & Lewthwaite, 2018, 2019).

Since stress can affect learning, mental health support is also key to promoting student success (Kryza-Lacombe et al., 2019; Thompson et al., 2019). Students who identify as non-European or racial or ethnic minorities reported significantly higher psychological distress than did their European counterparts (Thompson et al., 2019). Within music therapy, more than half (60.6%) of students report high levels of stress, with respondents who identify as female or transgender reporting higher levels of stress

than those who identify as cisgender male (Moore and Wilhelm, 2019). Managing stress and anxiety among learners can be complex, as several personal characteristics, experiences, and encounters contribute to those feelings.

Attitudes Toward Research in Music Therapy

In music therapy, researchers have focused efforts on understanding and addressing the inhibiting factors and general attitudes toward research among students and professionals (Dvorak et al., 2021; Dvorak & Hernandez-Ruiz, 2019; Hernandez-Ruiz & Dvorak, 2020; Waldon, 2015; Waldon & Wheeler, 2017). While the terms *utility value* and *attainment value* have not been directly integrated into the existing body of music therapy literature, researchers have studied similar concepts and have had some success improving attitudes and increasing knowledge, deciphering factors that contribute to the reluctance to engage with research.

Attitudes Toward Research Among Music Therapy Students

Recent studies in music therapy have provided important information about how to contribute to positive attitudes toward research among students (Dvorak et al., 2021; Dvorak & Hernandez-Ruiz, 2019; Hernandez-Ruiz & Dvorak, 2020). Improved attitudes toward research have been achieved using course-based undergraduate research experiences (CUREs), which allow for active, hands-on learning. To study the research and scientific thinking skills of undergraduate students in music therapy (n = 17) and music education (n = 13), Dvorak and Hernandez-Ruiz (2019) conducted a pre-experimental single-group posttest study of outcomes of a CURE. Participants (N = 30) were from an upper-level music psychology course at a large university in Kansas. With support from faculty and a graduate researcher, participants worked through identified

key steps in the research process and completed the Undergraduate Research Student Self-Assessment (URSSA) on the last week of class, which included Likert-type items and open-ended questions. The Likert-type item response options included reporting no gains, a little gain, moderate gain, good gain, or great gain on questions about their learning and experiences.

Results from the URSSA revealed that more than 50% of participants indicated some or a great deal of change in their attitudes and behaviors around engaging with science. Further, more than 50% of participants reported at least a good gain in understanding research steps, formulating research questions, identifying study limitations, and understanding the connections between research and coursework (Dvorak & Hernandez-Ruiz, 2019). Hernandez-Ruiz and Dvorak (2020) replicated the results in a subsequent study of a CURE with music students, providing further evidence of the effectiveness of such a hands-on approach with music therapy students. The importance of positive experiences in undergraduate research learning has been echoed by other authors (Cooper et al., 2019).

In a further examination of CUREs, Dvorak et al. (2020) conducted a systematic review of 54 studies published on this topic outside of music therapy. Findings revealed that some studies (n = 18) reported improved student attitudes toward the material, the majority (n = 48) reported increased student research knowledge and skills, and two-thirds (n = 36) reported increased student knowledge of course material and skills. Findings also pointed to increased student participation in future research, strengthened identity as a scientist, and increased engagement. The findings support the broader use of CUREs to foster research skill development among undergraduate music therapy

students, eventually producing professional music therapists who have strengthened attitudes toward research and are less subject to commonly reported barriers to research usage. Other music therapy scholars have suggested that educators might begin to demonstrate how relevant research is to practice and actively encourage students to engage with research early in their training to increase perceptions of research relevance among professionals (Waldon & Wheeler, 2017). It is important to note that the semester-long learning opportunities outlined above were designed for students, whereas board-certified music therapists may earn continuing education credits from a variety of learning opportunities that relate to any of the CBMT Board Certification Domains (CBMT, 2020b).

Attitudes Toward Research Among Music Therapy Professionals

There has been some research examining attitudes toward research among professional music therapists. A nonexperimental online survey (N = 1,272) of professional-level music therapists found that respondents generally perceived research as relevant to their work (n = 1286, M = 3.44, SD = 0.77) (Waldon & Wheeler, 2017). While respondents with doctoral degrees viewed research as more relevant to practice than did those at other education levels, the small effect size suggests that the difference might not be perceptible, $F(3, 1272) = 40.407$, $p < 0.001$, $\eta^2 = 0.09$. Importantly, analyses found that perceived relevance varied by professional role, $F(3, 1282) = 21.44$, $p < 0.001$, $\eta^2 = 0.49$, with respondents who worked in academic or research roles indicating that research is more relevant (n = 224, M = 3.78, SD = 0.66) than did those who worked in primarily clinical (n = 987, M = 3.34, SD = 0.77, $p < 0.001$) or administrative (n = 75, M = 3.31, SD = 0.79, $p < 0.001$) positions (Waldon & Wheeler, 2017).

To examine which parts of scientific papers respondents read and whether there was a relationship between their reading habits, level of education, and professional roles, the authors conducted chi-square tests of independence (Waldon & Wheeler, 2017). More than half of respondents reported reading full scientific papers, but those who held advanced degrees ($p < 0.001$) and those in academic or research roles ($p = 0.002$) reported doing this more often than their counterparts with undergraduate-level training. The study indicated that clinicians, whose job functions often involve consuming research to inform clinical work, considered research to be relatively less relevant than did respondents whose job functions focused more on producing research. The findings also suggest that efforts to foster positive attitudes about research in the field of music therapy must include music therapists who work in clinical roles.

Barriers Around Research

To learn about the extent to which music therapists access research as well as barriers to using research in their clinical work, Waldon (2015) surveyed members (N = 974) of AMTA. The researcher included members from all categories of membership using a background questionnaire and the Barriers to Research Utilization Scale (BARRIERS), a 29-question, four-point Likert scale. On the BARRIERS scale, the inability to understand statistical analyses (Mdn = 2.48), difficulty generalizing results (Mdn = 2.41), and implications for one's work (Mdn = 2.31) were among the topics with the highest median scores, indicating the importance of these factors when music therapists consume research. Similarly, Lee and Moon (2017) utilized the BARRIERS scale in Korea and found a significant difference between music therapists' publication activities and their perceived barriers to using research. It is important to note, however,

that most (69%) music therapists have undergraduate degrees and publish only a small fraction (4%) of studies in field-specific journals (Garwood, 2013), thus indicating that we need to find other ways to address the perceived barriers that inhibit research engagement and cause poor attitudes toward using research.

Messaging and Communication to Shape Attitudes

Attitudes may prompt cognitive, affective, or behavioral responses (Bohner & Wänke, 2002). Lorenz et al. (2021) wrote that people prefer information that is consistent with their pre-existing beliefs. This concept is referred to as *confirmation bias* and it can lead to an overreliance on evidence supporting one's beliefs (Michel & Peters, 2021). The researchers examined persuasive communication and proposed that exposure to views that are different from one's own may prompt attitude changes regardless of how negative the attitude was prior to that exposure, but that the discrepancy between one's prior beliefs and the new message will moderate the impact of the exposure to new ideas. Further, messages from sources with low credibility prompted less attitude change (Lorenz et al., 2021). Looking at examples from recent history, we see that societal changes in attitudes toward smoking have evolved due to simultaneous changes on multiple fronts: smoking cessation programs, workplace rules, increased taxation, and an overall reduction in messaging that supports tobacco usage (Burns, 2014). Similarly, seatbelt use and attitudes have evolved over time due to legislation and social messaging that normalized their use (Steptoe et al., 2002). These examples provide further evidence that it is possible to change beliefs by using credible sources, normalizing an issue within one's social group, and conveying the importance of the issues at hand.

Literature on professional identity formation in medical education has highlighted the repeated assembly, disassembly, and instilling of professional values and habits in medical students as identity forms (Sarraf-Yazdi et al., 2021), suggesting that there are multiple opportunities to shape or re-shape attitudes. Other scholars have suggested that values about how we treat others continue to develop over time due to continuous cultural and moral socialization (Thalmayer et al., 2019). For music therapists, motivation to learn new and difficult concepts might come from interpersonal relationships in which they value their clients' right to self-determination and wellbeing, a longstanding theoretical underpinning among therapists (Rogers, 1951). Further, factors within environments, such as schools, colleague relationships, supervisor interactions, and workplaces, can change, causing shifts in the expectations placed on a music therapist, who then in turn might evolve to meet new needs or demands (see Bronfenbrenner, 1981). Together, this information suggests that music therapists might have multiple opportunities to shift their attitudes toward research, particularly if the larger collective of music therapists places increased value on it.

Despite this hope, it is important to clearly outline the elements that might come into play between an initial problem and a desired outcome (Boston University School of Public Health, 2022). In this case, the identified problem is poor attitudes toward research, the desired outcome is improvement in attitudes toward it, and the elements that contribute to the problem must be addressed before a different outcome can be expected. Known barriers include low perceived relevance, anxiety, and low interest. Additional perceived barriers to research include access, organizational priority in clinical

environments, and relevance of research topics in the existing body of literature (Waldon, 2015).

Vignettes

Researchers have taken multiple approaches to understanding and combatting the many barriers around research utilization (Dvorak & Hernandez-Ruiz, 2019; Dvorak et al., 2021; Earley, 2014; Hernandez-Ruiz & Dvorak, 2020; Howard & Brady, 2015; Nind & Lewthwaite, 2018, 2019; Peterson et al., 2015; Wagner et al., 2019; Wahler, 2019). Numerous scholars have used vignettes as an intervention tool in quantitative and qualitative social science research (Bendetti et al., 2018; Dukic, 2019; Evans et al., 2015; Erfanian et al., 2020; Kandemir et al., 2018; Mellor & Duff, 2019; Sampson & Johannessen, 2020). Vignettes that capture real-life situations have been used to reflect a particular type of stimulus or situation and then study respondents' values and beliefs about it, and in such cases the vignettes must be carefully designed to resemble reality (Sampson & Johannessen, 2020). Factorial research designs use vignettes in experimental conditions, modifying aspects of each vignette according to the variables in a given study (Benedetti et al., 2018).

