

Pediatric Music Therapy and COVID-19: A Survey Study

by

Natalie C. Pulliam

A thesis submitted to the faculty of Radford University in partial fulfillment of the requirements for the degree of Master of Science in Music Therapy in the Department of Music

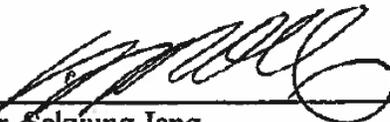
April 2021



Dr. Patricia Winter
Thesis Advisor

04/06/2021

Date



Dr. Sekyung Jang
Committee Member

4/8/2021

Date



Dr. Keith Davis
Committee Member

4-8-21

Date

Abstract

COVID-19 has caused insurmountable impact and change across healthcare and among healthcare workers around the world. Although many restrictions and shutdowns were established, healthcare workers remained dedicated to the needs for those in hospital facilities. The impact of COVID-19 is yet unknown for music therapists who work in medical settings. Have they experienced a furlough, are they facing increased stress and burnout, and what are the impacts of COVID in the way they provide services? This survey study was sent to 100 pediatric music therapists to determine the impacts of COVID on service delivery, work hours, and personal perspectives of perceived work satisfaction as a result of COVID-19. The purpose is to examine how COVID-19 has impacted the delivery of music therapy services in a pediatric setting and how those impacts suggest future implications for the profession.

Keywords: music therapy, pediatrics, pediatric music therapy, COVID-19, burnout, survey

Natalie C. Pulliam, M.S.
Department of Music, 2021
Radford University

Table of Contents

Abstract.....	2
Table of Contents.....	3
List of Tables and Figures.....	5
Introduction.....	6
Music Therapy Service Delivery	8
Literature Review.....	10
Burnout and Healthcare Workers	10
Music Therapy in Hospital Settings.....	13
Pediatric Music Therapy	15
Pain	16
Telehealth.....	18
Research Questions.....	19
Methods.....	21
Participants.....	21
Survey and Data Collection	21
Data Analysis	22
Results.....	23
Response Rate.....	23
Demographics	23

Pre-COVID 19 24

Job Burnout and Satisfaction 25

The Impact of COVID-19..... 26

 Telehealth..... 29

Discussion..... 36

 PPE..... 38

 Job Satisfaction and Burnout 39

Conclusion 43

 Strengths and Limitations 43

References..... 45

Appendix A..... 52

Appendix B..... 54

List of Tables and Figures

Table 1 – Demographics	23
Table 2 – Are There Other Music Therapists In-Facility?.....	24
Table 3 – Years of Experience with Pediatric Patients and at Facility.....	24
Figure 1 – Service Delivery Pre-COVID.....	25
Figure 2 – “How Would You Describe Your Job Pre-COVID?”	26
Figure 3 – Types of PPE Worn by Participants during Treatment	27
Table 5 – In-Person Treatment	28
Table 6 – In-Person vs. Telehealth	29
Figure 4 – Patient Access to Telehealth Services	30
Figure 5 – Telehealth Platforms.....	31
Table 7 – Transitioning to Telehealth Challenges	32
Table 8 – Patient Musical Participation during Telehealth Sessions.....	33
Figure 6 – “How Would You Describe Your Job Pre-COVID vs. Now?”.....	34

Introduction

On a children's hospital unit in southwest Virginia, child life specialists (CLS) partnered with a local university's student music therapists (SMTs) to offer music therapy services to pediatric patients and provide a unique clinical setting for students in training. For the purposes of this research, the definition of music therapy is the evidence-based use of music within a therapeutic relationship to improve physical, cognitive, psychological, socio-emotional, behavioral, communication, spiritual, and musical needs of a patient by a board-certified music therapist who promotes growth, healing, and health to achieve individualized goals for each patient (Abrams, 2010, 2015, 2018; Bruscia, 2014).

The CLS team made referrals and recommendations for patients who they believed would benefit and respond well to music therapy, both on the general pediatric unit as well as the pediatric intensive care unit. Pediatric patients have varying diagnoses and reasons for being in the hospital ranging from injury, oncology treatment, neurological injuries, psychiatric care, hematology, chronic conditions, multiple disabilities, trauma, and pain (Knott et al., 2020).

During hospital clinical experiences, SMTs learn how to assess patient need, implement music therapy interventions, and provide treatment to address needs such as pain, coping, environmental distraction, and neurological stimulation for pediatric patients. These areas are addressed through music therapy interventions such as songwriting, freely improvising music through singing or playing instruments, and recreating patient-preferred music. A unique challenge for SMTs in this setting is that they often do not know much, if anything, about a patient and have to provide interventions on-the-spot, with minimal preparation. In other clinical settings, SMTs typically meet the same clients each week and are able to plan sessions in advance based on already identified patient diagnoses and need, and through an established

relationship over time. However, in a pediatric setting in particular, the SMTs had no prior knowledge of any patient(s) they would visit until given the referral list by the CLS. While this is a stressful environment for SMTs, it is incredibly important for their clinical development as they learn to evaluate each individual patient and make clinical decisions in-the-moment that are therapeutically effective. During music therapy sessions, SMTs are able to collaborate with patients to create and establish a therapeutic relationship, to create live music, or to find music the patient would like to listen to.

Another aspect of pediatric music therapy is the presence of family and caregivers. Due to the age and significant illnesses presented by these children, it is common for family members/caregivers to be present with the patients during their hospital stay. The National Cancer Institute's Dictionary of Cancer Terms defines "caregiver" as,

a person who gives care to people who need help taking care of themselves. Examples include children, the elderly, or patients who have chronic illnesses or are disabled.

Caregivers may be health professionals, family members, friends, social workers, or members of the clergy. They may give care at home or in a hospital or other health care setting. ("NCI Dictionary of Cancer Terms", n.d.)

Often in hospital settings, caregivers are given the responsibility for around-the-clock care both in the hospital and after discharge, playing a critical role in their health and support. Caregivers can offer a deeper understanding of patients, who they are, what they enjoy, and other information that is important for clinical staff to know. Working closely with caregivers not only provides a greater understanding of the patient, but also offers an opportunity to include and collaborate with caregivers during music therapy sessions.

Music Therapy Service Delivery

One hundred ten of 220 hospitals that belong to the Children’s Hospital Association (CHA) reported offering music therapy services in 2015 (American Music Therapy Association [AMTA], 2018). In the 2018 AMTA workforce analysis, 14% of respondents in the United States reported working in a medical setting, which includes general hospital, oncology, home health agency, outpatient clinic, and children’s hospital or unit (AMTA, 2018). It is difficult to differentiate and evaluate a concrete number of pediatric music therapists based on this survey, as some categories overlap and/or include other populations. Research in pediatric music therapy needs additional attention as music therapy programs in pediatric medical settings continue to expand. With the constant evolution of technology, medical care and practice has changed and developed as technology has developed, which is why this research is important to be evaluated as music therapy practice also changes.

As the coronavirus disease (COVID-19) continues to change society in countless ways, music therapists have been tasked not only with the challenges of working in healthcare, but also with navigating how to transform their service delivery. This is so that music therapists stay up to date with current protocols and procedures to maintain a safe environment for patients to still have access to music therapy services. Telehealth has emerged as a delivery method not only for medical professionals, but also for music therapists. Prior to COVID-19, there was limited research on the viability of providing music therapy via a digital platform. However, when facilities began to restrict access to non-essential personnel, music therapists began employing telehealth as a way to maintain consistency of services. Expanded exposure and access to physical and arts education, specifically music, is an effective way to offer psychosocial support to children during a global pandemic: “creative processes are interdependently linked to the

brain's default mode network, hence the both artistic and neuro-psychological value of music” (Mastnak, 2020, p. 1518).

As a result of the rapidly changing healthcare market, the shift in service delivery methods, and the challenges presented by COVID-19, it is important to investigate the experiences of music therapists working with pediatric patients in a medical setting during this time. The purpose of this survey study is to examine the impacts of COVID-19 on pediatric music therapists, their practice, service delivery, and future implications for the profession.

Literature Review

COVID-19 continues to shift culture, society, and medical practice globally since its genesis in late 2019. Papatzikis et al. (2020) noted how the pandemic has greatly changed research practices, driving researchers to learn how to continue conducting research in novel ways. The original premise of this research study was to understand caregiver perceptions of music therapy with pediatric patients, through in-person sessions on a pediatric unit in a hospital. With governmental polices, mandates, and restrictions due to the pandemic, this study completely shifted in methodology and protocol in order to prioritize the health and safety of those in the community. The revised research project still focuses on pediatric music therapy and illuminates the many ways that researchers and music therapists have had to adapt in order to conduct research under COVID-19 mandates. Papatzikis et al. (2020) explained how COVID-19 limitations and restrictions directly impacting music and neuroscience research are evidenced by delays in data collection and are having a negative impact on productivity. However, researchers in neuroscience, music, and music therapy have displayed resiliency and adaptability throughout the pandemic (Papatzikis et al., 2020).

Burnout and Healthcare Workers

In November 2020, the World Health Organization (WHO) identified that there are over 53 million confirmed cases since the beginning of the pandemic, and of those confirmed cases, over one million reported deaths due to COVID-19 (“Coronavirus Disease (COVID-19) Dashboard,” 2020). In the United States alone, the Centers for Disease Control and Prevention (CDC) report almost 11 million total cases since January 21, 2020, with confirmed cases continuing to grow (“CDC COVID Data Tracker,” CDC, 2020). As of November 2020, over 200,000 U.S. deaths have been reported due to COVID-19 (“CDC COVID Data Tracker”).

Because of the novel, unique, and aggressive nature of this disease, researchers have focused on the imminent threat of the disease and are making steps to find a cure with a direct impact for those who are diagnosed with the disease. Currently, there is a gap in the literature regarding the experiences of healthcare workers and other medical and mental health professionals and clinicians. The aim of this study is to gain an understanding of the impact COVID-19 is having for music therapists who work in a medical setting with children.