A study of the attitudes of Greek English foreign language teachers (N = 111) toward consuming versus producing research used ten short, written case study scenarios of teaching activities (Kantaridou & Kaltsiou, 2018). More than half of respondents (65.5%) held master's degrees, and about the same fraction (63%) had 5–14 years of teaching experience. Respondents read the case study scenarios and then answered Likert-style questions about whether the activities in each scenario were considered research, views on what constituted high-quality research, and their own research

consumption and production habits. Results indicated that while teachers generally had positive thoughts and feelings about research, they were unlikely to produce it due to lack of time and worries that their research skills were inadequate.

Vignettes reflecting real-life situations have also been used in research with an experimental design (Cook et al., 2020). To explore how neurotypical children's attitudes toward their autistic peers shifted according to changes in the number of interactions they had and exposures to autism-specific support programs in their schools, researchers collected data from students (N = 775) at the beginning and end of the school year. The study used Likert questions about students' judgments, emotions, intended actions, and attitudes toward autism. Respondents read vignettes about autistic or neurotypical students being bullied or socially excluded. Results indicated that students who attended schools with autism-specific programs felt more anger and sadness in response to bullying of autistic peers. This study provides an important example of the successful use of vignettes to understand the complexities of attitudes, emotions, and intended behaviors.

First-person vignettes with positive role models have been central in changing opinions (Chen et al., 2017; Ruzi et al., 2021; Yamashita et al., 2017). Chen et al. (2017) assigned participants (N = 489) to read a vignette about a person with a family history of type 2 diabetes. The vignettes were randomly assigned and compared the persuasive effects of the first-person versus third-person point of view, protagonist as a positive versus negative role model, and demographic similarity versus dissimilarity. Researchers did not reveal a relationship between respondent characteristics and those of the character in the vignette, but findings did reveal that a first-person point of view was associated

with higher respondent identification with the character in the vignette, a finding that has been echoed in other research (Chen et al., 2015). Chen et al. (2017) also found that vignettes with positive role models led to higher levels of identification. Negative role models who did not act cautiously to prevent negative outcomes aroused more fear than positive role models, and, interestingly, respondents who felt more fear were more persuaded by the message in the vignette. These findings suggest that both positive role models and fear of negative consequences shape respondent perceptions and that it is worth investigating the use of vignettes that raise awareness of the negative consequences of one's choices.

Similarly, Chen et al. (2015) used a written narrative to explore how linguistic agency and point of view impacted respondents' perceptions of the health threat posed by colon cancer. Respondents (N = 499) read one fictional magazine article, the details of which were altered to examine first- versus third-person perspective, among other features. Results indicated that the first-person narrative that assigned agency to the fictional character, rather than to the disease, was connected to higher levels of belief in the narrative. Further, respondents indicated that all versions of the written narratives were persuasive, demonstrating the usefulness of this type of intervention.

Other researchers have used written vignettes in quantitative research to analyze staff attitudes in a hospital (Mellor & Duff, 2019). The researchers used a between participants design (N = 324) with an online questionnaire and six vignettes to explore the attitudes hospital professionals and the general public held toward pornography use in hospitals that served individuals who had committed sexual or violent offences and those who had not committed any crime. Findings revealed a relationship between the type of

offense committed by the character in the narrative and respondents' decisions about whether the character should have access to pornography. For example, respondents were less likely to support giving pornography to a person who had committed a sexual crime than to those who had committed a non-sexual violent offence or those who had had not committed any offence. This study shed light on the connection between attitude toward an issue and the decisions made about it. Together, these studies demonstrate that studies using vignettes as an intervention tool are considered acceptable when examining attitudes and how to change them.

Current practices in music therapy research methods classrooms have been explored (Flight, 2022); however, the field has insufficient evidence about various strategies to increase perceptions of research relevance and usefulness, combat anxiety, and boost enjoyment of research among students and professionals. This problem is particularly acute for existing board-certified practitioners who are less likely to participate in an active, semester-long research learning experience such as a CURE. Perceiving research as relevant does not happen spontaneously for all learners; therefore, it is important to specify why research matters to their field or practice (Hernandez-Ruiz & Dvorak, 2020). It is thus incumbent on professionals who share research across contexts in written or verbal forms to decipher the best ways to instill the belief that research should inform clinical work and will influence career success. Researchers have estimated that fewer than 10% of studies about attitudes toward sciences involve the use of a didactic intervention (Aguilera Morales & Perales-Palacios, 2020). Available literature supports the use of vignettes to shape attitudes, but vignettes had not been applied to music therapists' attitudes toward research. A better understanding of ways

positive attitudes toward research can be fostered among music therapists is critical to changing the landscape of low research engagement that is pervasive within the field. This study aimed to contribute to the body of knowledge about this topic, thereby moving toward a culture where the use of a wide variety of research methodologies to inform clinical decision-making is a standard component of clinical practice in music therapy.

CHAPTER 3

Methods

The current study used a three-condition experimental design to determine which condition, if any, was more effective in changing music therapy students' and professionals' attitudes toward research: a vignette showing positive outcomes of using research to inform clinical work, a vignette showing negative outcomes of not engaging with research to inform clinical work, or a fabricated research abstract. Three different conditions were necessary due to the dearth of research about strategies to change music therapists' attitudes toward research, allowing this study to compare outcomes between the two vignettes and an abstract, given that abstracts are the most commonly read sections of articles (Waldon & Wheeler, 2017). Participants were randomly assigned to a condition and the Revised Attitudes Toward Research scale (R-ATR; Papanastasiou, 2014) was used as pretest and posttest. The research was conducted online. Results were intended to contribute to an understanding of what experiences influence attitudes toward research among the music therapy community.

Intervention

The intervention included four steps: (a) a demographic questionnaire, (b) pretest completion of the modified R-ATR, (c) random assignment to one of three experimental conditions in which participants read one of three texts containing vignettes about uses of research, and (d) posttest completion of the modified R-ATR. This online experience took an average of just over 11 minutes. Completion time took between 113 and 64980 seconds, with a mean of 669 seconds (SD = 3012) and a mode of 264 seconds. The

intervention was designed to be short in order to maintain respondent engagement and to encourage responses from a larger number of music therapists.

Development of the Experimental Conditions

The researcher developed the three experimental conditions using findings from relevant literature (Chen et al., 2015; Chen et al., 2017; Ruzi et al., 2021; Sampson & Johannessen, 2020; Yamashita et al., 2017) and with feedback from the dissertation committee. All conditions were designed to be believable and to capture real-life situations (Sampson & Johannessen, 2020). Among the three conditions, two were first-person narratives about a fictional music therapist's use of research, whereas the third condition was a fabricated research summary. In all three conditions, the research was the same, and was fictional to minimize bias by participants who might have had associations with real music therapy researchers.

The music therapist in two of the conditions was crafted such that many respondents might identify with the character: the character's gender, race, age, or other demographic characteristics were not specified, and the name was gender neutral and carefully chosen to allow readers to identify with the character. The character had agency over their decisions. First-person narratives that assigned agency to a character have been found to be more believable than those that assigned agency to external factors (Chen et al., 2015; Chen et al., 2017). The character worked in a clinical private practice serving adults, which is a common type of employment and most common age group among professional music therapists (AMTA, 2021).

While two conditions shared characteristics, they differed in that they presented the character as contrasting role models. In one condition, the character was a positive

role model who used research to inform their clinical work which led to a career success. Positive role models have been found to be effective in changing attitudes (Chen et al., 2017; Ruzi et al., 2021; Yamashita et al., 2017). In the other condition, the character was a negative role model who did not use research to inform clinical work which led to a career setback. Negative role models have been associated with higher levels of fear and have proven to be persuasive in some research (Chen et al., 2017). Creating contrasting types of role models allowed the exploration of both positive and negative role models. The third experimental condition contained a fabricated research summary. The research summary was designed to simulate an abstract, the most commonly read part of academic journal articles (Waldon & Wheeler, 2017). All three conditions were short to avoid respondent fatigue and contribute to completion of the study (Erfanian, Latifnejad Roudsari, Heydari, & Noghani, 2020). See Appendix A for the three reading conditions.

Demographic Questionnaire

The demographic questionnaire collected information about respondents' personal characteristics, professional background, and prior research experience (see Appendix B). Specific questions sought information about respondents' gender identity, race, ethnicity, primary language, advanced music therapy trainings, status as a student or professional music therapist, and years in the field. It contained 15 questions and took no more than five minutes to complete.

Measure

This study used a modified version of the Revised Attitudes Toward Research scale (R-ATR; see Appendix C). The R-ATR is a self-report measure of students' attitudes that was designed to apply to qualitative, quantitative, and mixed methods

research. The original Attitudes Toward Research scale consisted of 32 items and measured five subscales (Papanastasiou, 2005), but a confirmatory factor analysis revealed that the fit of the model was inadequate. Due to amount of error variance, Papanastasiou (2014) removed two subscales and eliminated multiple items from the total scale. As a result, the revised version consists of 13 items and has three subscales: *research usefulness*, the belief that research has utility in one's professional life; *research anxiety*, the degree to which it evokes stress or feelings of nervousness; and *positive research predispositions*, the tendency to enjoy it. The importance of the subscales measured in the R-ATR has been echoed in the literature (Earley, 2014; Gunn, 2017; Lin et al., 2016; MacArthur, 2020, Maloney & Beilock, 2012; Waldon, 2015), and the use of these three subscales has been confirmed by other researchers (van der Westhuizen, 2015). Hence, the choice to use the R-ATR was a logical one was due to its fit with the specific questions being examined in this study.

The R-ATR is one of a handful of scales of its kind and has been used in several countries around the world to explore attitudes toward research in fields such as counseling, education, and computer science (Dukic, 2019; Habineza, 2018; Kakupa & Xue, 2019; Trikoilis & Papanastasiou, 2021). The fit of the model of the R-ATR was determined through a confirmatory factor analysis (Papanastasiou, 2014). The research found that the reliability of the scores from the R-ATR was high and its internal consistency was very good to excellent. This included excellent reliability of the research usefulness subscale (α = 0.90) and the positive research predisposition subscale (α = 0.92), and very good reliability of the research anxiety subscale (α = 0.86).

This researcher modified the R-ATR to remove references to research courses per se, keeping all other wording unchanged. For example, one question from the R-ATR was "Research courses make me anxious," and the researcher modified version was, "Research makes me anxious." This change allowed the questions to be applicable to students and professionals without changing the focus of the items on the scale. The internal consistency of the modified R-ATR, as used in the current study, was found to be good to excellent, which was consistent with the scale as developed by Papanastasiou (2014). See Table 1.

Table 1

Internal Consistency for the R-ATR and Researcher-Modified R-ATR

Scale	*N* of items	α R-ATR	α Modified R-ATR
Total	13	[a]	0.90
Usefulness	4	0.90	0.81
Anxiety	5	0.86	0.89
Predispositions	4	0.92	0.89

[a] data not reported

Although the R-ATR was designed for students, continuing education requirements in music therapy (CBMT, 2020b) require that professional music therapists engage with learning opportunities throughout their careers, intermittently positioning music therapists as short-term students in a variety of learning formats.

Data Collection

Study data were collected in Qualtrics. The online study first collected basic demographic data (see Appendix B) then collected a pretest score on the modified R-

ATR (Papanastasiou, 2014; see Appendix C). Next, respondents read one of three experimental conditions:

- a vignette demonstrating positive outcomes of using research to inform clinical work, referred to as the PO condition,
- a vignette demonstrating negative outcomes of not using research to inform clinical work, referred to as the NO condition, or
- a research summary, referred to as the RS condition.

Last, respondents completed the modified R-ATR to provide a posttest score.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences Data. Analyses used one-way ANOVA to compare changes in attitudes toward research across the three conditions and stratification between demographic characteristics such as levels of education and positions as students or professionals. Two-way ANOVA was used to analyze the effect of experimental condition with other characteristics (level of education and years in the field). Post hoc analyses were used to determine which of the conditions showed significant changes. Due to the exploratory nature of this research and the lack of previous studies about the use of vignettes to influence attitudes toward research, power analysis calculations were not conducted. However, efforts were made to maximize sample size for both students and professionals by repeating recruiting efforts over a period of several months.

Participants

The participants in the study were music therapy students, interns, and professionals (N = 656) in the United States. Inclusion criteria included being a student

enrolled in any level training program that is approved by AMTA or being a Board-Certified Music Therapist. The researcher distributed the invitation to participate to a diverse set of music therapists from April through June 2022. See Appendix D for the invitation text. First, the researcher distributed the study through an email to professional, retired, and student AMTA members on April 7, 2022, and then via social media post in the Facebook group Music Therapists Unite on April 26, 2022 and May 24, 2022. The researcher also distributed the study via emails to the CBMT email list on April 28, May 12, and June 1, 2022. Last, the researcher shared the study through personal emails to professional contacts in April and June 2022. Messages that were returned as undeliverable or that returned out of office replies accounted for approximately 4% of the email distribution lists. Consent was collected on the first page of the study in Qualtrics.

Stance of the Researcher

This study and its design rest on the core tenet and this author's belief that research can and should be used to inform music therapists' decision making in clinical practice. A wide variety of sources of information allow music therapists to make informed decisions with their clients. This includes considering evidence from assorted research methods (qualitative, quantitative, and mixed methods research, including arts-based), client preferences and needs, clinician training and experience, clients' lived experiences, and other available resources, which work in concert to allow client-centered, evidence-based clinical work (AMTA, 2015).

The study's method of participant recruitment sought responses from music therapy students, interns, and professionals with various characteristics and backgrounds in the United States. Collecting respondent demographic data allowed the author to

decipher if or how the findings varied across participants with various characteristics. Insufficient knowledge about how to instill perceptions of research relevance is a barrier to research engagement, impacting music therapy education, clinical services that clients receive, and creating a hurdle to clinicians' engagement with broader research activities within the field. Gathering information from students served to potentially inform research methods instructors. Gathering information from students, interns, and professionals served to contribute to the development of strategies to instill perceptions of research relevance, equipping future professionals with more of the necessary tools to provide research-based music therapy experiences and to participate in the research landscape in the field.

CHAPTER 4

Findings

Respondent Information

While 792 respondents began the survey, some were excluded because they did not meet the inclusion criteria of living in the United States, and others abandoned the survey at various points before the posttest. This yielded 656 respondents who met the inclusion criteria and completed both the pretest and posttest. The majority of respondents (86.5%) were professional music therapists who were not enrolled in an academic program, and the majority identified as cisgender women (82.7%). Almost all (93.9%) identified as not Hispanic or Latino/a/x and most identified as White (86.4%). A small number (1.5%) identified as mixed race, specified as white and American Indian, Alaska Native, Indigenous, Asian, Arab, or another race. Almost all (98.5%) spoke English as a primary language, and the remaining 1.5% preferred not to specify or spoke Dutch, Czech, Roma, Korean, or Spanish. See Table 2 for further information about respondents' demographic information.

Table 2

Demographic Characteristics of Respondents N = 656

Characteristic	%
Professional status	
Credentialed professionals who were not also students	86.5
Credentialed professionals who were also students	11.9
Students/Interns who were not credentialed	6.6
Years in the field	
0 – 10 years	53.1
11 or more years	46.9
Gender identity	
Cisgender woman	82.7
Cisgender man	10.2
Prefer not to say	3.6
Nonbinary	1.7
Genderqueer	1.5
Other (two or fewer of transgender man, or nonbinary and genderqueer)	0.4
Ethnicity	
Not Hispanic or Latino/a/x	93.9
Hispanic or Latino/a/x	4.4
Not reported	1.7
Race	
White European	86.4
Prefer not to answer	3.7
Asian or Asian American	3.4
Black or African American	2.3
Arab American, Middle Eastern, or North African	0.3
Other (two or fewer of Jewish, Eastern European, or others)	2.4
Mixed race	1.5
Language	
English	98.5
Other	1.1
Chinese, including Mandarin, Cantonese, or other varieties	0.4

Since music therapy is an undergraduate-entry field in which professionals may enroll in academic programs to continue their education and earn master's or doctoral degrees, it was important to seek information about levels of education. With respect to the highest level of education among all credentialed professionals, almost half (48.7%) held a master's degree, the second largest group (39.5%) held an undergraduate degree, and the smallest group (11.8%) held a doctoral degree. This was comparable to the levels of education recently reported in the music therapy workforce analysis survey (AMTA, 2021). In this study, among credentialed professionals who were also students, most were completing a master's degree (56.6%) or doctoral degree (38.6%). Of the student respondents who were not yet credentialed professionals, 75% were working on an undergraduate degree and 25% were enrolled in a master's program, and almost all uncredentialed students (92.1%) had taken a research course prior to participating in this study.

Respondents reported how they divided their working hours between clinical, administrative, academic/research, or non-music therapy related tasks. For the purposes of analysis, the area in which respondents reported spending more than half of their time was designated as their primary job duty. Among respondents, 58.5% reported that their primary job duty was providing clinical services. See Table 3 for primary job duties.

Table 3

Primary Job Duties N = 656

Job duty	%
Clinical	58.5
Non music therapy	14.1
Academic/research	10.5
Equal split between two or more duties	10.2
Administration	6.7

More than half of all respondents (53.1%) had been in the field for 10 years or fewer, 20.7% had been credentialed for 11–20 years, and 26.2% had been credentialed for 21 years or more. While some research training is required to enter the field, it was important to understand more about respondents' experiences and exposure to research outside of this entry requirement since different experiences might shape attitudes. One way that music therapists might otherwise be exposed to research is by conducting research outside of an academic program. Approximately one third of all respondents said they had conducted research that was not required as part of a degree program. A second way that music therapists might be exposed to research is by completing a degree program or licensure outside of music therapy. Because of this, respondents were also asked whether they held degrees outside of music therapy. Results indicated that 40.7% of respondents held a degree not in music therapy or expressive therapies, and 18.7% held a certification or licensure outside of music therapy. The three most common degrees outside of music therapy were the bachelor's degree (54.2%), Master of Arts

(10.4%), and Master of Education (6.4%). Information about the disciplines of each degree outside of music therapy was not collected.

A third way in which music therapists might experience research outside of the field's entry requirement is through trainings or certifications, though the use of research varies by training. Among credentialed professionals, 62.5% reported that they had completed trainings or certifications beyond their professional music therapy credential. The most common training was Neurologic Music Therapy, a "research-guided clinical model" of music therapy (The Academy of Neurologic Music Therapy, n.d.), which 27.3% of respondents had completed. The second most common training was Guided Imagery and Music, completed by 17.5% of respondents, and a model of music therapy that does not put forth a focus on research. See Table 4 for respondents' trainings beyond music therapy board certification.

Table 4

Credentialed Respondents' Additional Trainings N = 616

Name of training	%
None	37.5
Neurologic Music Therapy	27.3
Guided Imagery and Music	17.5
Neonatal Intensive Care Unit Music Therapy	16.1
Trauma-Informed Music Therapy	8.8
Other	5.2
Hospice and Palliative Care Music Therapy	7.3
Dialectical Behavior Therapy	6.2
Nordoff-Robbins Music Therapy	2.3
Analytical Music Therapy	0.6

Pretest and Posttest Scores

Only respondents who completed the pretest and the posttest were included in the analysis (N = 656). After completing the demographic questionnaire and the pretest R-ATR, respondents were randomly assigned to one of three experimental conditions. In one experimental condition, respondents read a text demonstrating the positive outcomes of using research (PO 33.1%). In another, they read a text demonstrating negative outcomes of not using research (NO 33.4%). In the third condition, they read a short research summary (RS 33.5%). A chi-square test of independence showed that there was significant association between experimental condition and status as a professional, student/intern, or both, X^2 (4, N = 656) = 11.67, p = .02. This indicated that in every condition, there were significantly more credentialed professionals than either uncredentialed students/interns or credentialed professionals who were also students; however, there was proportional assignment to each experimental condition. After reading the text, all respondents completed a posttest. The R-ATR had three subscales: *usefulness*, *anxiety*, and *research predispositions*. In all cases, higher values in the *post* – *pre* calculation of change indicated more positive attitudes in the corresponding area. It is worth noting that the anxiety subscale was reverse scored, so higher numbers represented less anxiety. Table 5 lists pretest scores, posttest scores, and the difference between the two on the R-ATR and its three subscales.