It is no mystery that experiences of stress and anxiety have increased globally due to COVID-19, but the direct impact on the stress and burnout of healthcare workers is an urgent area of need, support, and understanding. Burnout is defined as “a significant psychosocial problem that is caused by unsuccessfully managed chronic stress in the workplace” (Raudenská et al., 2020). The WHO’s International Classification of Diseases (2018) characterized burnout in three ways: “feelings of energy depletion or exhaustion, increased mental distance from one’s job or feelings of negativism or cynicism related to one’s job, and reduced professional efficacy” (WHO, 2018). Symptoms associated with burnout include, but are not limited to, depression, anxiety, lower satisfaction, and PTSD among healthcare workers (Alharbi et al., 2019). Raudenská et al. (2020) suggested increasing education on mental health and providing preventative tools as basic ways to raise awareness and support; however, they also stressed the importance of hospitals providing their employees with basic physiological supports. This includes regulating scheduling of employees and ensuring adequate rest periods to prevent overworking, which is a precursor to burnout (Raudenská et al., 2020; Restauri & Sheridan, 2019). Peer and employee support is one way that combines education on the psychological impact of working during such stressful conditions with community support. This along with

individual self-care can help prevent burnout or other negative psychological experiences (Raudenská et al., 2020).

Primary healthcare nurses working during the pandemic identified seven common areas of self-perceived need: personal protective equipment (PPE), funding, self-care, valuing nurses, workplace factors, industrial issues, and communication (Halcomb et al., 2020). Seventy-two percent of participants indicated the need for proper access to PPE as a high priority, in light of global shortages in the beginning months of COVID-19 (Halcomb et al., 2020). Protection and safety of healthcare workers is put at stake with the lack of proper access to protective equipment and resources, which protect healthcare workers caring for those with COVID-19. This lack of protection and safety unquestionably can lead to increased stress (Adams & Walls, 2020; Haines et al., 2020). Thirty-four clinical staff employees working with COVID-19 patients in Italy participated in a study where receptive music therapy was used to decrease stress and improve wellbeing (Giordano et al., 2020). Participants received music therapy services over a 5-week period where participants would listen to playlists created by the music therapists conducting the study (Giordano et al., 2020). Participants were provided pre- and post-tests via mobile link, as COVID-19 restrictions limited the music therapists from conducting research in-person (Giordano et al., 2020). Results indicated, via self-assessment questionnaires, a significant change in emotional status related to a decrease in feelings of worry, sadness, fear, and tiredness in participants (Giordano et al., 2020).

Although COVID-19 increased the need for social distancing and isolation, the basic human need for deep connection should not be forgotten, and has become more pronounced when separation becomes necessary (Thompson, 2020). Music therapists and other healthcare professionals are often seen as helpers in good health and patients as those with compromised

mental and physical health. This ignores the possibility of providers having compromised health, needing care themselves, while supporting “an ableist view of society that presumes that only healthy people can be helpers” (Thompson, 2020). With the shift to telehealth services and remote treatment, this challenges the ableist view that even if a provider is working from home, they may not be in good health, but are still providing care and services while prioritizing the health and safety of those around them (Thompson, 2020). This literature outlines the urgently needed psychosocial support for healthcare workers and supports the use of music therapy, peer support, and a deeper understanding of employee needs in order to prevent increased anxiety and burnout among healthcare workers.

Music Therapy in Hospital Settings

Music therapists often address issues such as pain and anxiety, and provide distraction and neurological stimulation while promoting increased self-awareness and enhanced quality of life (Bruscia, 2014). Previous studies examined the effectiveness of music therapy interventions in addressing pain, anxiety, and wellbeing in a hospital setting (Beh et al., 2017; Misra et al., 2016; Millet & Gooding, 2017; Nguyen et al., 2010; Palmer et al., 2017; Mandel et al., 2019; Yinger, 2016). Other literature supports the use of music therapy in a medical setting for addressing surgery/surgical procedures, palliative care, oncology, and various chronic diseases (Dileo, 1999). Bradt et al. (2013) conducted a systematic review of music interventions for preoperative anxiety using pre-recorded music listening. The review included 26 trials, all which utilized passive music listening interventions, also known as music medicine, which is when “pre-recorded music is offered to patients often by medical personnel” (Bradt et al., 2013, p. 2). In comparison, active music interventions, also called music therapy, requires a “board-certified music therapist, presence of the therapeutic process, a therapeutic relationship, and the use of

personally tailored music experiences” (Bradt et al., 2013, p. 2). Results were inconsistent across studies, but indicate listening to music before surgery may have a positive impact on decreasing preoperative anxiety (Bradt et al., 2013).

Music medicine, or receptive music therapy, is only one of the four methods that is utilized in music therapy. The other music therapy methods include recreative, improvisation, and composition (Gardstrom & Sorel, 2017). These methods can be used individually or combined in the therapeutic process with patients. Music therapists also have different theoretical approaches or orientations to practice on which they may base their practice (Dileo, 1999). These include, but are not limited to, biomedical, developmental, cognitive-behavioral, neurological, humanistic, and integral.

Lee (2016) conducted a meta-analysis of randomized controlled trials measuring the effect of music on pain. In this study, music outcomes for pain management were compared to standard care. These outcomes included changes in vital signs (heart rate, blood pressure, respiration rate) and a comparison of the effectiveness of music medicine and music therapy (Lee, 2016). Both music therapy and music medicine trials suggested a significant effect of music on pain intensity, indicating that those who received music therapy had a greater decrease of pain (-1.50) whereas those who received music medicine displayed a -1.08 reduction in pain intensity (Lee, 2016, p. 463). One factor that differentiated music medicine from music therapy was that for the majority of the music medicine studies, participants passively experienced music through music listening to pre-recorded music. Also, for several of the included music medicine studies, the music was provided to patients by nurses or other medical staff, not by music therapists (Lee, 2016).

Klassen et al. (2008) conducted a systematic review of randomized controlled trials focused on music to help alleviate pain and anxiety in children undergoing surgical procedures. Results indicated that children who had music therapy experienced a significant decrease in anxiety and pain in both medical and dental procedures. The trials considered in the review included both passive and active music therapy interventions, both of which suggest a positive effect on pain and anxiety for children and adolescents (Klassen et al., 2008).

Pediatric Music Therapy

Pediatric music therapists serve a variety of patients, units, and patient needs. These areas include, but are not limited to, the pediatric intensive care unit, hematology and oncology, general medical, surgical, neonatal intensive care, cardiology, and outpatient units (Knott et al., 2020). Knott et al. (2020) conducted a survey of music therapists who work with pediatric patients in a medical setting, detailing demographic information, structure, practice, and delivery of services. One of the most common ways patients receive music therapy referrals is through electronic medical records (Knott et al., 2020). Areas of clinical need that are addressed in music therapy for pediatric patients include pain, end-of-life care, support pre- and post-procedure, coping difficulties (both environmental and diagnostic), and lack of familial/caregiver support (Knott et al., 2020). Music therapy is often a part of the child life department or the integrative medicine/creative arts therapy programs at hospitals (Knott et al., 2020). While each respective discipline has its own protocols and treatment plans, the interdisciplinary collaboration can help provide a more holistic approach and supportive care to patients. Referrals for music therapy services can come directly from medical personnel, child life specialists, or other integrative medical staff, either electronically or also by verbal referral (Knott et al., 2020).

Because of the variety of clinical needs and diagnoses in a medical setting, music therapists implement a variety of approaches and orientations to their practice depending on the specific and unique needs of each patient (Dileo, 1999). These theoretical orientations can be used individually or in an integrated approach, combining multiple approaches and orientations to treatment. An example of using an integral approach involves a student music therapist on a pediatric unit working with an adolescent male with multiple disabilities. Upon entering the unit, audible groans of pain could be heard coming from a specific room where an isolated patient was residing, alone. This patient communicated nonverbally, but appeared to be in excruciating pain, evidenced by his affect, muscle tension, and heart rate. Pain was assessed and measured by FLACC score. Based on his immediate need for pain management, improvisatory music was created to match the patient's respiratory rate in order to attempt to regulate it. In addition to addressing respiratory rate, the improvised music included matching his verbalizations and using the patient's name to gain his attention. Once his respiratory rate steadied, the music maintained at a comfortable rate for breathing. The music ended as the patient rested and fell asleep while the student music therapist faded the music while offering positive affirmations to the patient. This is an example of using an integrated approach in music therapy by incorporating multiple theoretical approaches for optimal treatment based on individual needs.

Pain. The International Association for the Study of Pain (IASP) defined pain as an “unpleasant sensory and emotional experiences associated with actual or potential tissue damage, or described in terms of such damage” (“IASP Terminology,” 2017). Pain assessment in pediatric patients is difficult; therefore, there is a need for a deeper understanding and resources for how to treat and manage pain for this specific population (Boric et al., 2017). Since “appropriate treatment of postoperative pain contributes to shorter time of hospitalization...”

(Boric et al., 2017, p. 1), it is essential to utilize effective pain management interventions and strategies. Thrane et al. (2016) conducted a review analyzing past research about pain management strategies for children through a developmental lens, concluding that pain assessment based on developmental stages and cues is crucial. Cues such as crying and body posture are ways in which to measure pain for infants and children; however, these behaviors are not always indicative of pain (Thrane et al., 2016).

Studies have shown that adolescent patients also benefit from music therapy to address pain. Adolescents reported a decrease of pain after postoperative music therapy following spinal fusion surgery by means of distraction and relaxation (Kleiber & Adamek 2012). Patients in an emergency department indicated that they would request music therapy in the future, after receiving services (Mandel et al., 2019). García-Perdomo et al. (2019) found that live music therapy during cystoscopy reduced anxiety in patients. A cystoscopy is a procedure where a scope examines the lining of the bladder and urethra (“Cystoscopy,” 2021). Yinger and Gooding (2014) evaluated various psychotherapeutic approaches in music therapy in treating children and adolescents. Their research suggests that using client-preferred music can strengthen the therapeutic alliance and overall hospital experience for the patient. In a study where a group of pediatric patients and caregivers received music therapy during immunizations, parents reported that their child’s level of distress decreased during music therapy than in previous immunization experiences (Yinger, 2016). There were no significant differences between the control and the music group responses from parents; however, children in the control group “showed significantly higher rates of distress behaviors during the procedure phase and recovery phase compared to children in the music therapy group” (Yinger, 2016, p. 354). The researchers

concluded that live music therapy benefits parents and young children during routine immunizations (Yinger, 2016).