Table 5

Comparison of Scores on the Subscales of the Revised Attitudes Toward Research Scale

	Pre		Post		Post – Pre
	M	*SD*	*M*	*SD*	
All respondents (*N* = 656)					
Total score	4.9	1.1	5.1	1.0	0.2
Usefulness	5.7	1.2	6.0	1.1	0.3
Anxiety	4.3	1.4	4.5	1.4	0.2
Predispositions	4.9	1.4	5.1	1.3	0.1
PO (*n* = 217)					
Total score	5.0	1.1	5.2	1.0	0.2
Usefulness	5.7	1.2	6.0	1.1	0.3
Anxiety	4.5	1.4	4.6	1.4	0.2
Predispositions	5.0	1.4	5.1	1.3	0.1
NO (*n* = 219)					
Total score	4.9	1.0	5.1	1.0	0.2
Usefulness	5.7	1.2	6.1	1.0	0.4
Anxiety	4.2	1.5	4.3	1.5	0.1
Predispositions	4.9	1.3	5.1	1.2	0.2
RS (*n* = 220)					
Total score	4.9	1.1	5.1	1.1	0.2
Usefulness	5.7	1.2	5.9	1.1	0.2
Anxiety	4.3	1.5	4.5	1.5	0.2
Predispositions	4.9	1.4	5.0	1.4	0.1

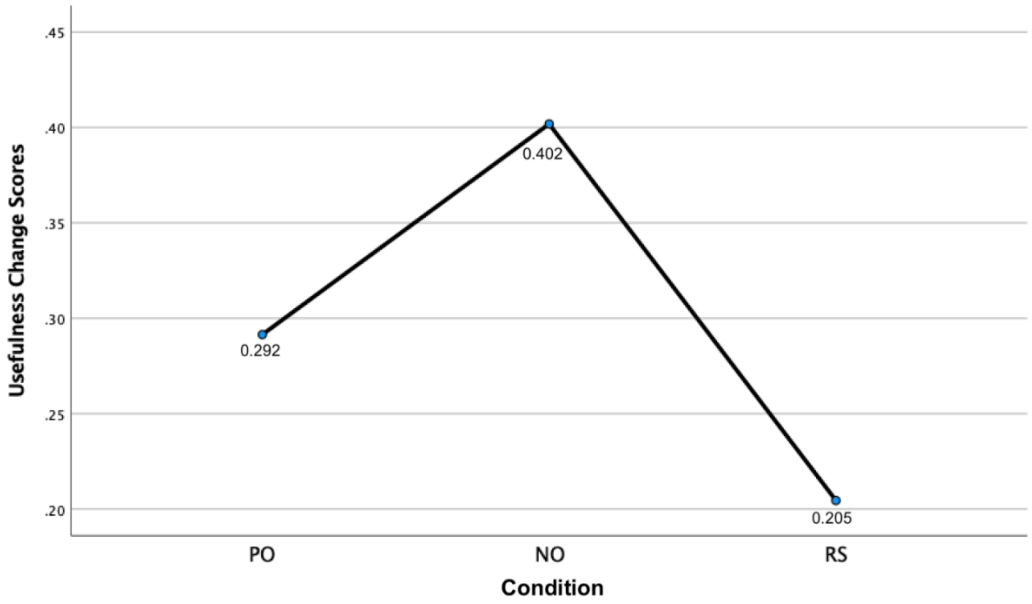
Differences in Usefulness and Anxiety

A one-way ANOVA was performed to compare the effect of the three experimental conditions on respondents' change scores on the R-ATR. There was no significant difference in the R-ATR total scores among the three conditions ($p = .676$), however, all conditions resulted in more positive attitudes as indicated by higher total scores. Further analyses examined the three subscales of *usefulness, anxiety*, and *research*

predispositions. There was a statistically significant difference for the usefulness subscale demonstrated by the one-way ANOVA, $F(2, 653) = 5.83$, $p = .003$. Tukey's HSD Test showed significant difference again between the NO and RS conditions ($p = .02$). There was no significant difference between PO and NO or PO and RS. This indicated that perceptions of usefulness increased more for respondents in the NO condition than in the RS condition. The effect size was $\eta^2 = 0.018$. Figure 1 illustrates the mean changes in the usefulness subscale across the three experimental conditions.

Figure 1

Mean Usefulness Changes Across Conditions

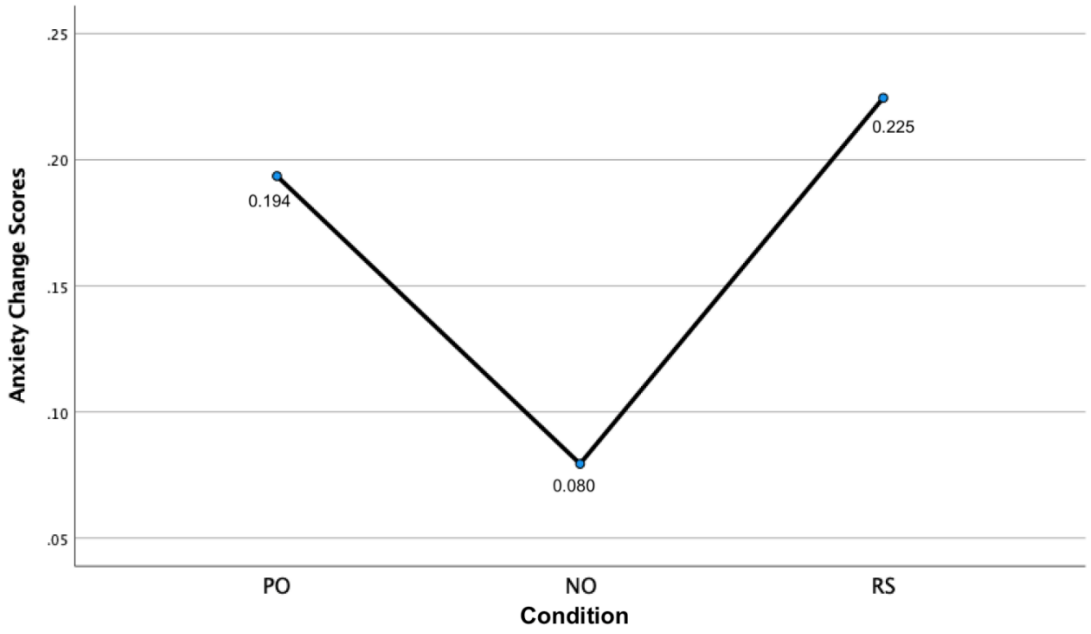


There was also a statistically significant difference for the anxiety subscale, $F(2, 653) = 4.0$, $p = .02$. Tukey's HSD Test revealed that the anxiety subscale score was significantly different between the NO and RS conditions ($p = .02$) but not between the PO and NO or the PO and RS. This indicated that anxiety decreased more for those in the

RS condition than in the NO condition. The effect size was $\eta^2 = 0.012$. Figure 2 illustrates the mean changes in the anxiety subscale across the three conditions.

Figure 2

Mean Anxiety Changes Across Conditions



Results revealed that there was not a significant difference in the scores on the predispositions subscale ($p = .16$).

Differences by Level of Education

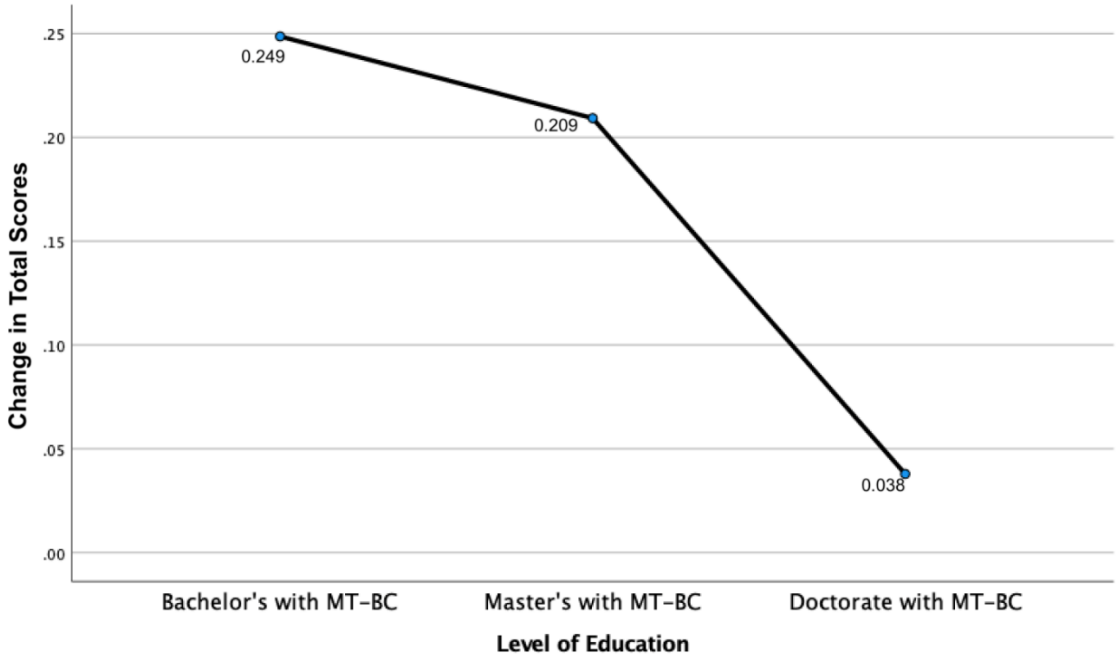
Total Score

A 3 X 3 ANOVA was performed to analyze the effect of condition and level of education (undergraduate, master's, doctoral) on change in total scores. The ANOVA revealed that there was not a statistically significant interaction between level of education and condition on change in total scores ($p = .146$). However, level of education

had a statistically significant effect, $F(2, 607) = 8.13$, $p < .001$, with an effect size of $\eta^2 = 0.26$. Tukey's HSD revealed that undergraduate-level respondents demonstrated significantly more change than doctoral-level respondents ($p < .001$), and master's-level respondents also demonstrated significantly more change than doctoral-level respondents ($p = .002$). There was not a significant difference between the bachelor's-level respondents and master's-level respondents. Figure 3 illustrates these findings.

Figure 3

Mean Change in Total Scores Across Levels of Education



To analyze the effect of experimental condition and level of education on the three subscales of usefulness, anxiety, and predispositions, 3 X 3 factorial ANOVAs were performed.

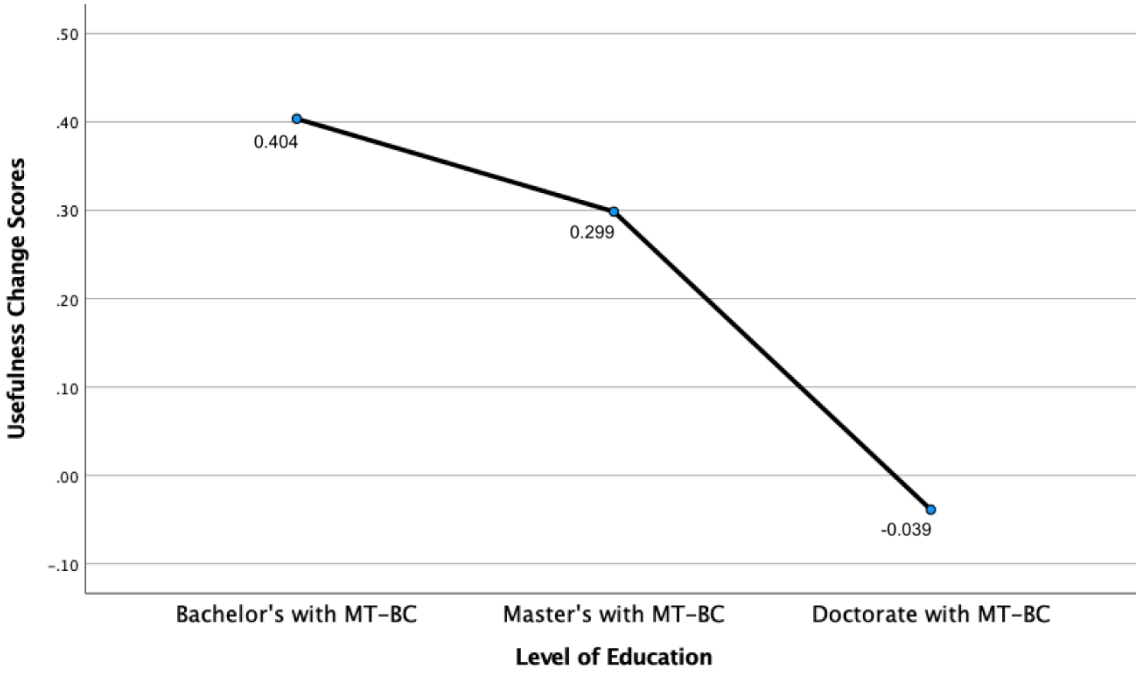
Usefulness

No two-way interaction was found for experimental condition and level of education on usefulness (p = .176). However, there was a significant main effect on usefulness for experimental condition, $F(2, 607 = 4.21$, p = .015, with an effect size of η^2 = 0.014. Tukey's HSD Test revealed that the usefulness subscale score was significantly different between NO and RS (p = .013), with NO showing more change than RS.

There was a significant main effect of level of education on usefulness, $F(2, 607)$ = 15.71, p < .001, with an effect size of η^2 = 0.047. Tukey's HSD Test revealed that undergraduate-level respondents demonstrated significantly more change in usefulness than did doctoral-level respondents (p < .001), and master's-level respondents also demonstrated significantly more change than doctoral-level respondents (p < .001). There was no significant difference between the usefulness change scores of the undergraduate-level respondents and master's-level respondents. Figure 4 illustrates the greater increases in perceptions of usefulness among respondents with bachelor's and master's degrees than those with doctoral degrees.

Figure 4

Mean Usefulness Change Scores Across Levels of Education

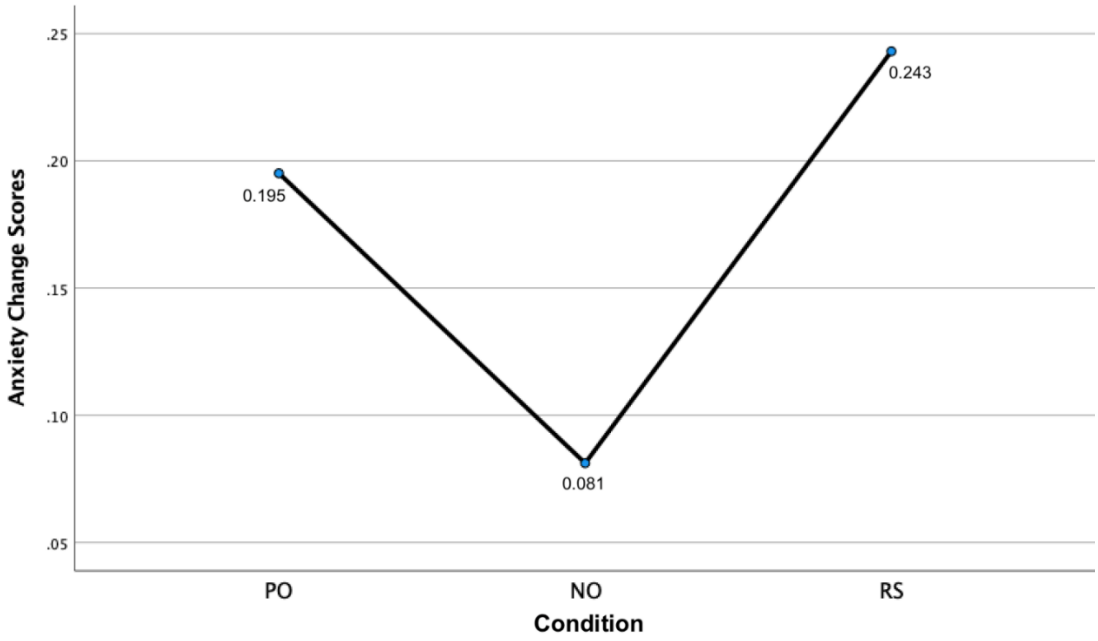


Anxiety

The 3 X 3 factorial ANOVA that was performed to analyze the effect of experimental condition and level of education on the anxiety subscale found no two-way interaction (p = .567). There was no significant main effect of level of education on anxiety (p = .637). However, there was a significant main effect of experimental condition on anxiety, $F(2, 607) = 4.39$, p = .013. Tukey's HSD Test revealed that the anxiety subscale scores were significantly different between the NO and RS conditions (p = .011), indicating that those in the RS condition had a greater decrease in reported anxiety than those in the NO condition. This indicated that those in the RS condition showed more improvement. The effect size was $\eta^2 = 0.14$. Figure 5 illustrates these findings.

Figure 5

Mean Anxiety Change Scores Across Conditions



Predispositions

The 3 X 3 factorial ANOVA that was performed to analyze the effect of experimental condition and level of education on the predispositions subscale found no two-way interaction and no significant main effects.

Differences by Years in the Field

Total Score

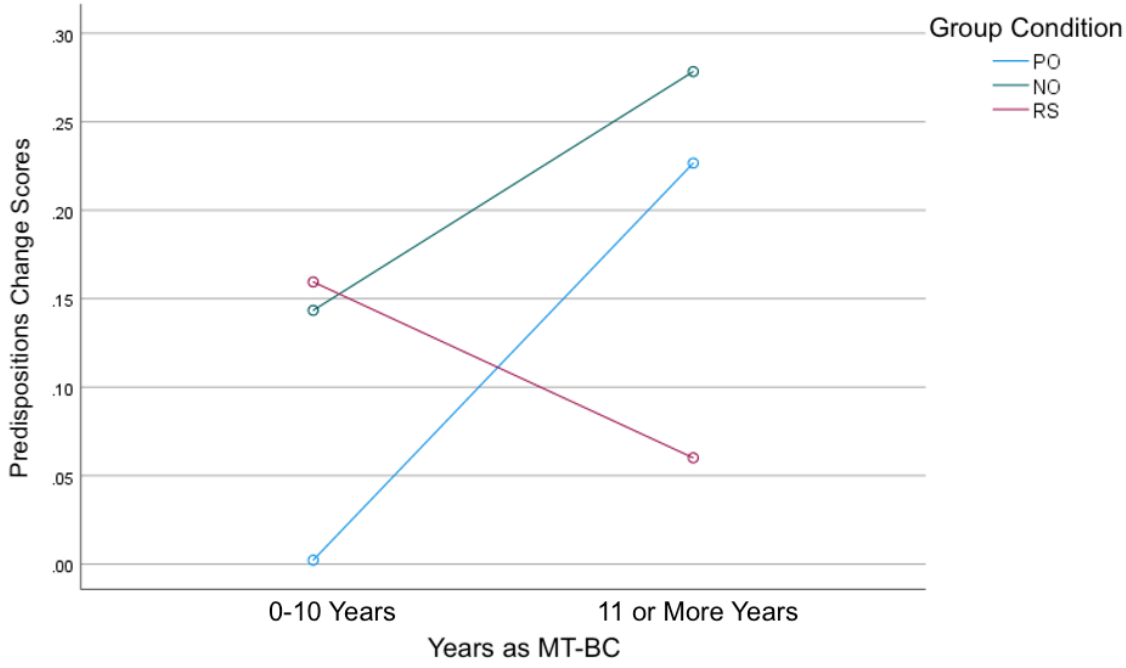
A 3 X 2 factorial ANOVA was performed to analyze the effect of experimental condition and years in the field (10 years or fewer, 11 or more years) on the change in total scores and each of the three subscales. There were no significant results for total score.

Predispositions

Results indicated a two-way interaction effect of experimental condition and years in the field on the predispositions subscale, $F(2, 650) = 4.77$, $p = .009$. Analysis of simple effects revealed that those credentialed with 10 or fewer years in the field changed significantly more if they were in the RS condition than in the PO condition ($p = .047$), while those credentialed with 11 or more years in the field displayed significantly more change in the NO condition than in the RS condition ($p = .040$). Figure 6 illustrates these findings.

Figure 6

Interaction Effect of Condition and Years in the Field on the Predispositions Subscale



Usefulness

For the usefulness subscale, there was only a main effect of experimental condition, $F(2, 650) = 5.89$, $p = .003$, partial eta-sq = .012. Those in the NO condition changed significantly more than those in the RS condition ($p = .002$).

Anxiety

Results indicated only a significant main effect of experimental condition for the anxiety subscale, $F(2, 650) = 3.89$, $p = .021$, partial eta-sq = .020, as the RS condition changed significantly more than the NO.