The aforementioned research supports the need and effectiveness of music therapy services for pediatric patients and how it positively impacts their hospitalization and caregiver interactions as well. The use for music therapy services to address any clinical need is especially important during the COVID-19 global crisis, as hospital protocol, treatment, and patient care has adapted greatly due to the implications of the pandemic.

Telehealth. The utilization of telehealth services began prior to the beginning of COVID-19. Telehealth is “the use of electronic information and telecommunication technology to support clinical care and public health, and to promote patient education and professional development” (Tomines, 2019). The U.S. Department of Health and Human Services (DHHS) defines four approaches to telehealth delivery: “(a) live synchronous video conferencing, (b) store-and-forward, (c) remote patient monitoring, and (d) mobile health” (DHHS, 2017).

Between 2014 and 2016, the percentage of large U.S. employers offering telehealth services increased from 48% to 74% (Utidjian & Abramson, 2016). The Affordable Care Act established in 2010 included “provisions that promoted the use of telehealth by Accountable Care Organizations, and in the care of behavioral health issues and patients with chronic, complex conditions” (Public law 111-148, 2020). Utidjian and Abramson (2016) outlined pediatric telehealth practices, support, and implications for accessibility to remote care. Telehealth services are expected to expand access to care in “underserved rural areas” that are more prone to workforce shortages in area hospitals (Utidjian & Abramson, 2016). This is particularly timely as healthcare agencies are reporting staff shortages as well as increased patient capacity due to COVID-19. The CDC encourages healthcare facilities to utilize telehealth

service to mitigate expected staff shortages due to illness, exposure, or caring for family at home (“Mitigating Staff Shortages,” CDC, 2020).

Knott and Block (2020) emphasized how the impact of PPE shortages have led music therapists to adapt their delivery of services “in order to provide safe and relevant services” (p. 151) to patients during the pandemic. Knott and Block (2020) also provided a model framework for virtual music therapy as a new approach to delivering music therapy services, as clinicians have had to quickly change and adapt their practice. While music therapy and telehealth research is limited, most published research has utilized live synchronous videoconferencing for service delivery (Knott & Block, 2020). As clinicians have adapted, AMTA has provided resources for music therapists during COVID-19. These resources include telehealth resources, infection prevention and control, and self-care resources to support the work of music therapists (“COVID-19 Resources for Music Therapists and Students,” 2020).

Research Questions

As COVID-19 continues to increase its impact, the implications for healthcare professionals regarding practice, health and safety, and adapting delivery of services is an important area of research that needs further investigation. The aim of this survey study was to investigate if COVID-19 has directly impacted music therapists who work with pediatric patients in a medical setting, and if changes indicate future implications for education of music therapists and best-practice approaches.

Specific research questions guiding this survey include:

1. How has COVID-19 impacted the work of music therapists in pediatric medical settings?

2. How many pediatric music therapists are using telehealth platforms to deliver services?
3. Are clinicians receiving or utilizing any professional support?
4. Has job satisfaction changed for pediatric music therapists due to COVID-19?
5. What are future implications for the profession? Will music therapy practice change because of COVID-19 experiences?

Methods

Participants

The participants were a purposive sample of music therapists who work with pediatric patients in medical settings in the United States. This group of clinicians was recruited in order to understand if their work was impacted due to COVID-19 and if so, how? The AMTA has an active online directory of members on their website listed under “Find a Music Therapist” (AMTA, n.d.). The researcher selected the keywords in the search for “settings served”: children’s hospital or unit to refine the search results. Email addresses provided in the online directory were then recorded in a password-protected file for survey distribution. For the purposes of this study, the Qualtrics™ survey instrument, designed by the investigator, was sent to a maximum of 100 participants (n = 100). No identifiable information was collected. Consent was explained and provided in the survey invitation email sent to participants (see Appendix A). Participants indicated consent by clicking the survey link in the invitation email they received.

Survey and Data Collection

Questions were divided into five sections: (1) demographic information, (2) questions about participants’ job before COVID-19, (3) how their job has been impacted by COVID-19, (4) telehealth, and (5) wrap-up questions (see Appendix B). The 36-item survey was created using Qualtrics™, using a combination of nominal, discrete, and open-ended questions. Open-ended questions were offered to provide participants with opportunities to share personal experience(s), descriptions, and any other information they wished to include. Questions were developed to gather data regarding furlough, daily case load, delivery of services, and the use of telehealth since COVID-19. Participants were able to skip questions and some questions allowed multiple responses. Prior to distribution, the researchers tested the online survey for ease of

access to the system, clarity of questions, to estimate the amount of time needed for completion (about 30 minutes), and overall survey flow. The survey was active for one month after initial distribution to gather responses. Participants received a reminder email one week before survey closure. Upon closure of the survey, participant email addresses were deleted.

Data Analysis

All survey responses were recorded, both complete and partial completions, unless participants indicated to the primary investigator their wish for their response to not be included. Results were analyzed using descriptive statistics and thematic content analysis for open-ended answers (Creswell, 2002). Qualtrics™ provided a summary of results and aggregated responses for further analysis.

Results

Response Rate

Survey invitations were sent to 100 email addresses. Of the 100 initially invited to participate, 12 email addresses resulted in either a system error or undeliverable automatic response emails. To accommodate, 12 additional email addresses were added to the password protected list and these individuals were invited to participate in the survey. Out of 100, 47 responses were recorded, for a survey response rate of 47%.

Demographics

A summary of the demographic data is given in Table 1.

Table 1

Demographics

Age	≤ 24	25-34	35-44	45-54	≥ 55			
	1	36	3	2	3			
Gender	Female	Male	Non-binary	Transgender	Prefer not to answer			
	39	6	0	0	0			
Region	Great Lakes	Mid-Atlantic	Midwestern	New England	Southeastern	Southwestern	Western	
	12	9	2	1	10	0	11	

Note. Regions are in accordance with AMTA’s regions. $n = 45$.

The largest group of participants were females 34 years of age and younger. Participants were widely disbursed across the country with most respondents from the Great Lakes region, followed by the Western region, Southeastern region, and the Mid-Atlantic. Tables 2 and 3 detail participants’ facilities, music therapy programs, and years of experience working with pediatric patients. Most respondents ($n = 39$) work in a facility with at least one other music therapist. The

respondents tended to be relatively new to the profession ($n = 14$) in the 3-to-5 years of experience, and an equivalent amount had been at their facilities for the same amount of years ($n = 13$).

Table 2

Are There Other Pediatric Music Therapists In-Facility?

Yes	39		
No	6		
	\bar{x}	Std. Dev. (s)	Range (R)
If so, how many?	3.51	2.50	9

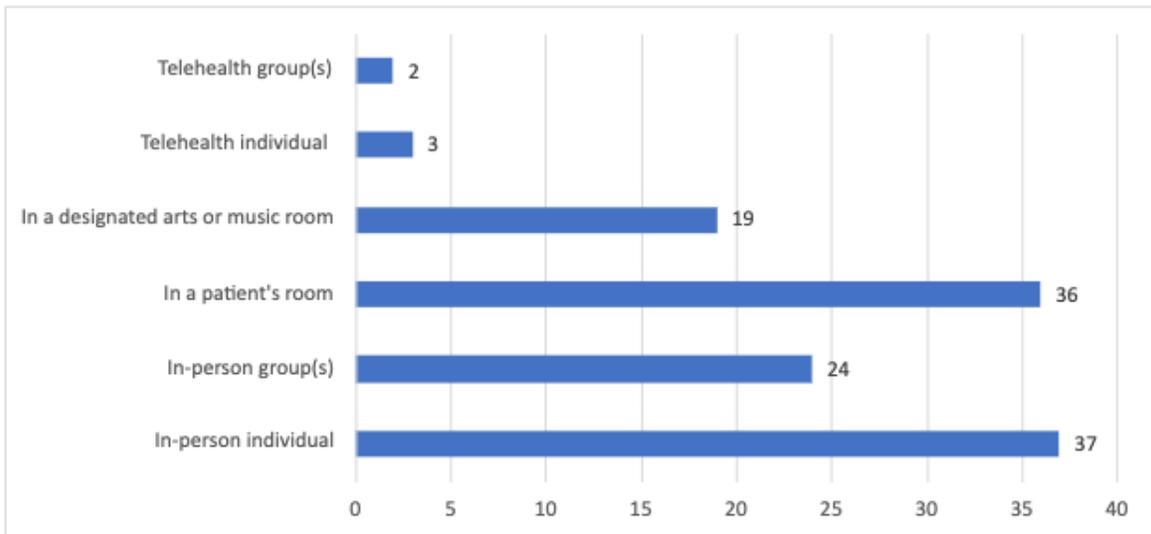
Table 3

Years of Experience with Pediatric Patients and at Facility

Years of experience with pediatric patients	Less than a year	1-3 years	3-5 years	5-7 years	7-10 years	10 or more
		1	8	14	6	8
Years at current place of employment	Less than a year	1-3 years	3-5 years	5-7 years	7-10 years	10 or more
		2	12	13	5	6

Pre-COVID 19

Before COVID-19, 79.46% of participants were full-time employees, with only 4.07% of participants using telehealth for service delivery for both individual and group settings. Sessions trended toward in-person individual and were held mostly in the patient’s room. Participants reported method(s) of service delivery pre-COVID (see Figure 1).