Summary of Findings

The results of this study found that reading a vignette about the negative outcomes of not using research led to greater increases in the perceptions of research usefulness subscale when compared with reading a research summary. However, findings indicated that reading a research summary led to greater decreases on the anxiety subscale when compared to reading a vignette about the negative outcomes of not using research to inform clinical work. When considering how experimental condition and years in the field impacted changes on the anxiety subscale, findings indicated again that respondents who read the research summary changed more than those who read the vignette about negative outcomes of not using research.

Further, this study found that respondents with undergraduate or master's degrees had greater overall increases in positive attitudes toward research after reading the vignettes when compared to those with doctoral degrees. There was an important distinction when considering years in the field, as professionals with 10 or fewer years of experience had greater improvement in predispositions, defined as tendency to enjoy research, if they read the research summary than if they read a vignette about the positive

outcomes of using research; however, in professionals with 11 or more years of experience there was greater improvement in the predispositions subscale with the vignette about the negative outcomes of not using research than with the research summary. Table 6 summarizes the significant findings in the R-ATR and its three subscales.

Table 6

Significant ANOVA Changes in the R-ATR and its Subscales

R-ATR	ANOVA		Statistic (*df1*, *df2*)	*p*	η^2	Post hoc	Post hoc
	One-way	Two-way					
Total Score							
	Cond			NS	.	.	.
		Cond x Ed main effect educ	8.13 (*2, 607*)	<.001	0.26	BA>PhD <.001	MA>PhD <.002
Usefulness							
	Cond		5.83 (*2, 653*)	.003	0.018	NO>RS .02	.
		Cond x Ed main effect cond	4.21 (*2, 607*)	.015	0.014	NO>RS .013	.
		Cond x Ed main effect educ	15.71 (*2, 607*)	<.001	0.047	BA>PhD <.001	MA>PhD <.001
		Cond x Yrs main effect cond	5.89 (2, *650*)	.003	0.012	NO>RS .002	.
Anxiety							
	Cond		4.0 (*2, 653*)	.02	0.012	RS>NO .02	.
		Cond x Ed main effect cond	4.39 (*2, 607*)	.013	0.140	RS>NO .013	.
		Cond x Yrs main effect cond	3.89 (2, *650*)	.021	0.020	RS>NO .021	.
Predispositions							
	Cond			NS	.	.	.
		Cond x Yrs interaction	4.77 (2, *650*)	.009	.	≤10 yrs, RS>PO .047	≥11 yrs, NO>RS .040

Note. Cond = experimental condition; Educ = level of education (BA/BS, MA, PhD); Yrs = years as an MT-BC (10 or less, 11 or more).

CHAPTER 5

Discussion

The findings of this study revealed the complex nature of attitudes toward research in the music therapy field. There remains much work to be done to fully understand how to promote positive attitudes toward research and develop the correct tools to do so, but this study was an important step in the process. This chapter will describe the findings of this research study and their implications for developing positive attitudes toward research among music therapy students, interns, and professionals with different levels of education and at varying points in their careers. This chapter will also describe the limitations of this study, implications for music therapy more broadly, and recommendations for subsequent research if these efforts are to continue moving forward.

This study had three experimental conditions: one that demonstrated the positive outcomes of using research to inform clinical decisions, one that illustrated the negative outcomes of not using research to inform clinical work, and one that was a short research summary. All three conditions used the same fictional research information but presented it differently. The different conditions were used to determine which, if any, was more effective in changing attitudes toward research among music therapy students and professionals. Each experimental condition included responses from students and professionals with a range of years of experience in the field. Initial findings from total change scores, examination of changes across the three subscales, and analyses of experimental condition with level of education and years in the field revealed that the research summary was consistently most effective at decreasing anxiety as measured on the anxiety subscale of the Revised Attitudes Toward Research scale (R-ATR), and the

negative outcomes vignette was consistently most effective at increasing perceptions of usefulness as measured on the R-ATR usefulness subscale; findings also shed light on the roles of levels of education and years in the field.

Review of Findings for Experimental Condition

Initial findings revealed that none of the three conditions produced a significant change in total score on the R-ATR scale compared to the others. There was also not a significant finding by experimental condition on the *positive research predispositions* subscale (assessing the tendency to enjoy research). However, scores on the *perceptions of usefulness* subscale increased significantly more among respondents who read the negative outcomes vignette compared to those who read the research summary. In contrast, findings by experimental condition revealed that scores on the *anxiety* subscale increased significantly more among respondents who read the research summary—reflecting greater decreased anxiety in this group—than those who read the negative outcomes vignette.

Review of Findings for Level of Education and Experimental Condition

Examination of the influence of level of education (bachelor's, master's, and doctoral degrees) and experimental condition revealed a main effect of experimental condition on the *perceptions of usefulness* subscale; the negative outcomes vignette was significantly more effective at improving perceptions of research usefulness than was the research summary. There was also a main effect of experimental condition on the *anxiety* subscale; in this case, the research summary was significantly more effective at decreasing anxiety than was the negative outcomes vignette. Findings were consistent with the findings by experimental condition only, as described above.

Analyses revealed a main effect of level of education for total score, or overall positive attitudes toward research, in that the respondents with a bachelor's or master's degree as their highest level of education showed greater increases than did those with a doctoral degree. Also, on the *perceptions of usefulness* subscale, those with a bachelor's or master's degree showed significantly greater increases than did those with a doctoral degree.

Review of Findings for Years in the Field and Experimental Condition

Examination of the influence of years in the field (10 or fewer, and 11 or more) and experimental condition revealed a main effect of experimental condition on the *perceptions of usefulness* subscale. Perceptions of usefulness increased significantly more among respondents who read the negative outcomes compared to those who read the research summary. This finding was consistent with the calculations by experimental condition, and the calculations by experimental condition and level of education.

The analysis also showed a main effect of experimental condition on the *anxiety* subscale; there was a greater decrease in anxiety among respondents who read the research summary than those who read the negative outcomes vignette. This finding was also consistent with previous calculations by experimental condition only, and with the calculations by experimental condition and level of education.

Findings revealed an interaction effect of experimental condition and years in the field on the positive *research predispositions* subscale. Respondents with 10 or fewer years of experience in the field had significantly more change in their positive research predispositions if they read the research summary than if they read the vignette about positive outcomes. In contrast, those with 11 or more years of experience had

significantly more change in their positive research predispositions with the negative outcomes vignette than with the research summary. This was the only calculation that revealed a change in the research predispositions subscale.

Summary of Noteworthy Findings

Based on the outcome measure used in this study, a key finding is that music therapists with a bachelor's or master's degree experienced greater total R-ATR score changes in positive attitudes toward research and greater increases in perceptions of its usefulness than did those with a doctoral degree. Respondents with a doctoral degree did not change regardless of condition. Surprisingly, the vignette about positive outcomes of using research to inform clinical work was never associated with statistically significant change. This means that reading about a music therapist doing things *right*, or practicing in a research-informed manner, was never the most effective at changing music therapists' total score or score on any of the three subscales of the R-ATR. In other words, it was never the most successful at changing their attitudes toward research, perceptions of its usefulness, level of anxiety, or research predispositions.

Interpretation and Relation to Literature

The task of addressing and improving music therapists' attitudes toward research is a complicated one, as evidenced by the complex findings of this study. The current study's findings connect to other research and raise questions that might be answered in future research.

Perceptions of Research Usefulness

The negative outcomes vignette was significantly more successful than the research summary at increasing perceptions of research usefulness among the

respondents. This vignette provided a context that demonstrated how ignoring research could negatively impact clinical care. In so doing, it could have sensitized participants to the value of research in a clinical context. Immediately indicating the usefulness or relevance of using research through instructor-provided context could have an impact. In science, *context-based teaching* uses everyday contexts and applications of science as a central component in developing competencies (Bennett et al., 2007) and is believed to lead to increased interest and understandings of information's usefulness (Aguilera & Perales-Palacios, 2020).

Previous studies using positive role models and negative role models have had mixed results, with positive role models associated with higher levels of respondent identification and negative role models who did not act cautiously associated with higher levels of fear (Chen et al, 2017). It is possible that the negative outcomes vignette, which resulted in increased perceptions of usefulness, aroused some level of fear of not using research among respondents.

Research Anxiety

Of the experimental conditions, the research summary produced more change on the anxiety subscale than did the other conditions. This outcome might be related to how the summary in this study was written. If the research summary was perceived as simple or approachable, it is possible that reading the summary did not trigger any negative emotional responses. It is also conceivable that the research summary served as a time-limited, low-stakes exposure to research, impacting respondents in a manner consistent with exposure therapy, which has proved to be effective at decreasing feelings of anxiety about a specified stimulus (APA, 2023). This study was not designed to simulate

exposure therapy; however, the short vignette and resulting decreased anxiety are consistent with it.

The ability to use a research summary to decrease anxiety as measured on the R-ATR might provide a way to begin to bypass the powerful effects of anxiety as a barrier to interacting with research. Addressing anxiety is important because consumers of research must not only possess the skills required to consume it but also must believe they are capable of consuming it and applying it to their work (Komarraju & Nadler, 2013; Bailey et al., 2020). Belief in the ability to successfully read and apply research can increase the value of that effort and increase the willingness to work hard to engage with research despite the challenges that come with it (Komarraju & Nadler, 2013).

Level of Education

It was not surprising that music therapists with a bachelor's or master's degree had significantly more change in their overall attitudes toward research and in their perceptions of research usefulness than did those with a doctoral degree given that doctoral degrees often include a focus on research (AMTA, 2021), with an emphasis on producing original research. While the percentage of respondents who had conducted unrequired research was similar among those who were not yet credentialed (35%), those with a bachelor's degree (25%), and those with a master's degree (35%), it was notably higher (80%) among doctoral-level respondents. While collecting data for the current study, the researcher received a number of unsolicited emails from members of the community who had received the invitation to participate. One of those emails communicated a music therapist's incorrect impression that earning a doctoral degree or being associated with a researcher who holds one is required to publish research. The

same music therapist expressed frustration that job duties often do not include research time, requiring potential researchers to invest unpaid time in their research efforts.

Respondents with a doctoral degree likely had the most in-depth exposure to and understanding of research prior to participation in this study, and this past exposure could partly explain the absence of change in attitude toward research among these respondents. Doctoral degrees that focus on producing novel research could provide strengthened understandings of the complexity of research, thereby reducing anxiety through increased perceived self-efficacy, as has been found outside of music therapy (Rezaei & Zamani-Miandashti, 2013). Also outside of music therapy, other research has indicated that doctoral-level respondents enjoyed research and felt a fondness for it (Christian et al., 2021).

Years in the Field

It is noteworthy that the interaction of years in the field and experimental condition was the only effect found on the research predispositions subscale of the R-ATR, and it was surprising. This finding pointed to the complexity of dispositions, and how they shift over time in the field. On this subscale, those with 10 or fewer years in the field changed significantly more if they read the research summary than if they read the positive outcomes vignette, while those with more than 10 years in the field changed significantly more if they read the negative outcomes vignette than the research summary. It is possible that music therapists with more years in the field might have perceived a greater threat from the possibility of negative outcomes based on their lived experiences, but this cannot be gleaned from the current study.

Research outside of music therapy has examined the relationships among master's and doctoral students' perceptions of self-efficacy, research anxiety and attitudes, and personal experiences or characteristics (Rezaei & Zamani-Miandashti, 2013). Findings revealed that as perceptions of self-efficacy increased, anxiety decreased. Further, research attitudes improved as master's and doctoral students gained years of experience in their fields and experience in the publication process (Rezaei & Zamani-Miandashti, 2013). These findings are consistent with those of the current study, as both demonstrate that increased time and experience within a given field can affect attitudes toward research.

Based on the findings of this study as measured by the R-ATR, it appears that in order for learning experiences that seek to improve music therapists' attitudes toward research to be most effective, it is important to tailor such learning to fit their levels of education and years in the field, and thus it is important to have this information about them. All music therapists, including those who are educators, are well-versed in the clinical process, in which assessments are used to learn about clients in order to tailor music therapy experiences (CBMT, 2020a; Hanser, 2018). In the same way, music therapy educators can apply assessment skills to gather initial information about their learners and then tailor education aimed at improving attitudes toward research to suit their learners' education and experience profile. The proposition that learners' experiences necessitate individualization, even when they are professionals, suggests that sufficient assessment and planning time should be allotted when preparing experiences designed to shift attitudes toward research. Since practitioners with different years of experience in the field responded to distinctly different conditions in this study,

customized experiences are required to target research dispositions in continuing education learning opportunities.

In music therapy, there is research and theory on the development of music therapists over the course of their careers (Byers & Meadows, 2022; Ruud, 2020). The development of early-career music therapists was found to be characterized by a commitment to continuing their learning and development, and an acknowledgment that there would always be more knowledge and experiences to gain (Byers & Meadows, 2022). With regard to research attitudes, this finding is promising, possibly indicating openness to shifting attitudes. The development of early-career music therapists was also characterized by the recognition of the various roles of music therapy in different settings, the subtleties of different approaches, the various responsibilities that music therapists might hold at work, and isolation if they did not have colleagues who were also music therapists (Byers & Meadows, 2022). Engaging with music therapy research could address these needs by serving as a source of learning and development, exposing them to new ideas and ways of being, and supplying them with insights from the field that provide comfort and reduce feelings of isolation.

It remains the music therapist's responsibility to stay current with research (AMTA, 2013b). Music therapists who do not incorporate current understandings in the field and new ideas, some of which are sure to come from research, could face obsolescence. Perhaps, as discoveries about how to foster positive attitudes toward research continue, research might occupy a larger part of continued learning for music therapists in the field.

Limitations

While every effort was made to strengthen the method, some limitations remained around the tool, the study design, and lack of clarity with terminology. First, some limitations apply based on the R-ATR. The findings are restricted to use of that tool, and a different tool might have yielded different results. The researcher modified the R-ATR slightly, removing references to research courses per se but leaving all other wording unchanged. For example, the positive predispositions subscale had items such as "Research is difficult." This might have prompted respondents to reflect on their experiences and perceptions of their research courses or training programs in which they took those courses rather than their current feelings toward research. Changes like these made by the researcher, however, resulted in some uncertainty about how they might have influenced the validity of the tool and associated findings.

A second possible limitation was related to experimental design. Roughly 40 respondents completed the demographic questionnaire, the pre-test, and reading condition, but abandoned the survey before the post-test. It is unclear why this was the case but suggests that further explanation of the process or the research design would have been beneficial. The researcher was deliberately vague in some wording to minimize response bias, but this could have led to confusion about the design. The researcher received several emails from respondents who explained they had completed the demographic questionnaire, pre-test R-ATR, and reading condition, but were unsure about why they encountered the R-ATR as the last step.

Implications

The findings of the current study have implications for classrooms, continuing education courses, and the field of music therapy. Music therapy practice is guided by the CBMT Board Domains (CBMT, 2020a) and AMTA Professional Competencies (AMTA, 2013a), both of which place value on engaging with research. Considering that approximately 97% of the workforce is comprised of practitioners at the bachelor's or master's level (B. Dalsimer, personal communication, January 5, 2022), it was a positive finding to discover that the vignettes were more effective at improving overall attitudes and perceptions of research usefulness among music therapists with these degrees than those at the doctoral level. Further, the finding that the vignettes were not particularly useful for music therapists with doctoral degrees suggests that it would not be beneficial to use this type of intervention to shift their attitudes toward research in continuing education courses.

The proceedings from the Music Therapy Research 2025 symposium (AMTA, 2015) specified that a priority in the field was building research capacity through education, training, and continuing education. The findings of the current study provide information relevant to that priority. That symposium also placed a priority on research use in certain clinical settings, but in the absence of improved attitudes toward research among practitioners, there would not be a shift in clinical practice or an increase in research usage.

It is a challenge to understand how to foster a culture in which it is commonplace to engage with a variety of types of research to shed light on questions in the field. Changing perceived norms within a community requires understanding the information

that people get from their individual behaviors, summary information about the group, and institutional signals, as these are common sources people use to understand norms (Tankard & Paluck, 2016). In the case of music therapy, this indicates that the information music therapists receive from other individual music therapists regarding their attitudes toward research, their understanding of attitudes toward research among their peers more generally, and the signals they receive from AMTA and CBMT are important contributors to how research is viewed in the field. Much of MTR2025 focused on learning about music therapists' continuing education needs regarding research and how to improve their perceptions of research relevance (AMTA, 2015). Together, the current study's findings and the efforts of MTR2025 might contribute to a culture in which it is commonplace to engage with research on a regular basis.

Recommendations and Conclusions

For music therapists, it will come as no surprise that assessing initial information is critical to knowing how to proceed, as this reflects the clinical process. The findings of the current study suggest that it is important to assess music therapists' overall attitudes toward research, perceptions of its usefulness, levels of anxiety, and tendencies to find it enjoyable in order to find the appropriate tools to change their attitudes toward research moving forward. Further, attitudes might be re-assessed over time, especially after degree programs and periodically throughout a career, as evidence from this study indicates that attitudes shifted, as measured on the R-ATR. With information about attitudes, it is possible to design learning experiences accordingly. Effective interventions can be implemented in classrooms, independent study continuing education courses, and by

clinical supervisors who oversee professionals in the field. Future studies might use a different tool to examine attitudes toward research or study them over a longer period.

There is a need for additional research on the use of didactic interventions to influence attitudes toward science in general (Aguilera & Perales-Palacios, 2020). In the field of music therapy, this type of research is necessary to facilitate the deliberate use of research-based strategies to promote positive attitudes toward research. While not significant, all conditions in the current study resulted in more positive attitudes toward research. This shows that even time-limited interventions such as these have the potential to improve research attitudes. The changes were quite limited and no information is available about persistence of the change or any behavioral implications, but further study is needed to investigate these questions. Due to the flexibility in CBMT's continuing education requirements (CBMT, 2020b), it is possible that music therapists might never pursue or participate in educational opportunities related to their attitudes about research. This poses important questions about how to encourage music therapists, particularly those with bachelor's or master's degrees, to voluntarily engage with professional development about research.

Questions also remain about students. Due to the low number of respondents who were music therapy students and not yet credentialed professionals, this study did not determine whether these interventions would be successful with that group. Some research outside of music therapy has suggested that students' motivation to learn about research might have to do with a desire to receive high grades in the courses, and that how far a student is in their academic training can influence their perceived self-efficacy and attitudes regarding research (Dukic, 2019). Music therapy research supports the use

of course-based undergraduate research experiences (Dvorak et al., 2021; Dvorak & Hernandez-Ruiz, 2019; Hernandez-Ruiz & Dvorak, 2020), and additional strategies to promote positive attitudes toward research among students would be helpful to the field.

Given that overall attitudes toward research, perceptions of its usefulness, levels of anxiety, and the tendency to enjoy research might shift according to student development and experiences, future study is also needed on how to apply interventions to promote more positive attitudes toward research when teaching undergraduate and master's music therapy students across a single degree program that they complete over a number of years. While respondents with a doctoral degree experienced the least improvement in their attitudes toward research, it is not known how the experimental conditions of this study might impact music therapists who hold a master's degree but are enrolled in a doctoral program, since that was not studied.

In music therapy, ongoing engagement with theory and research is critical for clinical practice (AMTA, 2015). Music therapy requires musicianship, clinical music skills, clinical knowledge, and regular reflexive practice, and consuming research, acquiring the skills to apply it, and developing knowledge of various research methods can contribute to each of those necessary pieces to provide meaningful music therapy experiences.

APPENDIX A

THREE EXPERIMENTAL CONDITIONS

Condition A: Use of Research

Below, you will see a story about research. Please read it, then pause for a moment to reflect before moving on to the following next step.

My name is Alex, and I am a board-certified music therapist. I own a private practice and serve a variety of settings. I feel confident in my music skills, and my practice is fortunate to have a wide collection of music therapy instruments and supplies.

Some months ago, my private practice secured a contract providing 12 weeks of once weekly music therapy groups in an adult inpatient mental health facility. The participants' primary needs centered around alleviating depressive symptoms and reducing anxiety. Knowing that many music therapy research articles are available online through websites such as Google Scholar, I began planning by doing a literature search.