Figure 1*Service Delivery Method Pre-COVID*

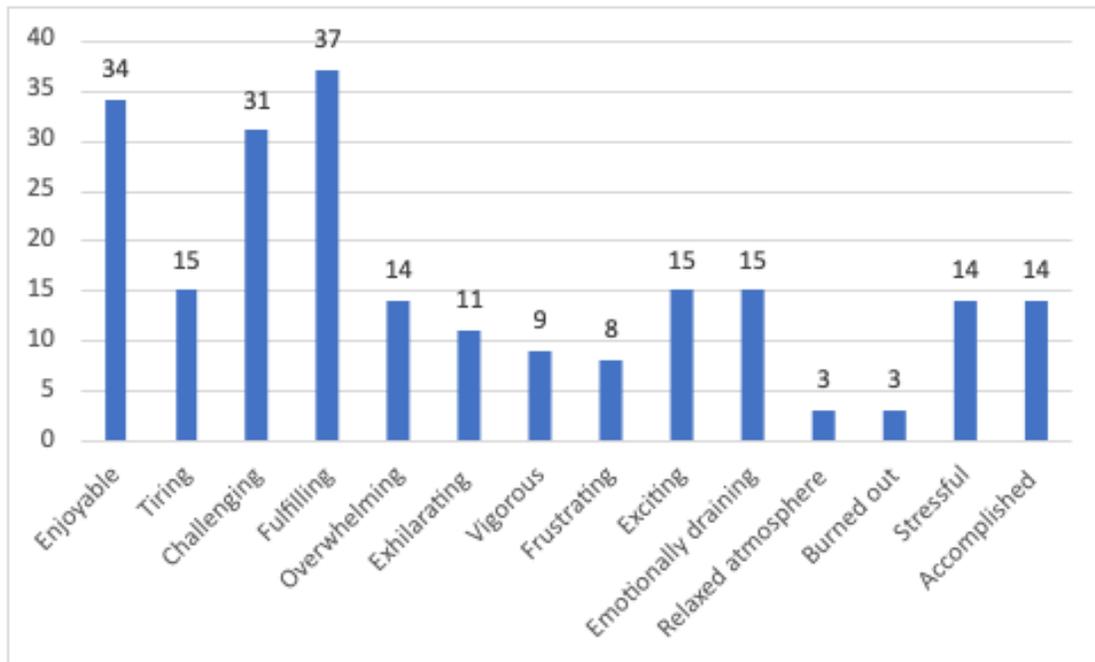
Daily caseload numbers ranged from 3 to 30 before COVID-19, with an average of 11.01 cases per day. See Figure 2 below for a detailed summary of how participants described their job pre-COVID. There is a lack of recent literature reporting caseloads for pediatric music therapists. However, a recent 2020 pediatric music therapy survey did report challenges experienced by music therapists, which included “high volume of referrals” and “caseload/staffing” (Knott et al., 2020, p. 54).

Job Burnout and Satisfaction

Participants were asked to choose from a series of words from the Maslach (1986) burnout inventory to describe their experiences in the job. Participants were asked to select all that applied.

Figure 2

“How would you describe your job pre-COVID?”



Note. These words are based on the Maslach Burnout Inventory.

The top three reported workplace experiences were fulfilling, enjoyable, and challenging, while the three least frequently reported were frustrating, relaxed atmosphere, and burned out.

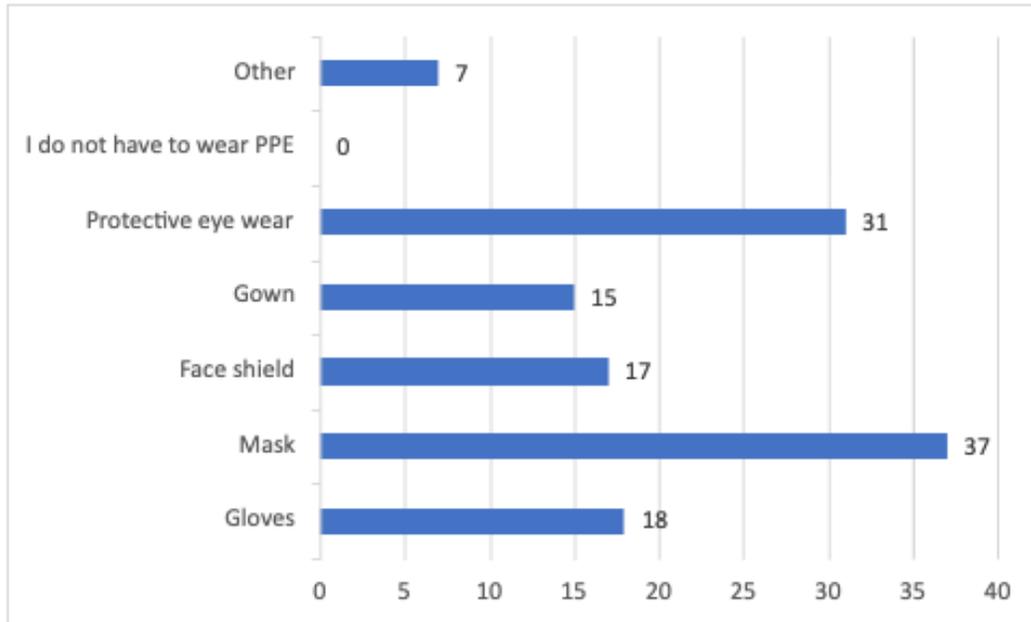
The Impact of COVID-19

At some point during COVID-19 shutdowns, 10.25% of participants were furloughed. Working hours were impacted for many participants, representing both an increase and decrease. Out of 39 respondents, nine participants reported that their hours were impacted, two indicated increased hours, and seven indicated decreased hours. One participant listed they were completely furloughed for 7 weeks, one worked 8 hours per week for 6 weeks, two indicated their hours decreased by 50%, and three listed their hours decreased by 8 hours. One participant whose hours increased due to COVID-19 described that their normal 8-hour days extended to 10-11-hour days while working virtually. At the time of the survey, all participants indicated that

they have returned to in-person treatment. All participants also indicated that they were required to wear a mask while providing in-person treatment, with 83.78% also wearing protective eye wear. See Figure 3 for a detailed summary of PPE for in-person treatment.

Figure 3

Types of PPE Worn by Participants During Treatment



Other responses include N-95 masks layered with other medical masks, PPE as indicated per patient, and following isolation protocols per room, which may include wearing a gown and gloves as well as masks and goggles. Social distancing protocols included maintaining a distance of at least 6 feet when providing in-person treatment, practicing social distancing “when possible,” and no social distancing unless the patient has a confirmed diagnosis of COVID-19 (51.35%). Table 5 outlines additional considerations for in-person treatment.

Table 5*In-Person Treatment*

Other people present in room during sessions?	Participant Responses	
		<i>n</i> = 35
Medical staff were present		35
Family/caregivers were present		7
Other		
<hr/>		
Have patients been able to sing and/or use instruments?		
Yes		35
Only singing		1
Other		1
<hr/>		
Have you been able to sing during in-person sessions?		
Yes		37
No		0
<hr/>		
If patients are allowed to sing, are they required to wear PPE?		
Yes		3
No		22
<hr/>		

Participants indicated that other people present in rooms included music therapy interns and co-treatment staff. Many hospitals established patient visitor restrictions to prevent additional exposure to COVID-19 by limiting family visitation for patients. Dokken and Ahmann (2020) examined the importance of family presence during challenging times, as past and current restrictions have limited the number of family members allowed to visit patients in the hospital. They emphasized that especially in vulnerable populations, such as children, family presence and support is needed to advocate for patients' needs and to ensure a positive experience of care (Dokken & Ahmann, 2020).

All participants reported that they and their patients have been allowed to sing during in-person sessions. Only three of 22 respondents reported that patients are required to wear PPE while singing, and of those three, all indicated that the type of PPE worn by patients was masks.

Telehealth. Before COVID-19, only 4.07% of participants utilized telehealth for service delivery. At the time of this survey, there has been a 57.50% increase in the use of telehealth for music therapy service delivery with pediatric patients. Currently, participants are delivering music therapy services both in-person and via telehealth. See Table 6 for a breakdown of current practices relating to in-person treatment, frequency of telehealth service delivery, and location of remote service delivery for music therapists.

Table 6

In-Person vs. Telehealth

Did you use telehealth for service delivery at any point?

No	12
Yes	25

How are you currently delivering services?

In-person	37
Telehealth	19

Remote location

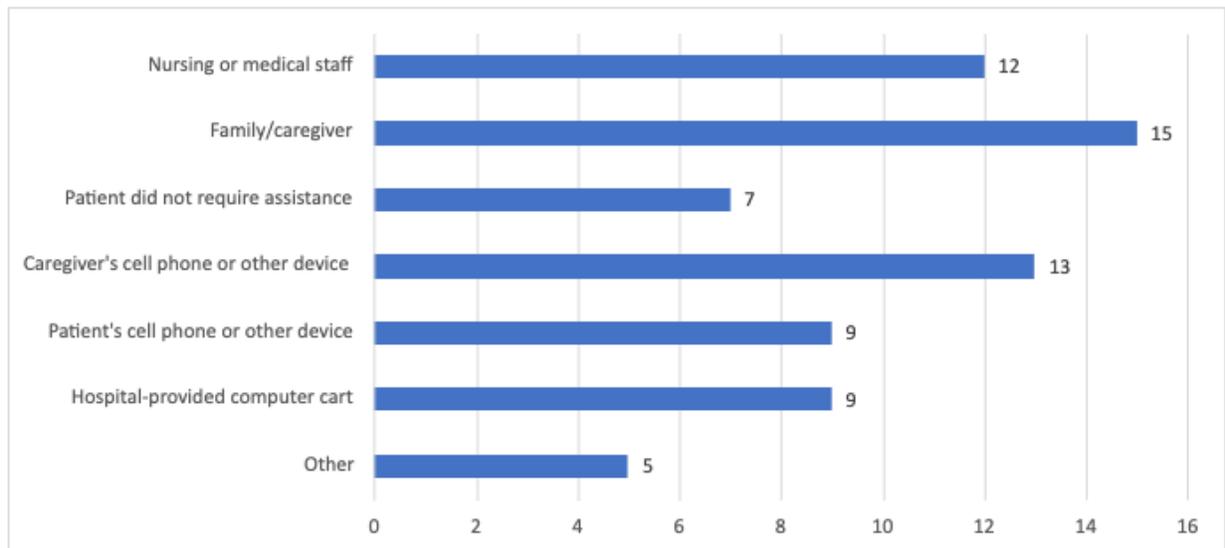
At home	12
In facility/office	12
Other	1

During the creation of this survey, it was assumed that telehealth services may have increased; therefore, participants were asked to outline how patients accessed telehealth services and what type of technology was implemented for these services. Figure 4 outlines how patients

accessed telehealth music therapy sessions. Participants were able to select all options that applied.

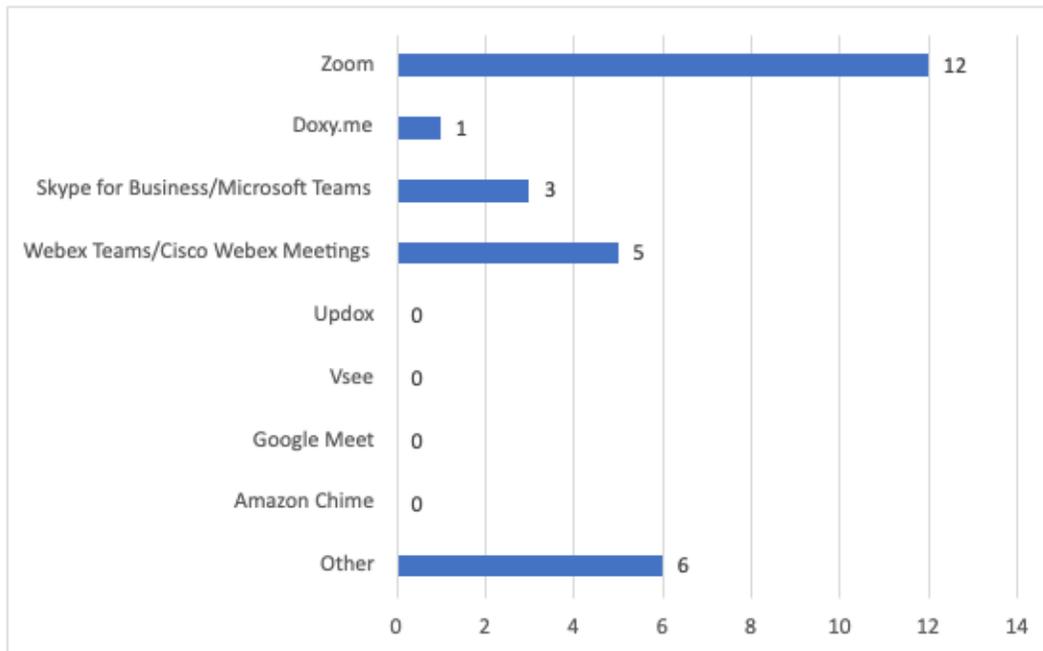
Figure 4

Patient Access to Telehealth Services



Note. Answer options were chosen based on the U.S. Department of Health and Human Services (DHHS) report on telehealth and telemedicine (DHHS, 2017).

The most common telehealth platform used among participants was Zoom. Other platforms listed included in-house hospital platforms and FaceTime between music therapy iPads (see Figure 5). Open responses included the use of the hospital-wide CCTV system, hospital-provided iPads, outpatient groups, and the implications of patients struggling with access to telehealth services.

Figure 5*Telehealth Platforms*

Other platforms listed by participants included in-house platforms, FaceTime, Starleaf, and hospital-wide CCTV system. Participants were asked if their transition to telehealth service delivery was self-selected or an administrative or departmental decision. They also were asked to choose from a series of options indicating challenges with implementing telehealth services. Table 7 details telehealth transition decisions and challenges with using telehealth platforms for service delivery.

Table 7*Transitioning to Telehealth and Challenges*

Working Remotely	Self-Selected	4
	Administrative Decision	18
	Other	7
Challenges with using telehealth for service delivery	Internet connection	12
	Audio quality	16
	Accessibility to internet services or technology	12
	Other	8

Other responses describing the move to remote and telehealth services included joint/mutual decision-making with supervisor. Written responses included: “*chose to provide some telehealth sessions as part of a departmental effort to provide more virtual options at this time,*” and “*virtual visits outside patient rooms if patient is under COVID precautions.*” Multiple participants reported additional challenges with telehealth including scheduling: “*staff do not make referrals,*” “*delayed sound,*” “*latency,*” and “*patients not having the proper support to utilize services.*” Decreased staff referrals was a trend in open-ended responses among two participants at the time of the survey. Others stated: “[telehealth is] *much harder for young children or people with special needs. Can also be an issue depending on medical status or awareness state,*” especially if music therapy staff are off-site. See Table 8 for details.

Table 8*Patient Musical Participation during Telehealth Sessions*

Are patients able to sing or play instruments during telehealth sessions?

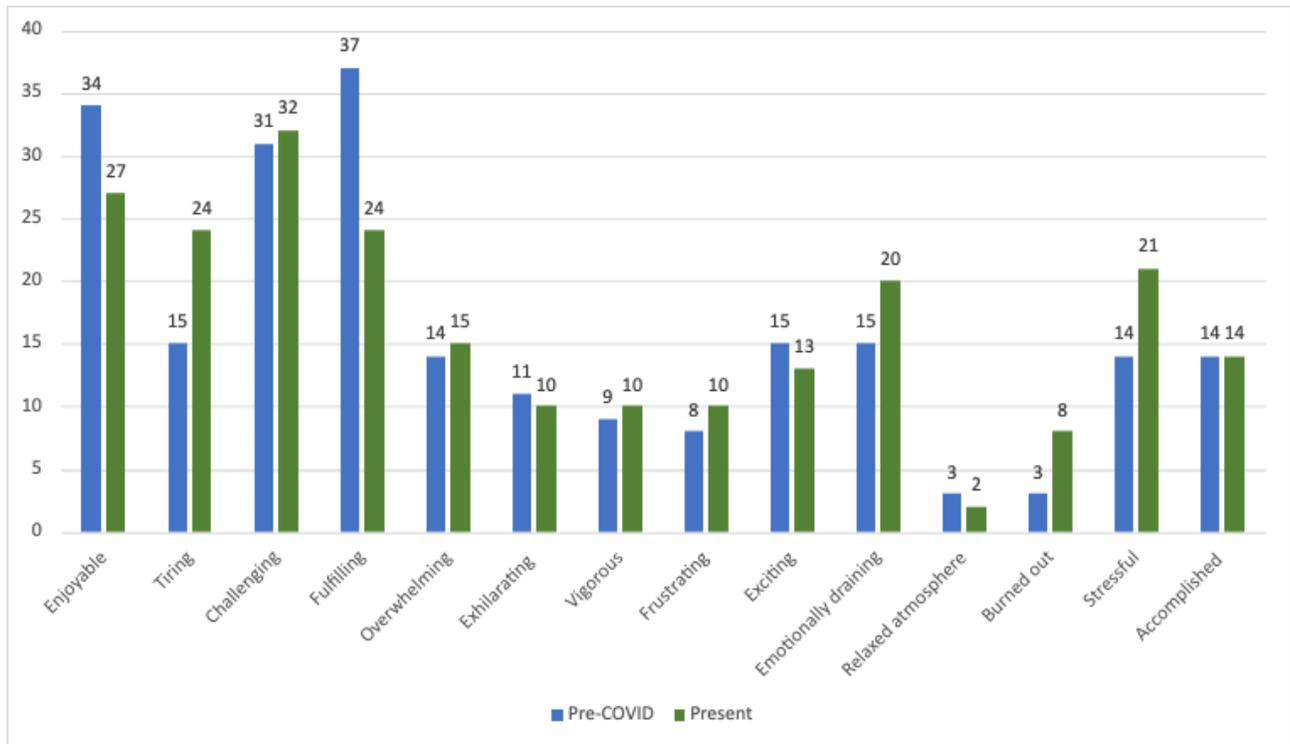
Yes, they are able to sing and play instruments	16
They are able to sing, but are not provided instruments	7
They are not able to sing, but are provided instruments by other staff	0
No, they are not able to sing nor play instruments	0
Other	2

Based on this data, it appears that the majority of participants are able to facilitate sessions at, or close to, the capacity they did pre-COVID. Other responses included: “*if [patients are] inpatient, they were provided instruments. Outpatient [sessions] no instruments.*”

At the conclusion of the survey, participants were asked to describe their job now using the same descriptive words as used previously in the survey. See Figure 6 for a comparison of pre-COVID and present description of jobs.

Figure 6

How would you describe your job pre-COVID vs. now?



Prior to COVID-19, 37 respondents indicated they found their job fulfilling. That number dropped to 24 at the time of this survey. In conjunction with that, there was a reduction in the number of participants indicating that their job is enjoyable, from 34 to 27. It is important to note that respondents still feel accomplished in their work, even though there were increases in feelings of burnout, tiredness, being emotionally drained, that the job is stressful, and that they are frustrated.

Current challenges expressed by participants are as follows:

increased caseload/patient volume,

challenges with accessibility to services,

increased feelings of stress and burn out,

*fear of exposing others or being exposed to COVID-19,
constant changes to keep up with changes in the pandemic,
family separation,
isolation from coworkers,
personal, emotional, and physical exhaustion,
resources for patients and families, scheduling
COVID-19 challenges are changing each day, so the biggest obstacle is change
the stress and burnout that come with working in healthcare during a pandemic while
still being expected to be physically and mentally present to the best of your
ability for patients and their families*

When asked what is working for them now, nine participants indicated that they experienced hope in regard to the future implications of using telehealth in their practice. Other responses regarding what is working for participants now include colleague support, self-care, and structured breaks while working at home. One participant reported, “*My remote groups are enabling people who cannot come to the hospital to participate in MT.*” Another reported that “*things have become much easier working and seeing kids in person! When I do telehealth, it is nice to have the rest of my team around to transport iPads and other items to the room rather than communicating with other staff.*” For one participant who has returned to full-time in-person treatment, it was noted that “*in-person sessions and groups helps keep consistency in the therapeutic relationship.*”

Discussion

It is evident that pediatric music therapists have had to make many changes in their delivery of services due to COVID-19. From remote delivery to social distancing, and use of PPE, music therapists were tasked with having to adapt in an extremely short amount of time and keep up with constant changes, developments, and protocols, while, at some point, having to personally process the impacts of a global pandemic.