Happily, I found an article by Smith et al. from 2018. The abstract read:

> Anxiety disorders are among the most common and impactful mental health disorders. The purpose of this study was to determine whether weekly inpatient music therapy groups with participants (N = 60) who experienced depression and anxiety would lead to decreases in those symptoms. Participants were divided into five groups, and participated in weekly 1-hour group music therapy sessions over 12 weeks. Groups incorporated re-creative, compositional, receptive, and improvisational experiences. Response was measured using pre-test and post-test scores on the Beck Depression Inventory II and the Beck Anxiety Inventory. Findings indicated that participants had significant decreases in their depression and anxiety scores, supporting the use of these music therapy methods in this group setting.

Next, I read the methods section of the article to find further details about the music therapy experiences in the study. I noticed that the sessions had provided education about depression and anxiety, allowed participants to explore their life histories, facilitated sharing of experiences, and helped participants develop tools for anxiety management.

Based on what I read in the study, I felt confident designing music therapy group experiences that incorporated the research findings, participants' preferences, suggestions from my peer supervision group, and my own clinical expertise. I had participants complete the Beck Depression Inventory II at the start of the sessions and at the end of the last session, and found an improvement in participants' symptoms. I wrote clinical notes after each session. I felt happy to hear directly from my group participants, who told me they enjoyed the group sessions, felt calmer, and used music therapy strategies outside of sessions.

At the end of the twelve weeks, the manager at the facility asked me how it had gone. I shared a summary of the music therapy methods and documented change based on the Beck Depression Inventory II scores and my clinical notes. Next, the manager invited me to create a survey for participant feedback and a program proposal to form a permanent music therapy program.

Please take a moment to reflect on this reading before proceeding to the next step.

Condition B: Negative Outcomes of Not Using Research

Below, you will see a story about research. Please read it, then pause for a moment to reflect before moving on to the following next step.

My name is Alex, and I am a board-certified music therapist. I own a private

practice and serve a variety of settings. I feel confident in my music skills, and my practice is fortunate to have a wide collection of music therapy instruments and supplies.

Some months ago, my private practice secured a contract providing 12 weeks of once weekly music therapy groups in an adult inpatient mental health facility for people whose primary needs centered around alleviating depressive symptoms and reducing anxiety. I was excited to plan the groups, as they were scheduled to begin the following week. Remembering a student practicum experience with adults where vocal re-creation was a common music therapy experience, I decided to facilitate similar experiences. I made a list of songs that might be popular given the participant information provided by the facility.

For the 12 weeks, I facilitated primarily familiar song vocal re-creation, which allowed choice making, expression, and sharing. I also facilitated piggyback songwriting, and the group members frequently accompanied familiar songs with percussion instruments. Group participants told me that they enjoyed the groups, got to know each other, and felt happier when they were making music.

At the end of the 12 weeks, the manager at the facility commented that it seemed like the group members had had fun. I shared a summary of the music therapy experiences and informal feedback that participants had provided. Next, the manager commented on the cost of paying a music therapist and asked if there was research evidence to support paying for music therapy in that setting. I did not know of any recent research, and the manager said they could play pre-recorded music to save money. Feeling worried that I would not earn another contract at the facility, I explained that I

had designed the tasks based on a previous clinical experience when I was a student. The manager planned to cut music therapy services because of the lack of evidence.

The following week, I attended a monthly peer supervision group where I discussed the music therapy groups. A peer told me about a recent music therapy research study in an adult inpatient mental health program. In that study, the music therapy researchers had facilitated re-creative, receptive, improvisational, and compositional music therapy experiences to provide education about depression and anxiety, allow participants to explore their life histories, facilitate sharing of experiences, and help participants develop tools for anxiety management. The study had used pre-test and post-test scores on a widely available, standardized tool and found that participants had statistically significant reductions in anxiety and depression on two standardized inventories. My peer had used this research to support insurance reimbursement for music therapy services.

Doing a literature search through Google Scholar or other sources would have better informed my clinical decision making, impacting my clients, prepared me to justify music therapy services with the manager, and increased my own feelings of satisfaction with my clinical work.

Please take a moment to reflect on this reading before proceeding to the next step.

Condition C: Article Summary Only

Below, you will see a summary of research. Please read it, then pause for a moment to reflect before moving on to the following next step.

Anxiety disorders are among the most common and impactful mental health disorders. The purpose of this study was to determine whether weekly inpatient music

therapy groups with participants (N = 60) who experience depression and anxiety would lead to decreases in those symptoms. Participants were divided into five groups, and each participated in weekly 1-hour group music therapy sessions over 12 weeks. Groups incorporated re-creative, compositional, receptive, and improvisational experiences. Response was measured using pre-test and post-test scores on the Beck Depression Inventory II and the Beck Anxiety Inventory. Findings indicated that participants had significant decreases in their depression and anxiety scores, supporting the use of these music therapy methods in this group setting.

Please take a moment to reflect on this reading before proceeding to the next step.

APPENDIX B

DEMOGRAPHIC QUESTIONS

1. What is your gender identity?
    a. Cisgender man
    b. Cisgender woman
    c. Genderqueer
    d. Nonbinary
    e. Transgender man
    f. Transgender woman
    g. Other:
    h. Prefer not to say
2. Which of the following best describes your ethnicity?
    a. Hispanic/Latino/a/x
    b. Not Hispanic/Latino/a/x
3. Which of the following best describes your race? You may select more than one.
    a. American Indian, Alaska Native, and/or Indigenous
    b. Arab American, Middle Eastern, or North African
    c. Asian or Asian American
    d. Black or African American
    e. Native Hawaiian or other Pacific Islander
    f. Self-description: Please specify ____
    g. White/Caucasian
    h. Prefer not to answer
4. What is your primary language?
    a. English

b. Spanish

c. Chinese (including Mandarin, Cantonese, or other varieties)

d. Other: ____

Professional Background

5. Are you a:

    a. student or intern

    b. professional music therapist

    c. professional music therapist who is also a student (part time or full time)

If selected A:

6. What is the degree you are currently working on?

    a. Undergraduate

    b. Master's

    c. Doctoral

    d. Post-doctoral

7. Have you taken or are you currently taking a research course? Yes/No

If selected B or C in Question 5:

8. What are your job duties? Select all that apply and sum to 100.

    a. Clinical

    b. Administrative

    c. Academic or Research

    d. I do not work as a music therapist

9. What is your level of education?

    a. Undergraduate degree with MT-BC

b. Master's degree with MT-BC

c. Doctoral degree with MT-BC

d. Currently working on a degree but not yet eligible to sit for the CBMT exam

10. What advanced trainings have you completed? (multi-choice)

a. None

b. Neurologic Music Therapist (therapist or fellow)

c. NICU Music Therapist (therapist or fellow)

d. Hospice & Palliative Care Music Therapist

e. Nordoff-Robbins Music Therapist

f. Analytical Music Therapist

g. Guided Imagery and Music (any level or fellow)

h. Trauma-Informed Music Therapy

i. Dialectical Behavior Therapy Informed Music Therapy Training

j. Other:

11. Do you hold non-music therapy licensure? Yes/No

12. Do you have a degree that is not in music therapy or expressive therapies? Yes/No

If selected *yes*

13. What is your non-music therapy degree?

a. Bachelor's degree (B.A., B.Sc., B.Mus, and others)

b. MA

c. M.Sc.

d. M.Ed.

e. M.Mus.

f. MPH

g. MSW

h. MBA

i. MFA

j. PhD

k. DA

l. Psy.D.

m. Other: ____

14. How many years have you been an MT-BC?

a. 0-5

b. 6-10

c. 11-15

d. 16-20

e. 20-25

f. 25+

15. Have you conducted research that was not required to earn a degree?

APPENDIX C

RESEARCHER-MODIFIED REVISED-ATTITUDES TOWARD RESEARCH (R-ATR)

Modified from Papanastasiou, E. (2014)

Please rate your degree of agreement or disagreement with each of the following statements

		1. Strongly disagree	2.	3.	4.	5.	6.	7. Strongly agree
1.	Research makes me anxious	1	2	3	4	5	6	7
2.	I enjoy research	1	2	3	4	5	6	7
3.	Research scares me	1	2	3	4	5	6	7
4.	Research is useful for my career	1	2	3	4	5	6	7
5.	I love research	1	2	3	4	5	6	7
6.	I find research interesting	1	2	3	4	5	6	7
7.	Research is connected to my field of study	1	2	3	4	5	6	7
8.	Research is stressful	1	2	3	4	5	6	7
9.	Research makes me nervous	1	2	3	4	5	6	7
10.	The skills I have acquired in research will be helpful to me in the future	1	2	3	4	5	6	7
11.	Research should be indispensable in my professional training	1	2	3	4	5	6	7
12.	Research is difficult	1	2	3	4	5	6	7
13.	Research is pleasant	1	2	3	4	5	6	7

APPENDIX D

STUDY INVITATION AND CONSENT

You are invited to participate in a research study titled "Attitudes Toward Research in the Music Therapy Community." Your participation will entail participating in an online experience that will take approximately 8-12 minutes. If you choose to participate, you will:

1. Provide your basic demographic data;
2. Answer questions about your perceptions of research;
3. Read a short story about research; and
4. Answer questions about your perceptions of research.

You are free to choose not to participate in the research and to discontinue your participation in the research at any time by quitting the survey. This survey will not collect your name, email address, or computer internet protocol identifiers. If any problem in connection to the research arises, you can contact the researcher, Adrienne Flight, doctoral candidate at Lesley University, at (857) 891-2299 or by email at aflight@lesley.edu, or Lesley University sponsoring faculty, Dr. Robyn Flaum Cruz, Professor, at (412) 401-1274 or by email at rcruz@lesley.edu.

There is a Standing Committee for Human Subjects in Research at Lesley University to which complaints or problems concerning any research project may, and should, be reported if they arise. Contact the Committee Chairperson at irb@lesley.edu.

By clicking "I agree" below, you are indicating that you have read this consent form and agree to participate in this research project.

Social Media Invitation

Perceptions of Research

Music Therapy Professionals, Interns, and Students: I want to hear from you!

Aim: To investigate perceptions of research among students, interns, and professionals

Eligibility: All music therapy professionals, interns, and students in the United States

Location: Online by following the link in the comments or the QR code below

Time: Approximately 8-12 minutes

If you choose to participate, you will be asked to provide basic information about yourself, answer questions about your perceptions of research, and read a short story.

Thank you!

Adrienne Flight MMT, MT-BC
Ph.D. Candidate, Lesley University

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