The participants in this study provided critical information regarding how COVID-19 directly impacted pediatric music therapy and what those changes imply for future professional practice. It is encouraging to see that most of the music therapists were able to continue to provide services to patients, with only 10.25% reported being furloughed, and of those furloughed, 80% were furloughed for 2 weeks or less. These numbers indicate that hospitals and facilities recognized the importance of music therapy for their pediatric patients.

The flexibility, tenacity, and resiliency of participants both pre-COVID and at the time of the survey were displayed in the results and through what participants reported in this study. The reported average daily caseloads varied significantly; however, 14 of 37 participants reported seeing more than 10 patients per day. While participants did not indicate whether these numbers included groups or were only individual clients, seeing more than 10 patients per day can be taxing for clinicians. A notable change reflected in responses is a noticeable shift to telehealth delivery for services. Participants reported a 57.05% increase in telehealth service delivery since COVID-19 along with the challenges and promising hope of telehealth for future service delivery. One participant noted that hosting telehealth groups enabled group members to still have access to music therapy even during COVID-19 restrictions. Expanding access to

services has been and continues to be a critical area of growth for the profession of music therapy, especially as new service delivery models become available. As all participants have returned to in-person treatment, it is encouraging to see that there has been a return to in-person treatment as well as telehealth options, when appropriate.

However, if telehealth and virtual music therapy are going to be promising future delivery methods for the profession, there needs to be an increase in resources offered by hospital systems that include access to devices, training on the various platforms, and troubleshooting assistance. Participants identified that challenges included audio quality, internet connection, delayed sound, and accessibility to technology. These challenges need to be thoroughly evaluated before establishing telehealth service delivery as a mainstream option, so that 1) music therapists do not experience additional stress or frustration due to technological issues, 2) patients have equal and easy access to telehealth services, and 3) music therapists can maintain and continue to provide a positive therapeutic environment through a virtual setting that supports positive changes for the patient. Along with evaluating these challenges and implementing solutions, music therapists need to also be provided with support from administration and colleagues through the sharing of ideas and solutions for technological issues that may arise. Hospital administration must also extend support beyond the technological by providing music therapists with emotional, social, and/or physical supports, so that they do not experience workplace burnout or secondary trauma from working in healthcare during a global pandemic, and so they have time to adequately process what it is like working during this time.

Leading factors causing healthcare workers' acute stress reactions, vicarious trauma, and traumatic stress related to COVID-19 were determined, including suggestions and ways in which these factors can be prevented: "Social support and self-efficacy scores correlated negatively

with stress scores, and positive correlations were identified between anxiety and stress scores and between stress and sleep quality scores...” (Benfante et al., 2020, p. 3). Risk factors including gender, age, being a nurse, lack of access to PPE, patient exposure, poor social support, and limited, or no, access to psychological support resources can impact stress and trauma responses and experiences for healthcare workers during a pandemic (Benfante et al., 2020).

PPE

One of the main and most surprising challenges was the lack of access to PPE at the time the survey was sent to participants. In March 2020, the WHO called on individual governments to increase manufacturing of PPE because of how shortages endangered healthcare workers internationally (“Shortage of personal protective equipment endangering healthcare workers worldwide,” 2020). With 89.75% of participants not being furloughed at any time during the pandemic, it is striking to think about the impact of the PPE shortages in regard to the participants in this study. Furthermore, it is important to consider that while many frontline workers such as doctors and nurses, directly working with COVID patients, may have had more reliable access to PPE as a means of priority, but what about other healthcare workers, like the participants in this study, who were still working in-person? Was their access to PPE as prioritized as doctors and nurses directly working with COVID patients? One participant shared in an open-ended response that they were “*struggling with lack of safety for healthcare workers.*”

In order for healthcare workers, like nurses, music therapists, and other medical staff, to maintain safety, they need to have access to basic precautions such as PPE. This should not be an additional source of stress and unpredictability in the workplace, particularly in the midst of a pandemic. The expectation of quality of care in a hospital setting for patients, whether diagnosed

with COVID or not, did not change throughout the unpredictability of the virus. Therefore, access to basic healthcare safety to provide quality care should not be in question for healthcare workers at any time.

Job Satisfaction and Burnout

It was evident from the responses that music therapists were impacted by a lack of access to PPE and staff resources and support. It is logical to think that these experiences could play a role in job satisfaction. The comparison of job satisfaction pre-COVID to the time of the survey outlines a clear change that occurred because of COVID-19 among participants. With decreased feelings of enjoyment and fulfillment, paired with increased experiences of stress, burn out, and feeling emotionally drained, the impact on pediatric music therapists must not be ignored nor passively accepted. Actions need to be taken to provide emotional and physical support to provide clinicians with resources that not only acknowledge their tremendous sacrifice and dedication, but provide resources they can utilize to help cope with stress and burn out.

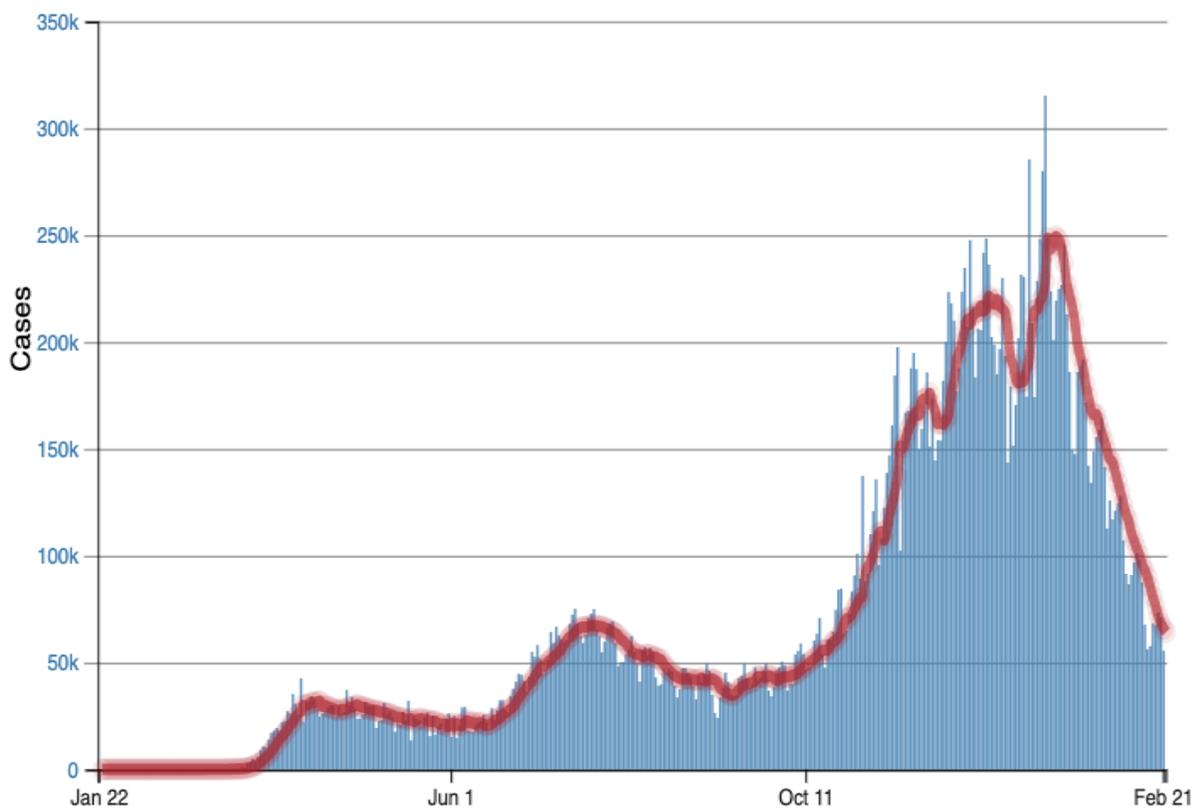
Compassion fatigue is defined as “a work-related stress response in healthcare providers that is considered a ‘cost of caring’” (Wang et al., 2020, p. 2). It is closely related to burnout and job satisfaction due to frequent contact with patients who are suffering and the consistent rigors of work. Burnout and secondary traumatic stress also contribute to an increased risk of compassion fatigue (Wang et al., 2020). A recent survey study of Chinese nurses in tertiary hospitals revealed that lower professional quality of life can result in compassion fatigue, burnout, and secondary traumatic stress. Variables such as exercise and quality of sleep help prevent compassion fatigue and burnout, according to this study. With that in mind, hospital administrations need to evaluate how to support, encourage, and provide opportunities to their employees to help prevent burnout and compassion fatigue.

A psychiatrist who works directly with frontline healthcare workers reported the exponential increase of burnout among healthcare workers due to COVID-19, even recognizing their own experiences of burnout in being “regularly transported there [COVID-19 units] with their [healthcare workers] words.” To them, “everyone needs therapy in this country right now” (Gold, 2021, n.p.). This psychiatrist emphasized that there is no explanation nor timeline for trauma or processing trauma, but that it is sustained over time (Gold, 2021). Among healthcare workers, it is perplexing to think that they continued to work, and some worked longer, more draining hours, with limited or no time to process what was happening around them. Frequently the impact of caretaking and long working hours of healthcare workers and those on the frontlines is recognized and commended, but what is actually being done to support them? What steps are being taken to intentionally give support to frontline healthcare workers?

Recommendations mentioned previously in regard to healthcare workers and burnout included hospitals ensuring adequate rest periods for their employees to prevent overworking and to regulate how and when employees are scheduled (Raudenská et al., 2020). These recommendations along with increased education on the signs and impacts of burnout while also providing sufficient time off for employees to practice self-care are achievable beginning steps hospitals can take to care for their healthcare workers during this time. Providing and implementing these resources to employees will not only address physiological and emotional needs, but also take an offensive approach to combating burnout.

In November 2020, a vaccine rollout plan seemed far out of reach in the United States, ultimately leading to rising numbers of COVID cases and sadly, COVID deaths. To give the reader a picture of the impact of COVID, the number of confirmed cases was over 10 million and over 200,000 deaths in the United States when the survey was sent to participants (“CDC

COVID Data Tracker,” 2020). With the introduction of vaccines and rollout plans in the United States since January 2021, COVID-19 numbers have increased (pre-vaccine) in comparison to the number of confirmed cases at the time of the survey. However, with vaccines now becoming available, numbers have begun to decline. As of February 22, 2021, the CDC reported over 27 million confirmed cases and 400,000 deaths due to COVID-19 (“COVID Data Tracker,” 2021). To date, over 64 million COVID vaccines have been administered and more are currently being rolled out and delivered (“COVID Data Tracker”). According to the CDC’s Daily Trends in Number of COVID-19 Cases Reported to the CDC, the figure below outlines the impact of vaccine rollout on number of cases in the country.



CDC COVID Data Tracker. https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases.

The impact of mass vaccinations across the country is leading to a decrease in the numbers of confirmed cases. However, in most states, older adults, healthcare workers, and

frontline workers have been priority, as they have been deemed most at-risk. Adolescents and children 18 and younger, in general, have not been on most states' priority vaccine rollout plans. This is especially important to consider as the participants in this study are directly working with patients in this age range and possibly family members and caregivers who have not been vaccinated, and may not be for a while. Therefore, the stress and worry that participants shared in the survey for being exposed, or exposing their own family members or others, has not gone away, even as vaccines have begun to impact total case numbers.

Participants have indicated that many of their facilities have returned to service delivery that is similar to pre-COVID delivery, with the addition of increased PPE protocols.

Conclusion

Overall, the results from this study offer important information regarding the impact of COVID-19 on pediatric music therapists and future implications for the profession. Hospital administrations and professional organizations must examine the impact, both professional and personal, and actively take steps to address it and support music therapists and other frontline workers that remained dedicated to their work in the midst of a global crisis. In addition to supporting music therapists, this study also provides information for future service delivery options, like telehealth.

Strengths and Limitations

Strengths in this study include the demographics of participants reflecting recent literature in the profession. The demographics of participants in this study reflected the demographics outline in the 2018 workforce analysis in regard to gender, with the majority of participants identifying as female (87.14%, AMTA, 2018; 86.67% this study). The workforce analysis, this study, and the 2020 pediatric music therapy survey all reflected one another regarding age and years in the profession/experience with this population. The majority are under 40 (62.92%, AMTA, 2018; 78.20%, Knott et al., 2020; 82.22% this survey) and have been in the profession/worked with pediatric patients in a medical setting for 5 years or less (42.91%, AMTA; 69.80%, Knott et al., 2020; 51.11% this study).

One limitation to this study is confirmation bias, where the researcher asked questions about music therapists' experiences in a way that would confirm the researcher's assumptions about current practice. In order to address this, the research sought out review of survey questions prior to sending the call to participate. This also includes confirmation bias in the call to support music therapists in light of the impact experienced due to the pandemic. Another

limitation is finding accurate email addresses and making sure that the survey was sent to the intended participant. Survey results were calculated using percentages and total response; however, correlations could not be calculated for this study because there were no numeric values with precise numeric meaning that could be compared. Because there were no variables with specific numeric significance or meaning, correlations could not be calculated nor reported, and therefore, could not be included in the data report and discussion.

Further questions to explore for a future study on this topic include examining if there were any changes to the client experience during music therapy sessions, a more clear description of caseloads/daily work life of pediatric music therapists, as well as the ongoing needs for continued use of telehealth technology. The researcher is also interested in knowing if internships were impacted and if so, did that impact caseloads? In March 2020, over 1,000 colleges and universities in the United States had transitioned to remote learning, which limited the number of students who could participate in face-to-face clinical rotations (Hess, 2020).

It is imperative that hospital administrations alongside the professional organizations of music therapy work relentlessly to offer effective and meaningful professional and personal support to music therapists during this time and the months to come. The dedication, care, and hard work that music therapists have demonstrated is something that needs to be fully recognized and supported.

References

- Abrams, B. (2010). Evidence-based music therapy practice: An integral understanding. *Journal of Music Therapy*, 47, 351-379. <https://doi.org/10.1093/jmt/47.4.351>
- Abrams, B. (2015). Humanistic approaches. In B. L. Wheeler (Ed.), *Music therapy handbook* (pp. 148-160). The Guilford Press.
- Abrams, B. (2018). Understanding humanistic dimensions of music therapy: Editorial introduction. *Music Therapy Perspectives*, 36(2), 139-143. <https://doi.org/10.1093/mtp/miy019>
- Alharbi, J., Jackson, D., & Usher, K. (2019). Compassion fatigue in critical care nurses: An integrative review of the literature. *Saudi Medical Journal*, 40(11). <https://doi.org/10.15537/smj.2019.11.24569>
- AMTA. (n.d.). "AMTA Regions and Student Organizations." <https://www.musictherapy.org/about/regions/>
- AMTA. (2020). "COVID-19 Resources for Music Therapists and Students." https://www.musictherapy.org/about/covid19_resources/
- AMTA. (n.d.). "Find a Music Therapist." <https://www.musictherapy.org/about/find/>
- AMTA. (2018). *2018 American Music Therapy Association, member survey and workforce analysis*. <https://www.musictherapy.org/assets/1/7/18WorkforceAnalysis.pdf>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Beh, W. F., Hashim, M. N., Tan, W. J., & Latiff, Z. A. (2017). Music listening intervention vs local anaesthetic cream for pain management in infants undergoing venipuncture: A

- collaborative trans-disciplinary research. *The Journal of Pediatric Research*, 5(1), 1-10.
<https://doi.org/10.4274/jpr.60251>
- Benfante, A., Di Tella, M., Romeo, A., & Castelli, L. (2020). Traumatic stress in healthcare workers during COVID-19 pandemic: A review of the immediate impact. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.569935>
- Boric, K., Dosenovic, S., Jelicic Kadic, A., Batinic, M., Urlic, M., Markovina, N., Puljak, L., & Cravero, J. (2017). Interventions for postoperative pain in children: An overview of systematic reviews. *Pediatric Anesthesia*, 27, 893-904.
<https://doi.org/10.1111/pan.13203>
- Bradt, J. (2012). Introduction. In J. Bradt (Ed.), *Guidelines for music therapy practice in pediatric care* (pp. 3-14).
<http://ebookcentral.proquest.com/lib/radford/detail.action?docID=3117671>
- Bradt, J., Dileo, C., & Shim, M. (2013). Music interventions for preoperative anxiety (review). *Cochrane Database of Systematic Reviews*, 6.
<https://doi.org/10.1002/14651858.CD006908.pub2>
- Bradt, J., Potvin, N., Kesslick, A., Shim, M., Radl, D., Schriver, E., Gracely, E. J., & Komarnicky-Kocher, L. T. (2015). The impact of music therapy versus music medicine on physiological outcomes and pain in cancer patients: A mixed methods study. *Support Care Cancer*, 23, 1261-1271. <https://doi.org/10.1007/s00520-014-2478-7>
- Bruscia, K. E. (2014). *Defining music therapy* (3rd ed.). Barcelona Publishers.
- CDC COVID Data Tracker. (n.d.). https://covid.cdc.gov/covid-data-tracker/#trends_dailytrendscases

- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Prentice Hall.
- Dokken, D., & Ahmann, E. (2020). Family presence during challenging times. *Pediatric Nursing, 46*(4), 161-162.
- García-Perdomo, H. A., Montealegre Cardona, L. M., Cordoba-Wagner, M. J., & Zapata-Copete, J. A. (2019). Music to reduce pain and anxiety in cystoscopy: A systematic review and meta-analysis. *Journal of Complementary and Integrative Medicine, 16*(3).
<https://doi.org/10.1515/jcim-2018-0095>
- Giordano, F., Scarlata, E., Baroni, M., Gentile, E., Puntillo, F., Brienza, N., & Gesualdo, L. (2020). Receptive music therapy to reduce stress and improve wellbeing in Italian clinical staff involved in COVID-19 pandemic: A preliminary study. *The Arts in Psychotherapy, 70*. <https://doi.org/10.1016/j.aip.2020.101688>
- Gold, J. (2021, March 4). *I'm a psychiatrist who treats healthcare workers. A year into the pandemic, we're all suffering from burnout*. WBUR.
<https://www.wbur.org/cognoscenti/2021/03/04/physician-burnout-covid-19-pandemic-jessi-gold?fbclid=IwAR3hGzhuxkDm3Hu4mito30Zdz5WTHDqqAVoAZn3InNN3Rru-qVOywFtyVhl>
- Hess, A. J. (2020, March 26). *How coronavirus dramatically changed college for over 14 million students*. CNBC. <https://www.cnbc.com/2020/03/26/how-coronavirus-changed-college-for-over-14-million-students.html>
- Kirsch, D. L. (2019). *Burnout is now an official medical condition*. The American Institute of Stress. <https://www.stress.org/burnout-is-now-an-official-medical-condition#>
- Klassen, J. A., Liang, Y., Tjosvold, L., Klassen, T. P., & Hartling L. (2008). Music for pain and

anxiety in children undergoing medical procedures: A systematic review of randomized controlled trials. *Ambulatory Pediatrics*, 8, 117-128.

<https://doi.org/10.1016/j.ambp.2007.12.005>

Kleiber, C., & Adamek, M. S. (2012). Adolescents' perceptions of music therapy following spinal fusion surgery. *Journal of Clinical Nursing*, 22, 414-422.

<https://doi.org/10.1111/j.1365-2702.2012.04248.x>

Knott, D., Biard, M., Nelson, K. E., Epstein, S., Robb, S. L., & Ghetti, C. M. (2020). A survey of music therapists working in pediatric medical settings in the United States. *Journal of Music Therapy*, 57(1), 34-65. <https://doi.org/10.1093/jmt/thz019>

Knott, D., & Block, S. (2020). Virtual music therapy: Developing new approaches to service delivery. *Music Therapy Perspectives*, 38(2), 151-156.

<https://doi.org/10.1093/mtp/miaa017>

IASP Terminology. (2017).

<https://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1698#Pain>

Lee, J. H. (2016). The effects of music on pain: A meta-analysis. *Journal of Music Therapy*, 53(4), 430-477. <https://doi.org/10.1093/jmt.thw012>

Mandel, S. E., Davis, B. A., & Secic, M. (2019). Patient satisfaction and benefits of music therapy services to manage stress and pain in the hospital emergency department. *Journal of Music Therapy*, 56(2), 149-173. <https://doi.org/10.1093/jmt/thz001>

Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1986). *Maslach burnout inventory* (Vol. 21, pp. 3463-3464). Consulting Psychologists Press.

Mastnak, W. (2020). Psychopathological problems related to the COVID-19 pandemic and

- possible prevention with music therapy. *ACTA Paediatrica Perspectives*, 109, 1516-1518.
<https://doi.org/10.1111/apa.15346>
- Mayo Clinic. (2021). *Cytoscopy*. <https://www.mayoclinic.org/tests-procedures/cystoscopy/about/pac-20393694>
- Millet, C. R., & Gooding, L. F. (2017). Comparing active and passive distraction-based music therapy interventions on preoperative anxiety in pediatric patients and their caregivers. *Journal of Music Therapy*, 54(4), 460-478. <https://doi.org/10.1093/jmt/thx014>
- Misra, S. M., Monico, E., Kao, G., Guffey, D., Kim, E., Khatker, M., Gilbert, C., Biard, M., Marcus, M., Roth, I., & Giardino, A. P. (2019). Addressing pain with inpatient integrative medicine at a large children's hospital. *Clinical Pediatrics*, 58(7), 738-745.
<https://doi.org/10.1177/0009922819839232>
- Nguyen, T. N., Nilsson, S., Hellström, A., & Bengtson, A. (2010). Music therapy to reduce pain and anxiety in children with cancer undergoing lumbar puncture: A randomized clinical trial. *Journal of Pediatric Oncology Nursing*, 27(3), 146-155.
<https://doi.org/10.1177/1043454209355983>
- Palmer, J. B., Lane, D., & Mayo, D. (2017). Surgical music therapy: The significance and implementation of music therapy in the operating arena. *Music Therapy Perspectives*, 35(1), 30-35. <https://doi.org/10.1093/mtp/miv036>
- Public law 111-148. (2020). *The patient protection and affordable care act*.
<http://www.gpo.gov/fdsys/pkg/PLAW-111publ148/pdf/PLAW-111publ148.pdf>
- Restauri, N., & Sheridan, A.D. (2020). Burnout and posttraumatic stress disorder in the

- coronavirus disease 2019 (COVID-19) pandemic: Intersection, impact, and interventions. *Journal of the American College of Radiology*, 17(7).
<https://doi.org/10.1016/j.jacr.2020.05.021>
- Shoemark, H., Rimmer, J., Bower, J., Tucquet, B., Miller, L., Fisher, M., Ogburn, N., & Dun, B. (2018). A conceptual framework: The music self as a unique pathway to outcomes in the acute pediatric health setting. *Journal of Music Therapy*, 55(1), 1-26.
<https://doi.org/10.1093/jmt/thx018>
- Thompson, G. (2020). Reflecting on relational needs in the context of a global health crisis. *Nordic Journal of Music Therapy*, 29(3), 197-199.
<https://doi.org/10.1080/08098131.2020.1746551>
- Thrane, S. E., Wanless, S., Cohen, S. M., & Danford, C. A. (2015). The assessment and non-pharmacologic treatment of procedural pain from infancy to school age through a developmental lens: A synthesis of evidence with recommendations. *Journal of Pediatric Nursing*, 31, 23-32. <https://doi.org/10.1016/j.pedn.2015.09.002>
- Tomines, A. (2019). Pediatric telehealth: Approaches by specialty and implication for general pediatric care. *Advances in Pediatrics*, 66, 55-85.
<https://doi.org/10.1016/j.yapd.2019.04.005>
- U.S. Department of Health and Human Services, Health Resources and Services Administration. (2017). *Telemedicine and Telehealth*. <https://www.healthit.gov/topic/health-it-initiatives/telemedicine-and-telehealth>
- Utidjian, L., & Abramson, E. (2016). Pediatric telehealth. *Pediatric Clinics of North America*, 63, 367-378. <http://dx.doi.org/10.1016/j.pcl.2015.11.006>
- Wang, J., Okoli, C., He, H., Feng, F., Li, J., Zhuang, L., & Lin, M. (2019). Factors associated

with compassion satisfaction, burnout, and secondary traumatic among Chinese nurses in tertiary hospitals: A cross-sectional study. *International Journal of Nursing*, 102.

<https://doi.org/10.1016/j.ijnurstu.2019.103472>

World Health Organization. (2018). *International classification of diseases for mortality and morbidity statistics* (11th Revision). <https://icd.who.int/browse11/l-m/en>.

World Health Organization. (2020). *Shortage of personal protective equipment endangering health workers worldwide*. <https://www.who.int/news/item/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide>

Yinger, O. S., & Gooding, L. (2014). Music therapy and music medicine for children and adolescents. *Child and Adolescent Psychiatric Clinics of North America*, 23(3), 535-553.

<https://doi.org/10.1016/j.chc.2013.03.003>

Yinger, O. S. (2016). Music therapy as procedural support for young children undergoing immunizations: A randomized controlled study. *Journal of Music Therapy*, 53(4), 336-

363. <https://doi.org/10.1093/jmt/thw010>

Appendix A

Survey Invitation Email/Internet Letter of Consent

Radford University Cover Letter for Internet Research

You are invited to participate in a research survey, entitled “Pediatric Music Therapy and COVID-19: A Survey Study”. This study is being conducted by Natalie Pulliam, graduate student (npulliam1@radford.edu), and Dr. Patricia Winter, MT-BC, primary investigator, 1-540-831-6160 (pwinter3@radford.edu) of Radford University, 801 E Main St. Radford, VA 24141.

The purpose of this study is to examine how COVID-19 has impacted the delivery of music therapy services in a pediatric setting and how those impacts suggest future implications for the profession. Your participation in the survey will contribute to a better understanding of the impact of COVID-19 on pediatric music therapists and how the delivery of music therapy services have changed and/or adapted due to COVID-19. We estimate that it will take about 30 minutes of your time to complete the questionnaire. If you have questions, please contact the investigator or co-investigator listed above.

This study has no more risk than you may find in daily life. We anticipate that your participation in this survey presents no greater risk than everyday use of the Internet. If at any point a question(s) makes you feel uncomfortable, you may refuse to answer any question, take a break, or stop your participation in this study at any time.

No identifiable data will be collected in this study. It is possible, although highly unlikely, that an unauthorized individual could gain access to your responses because you are responding online. This risk is similar to your everyday use of the internet. IP address will not be recorded. Email addresses will only be used to send survey invitations and will not be linked to survey responses. Only one researcher has access to email addresses.

Your participation in this survey is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time without penalty. If you wish to withdraw from the study or have any questions, contact the investigator listed above. If you choose not to participate or decide to withdraw, there will be no impact on your relationship with Radford University. You may withdraw from the study by simply exiting the survey if you began and contacting the investigator listed above.

To complete the survey, click on the link below:

http://radford.co1.qualtrics.com/jfe/form/SV_4SF0dxHKAutSV6Z

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Ben Caldwell, Institutional Official and Dean of the College of Graduate Studies and Research, bcaldwell13@radford.edu, 1-(540) 831-5724.

Thank you.

Appendix B

Survey Questions

Pediatric Music Therapy and COVID-19 Survey

Start of Block: Demographic Information

Q1 What is your age?

- 24 or younger
 - 25-34
 - 35-44
 - 45-54
 - 55 and up
-

Q2 Gender identification:

- Female
 - Male
 - Non-binary
 - Transgender
 - Prefer not to answer
-

Q3 What region is your facility, hospital, or practice located?

- Mid-Atlantic (Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia)
 - Great Lakes (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)
 - Midwestern (Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, Wyoming)
 - New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
 - Southeastern (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Puerto Rico, US Virgin Islands)
 - Southwestern (New Mexico, Oklahoma, Texas)
 - Western (Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah, Washington, Guam, American Samoa, Mariana Islands)
-

Q4 How long have you been offering music therapy services at your **current** place of employment?

- Less than a year
 - 1-3 years
 - 3-5 years
 - 5-7 years
 - 7-10 years
 - 10 or more years
-

Q5 How many years of experience do you have working with pediatric clients in a medical setting?

- Less than a year
 - 1-3 years
 - 3-5 years
 - 5-7 years
 - 7-10 years
 - 10 or more years
-

Q6 Are there other music therapists that work with pediatric patients at your facility?

- Yes
- No

Skip To: End of Block If Are there other music therapists that work with pediatric patients at your facility? = No

Q7 If so, how many?

Page Break

End of Block: Demographic Information

Start of Block: Section Two: This section will ask questions regarding your job BEFORE COVID-19.

Q8 Pre-COVID in your position, were you:

- Full-time
 - Part-time
 - Contract
 - PRN
 - Other: _____
-

Q9 How did you deliver music therapy services pre-COVID? Select all that apply.

- In-person individual
 - In-person group(s)
 - In a patient's room
 - In a designated arts or music room on the unit
 - Telehealth individual
 - Telehealth group(s)
 - Other _____
-

Q10 What was your average daily case load pre-COVID?

Q11 How would you describe your job pre-COVID? Select all that apply.

- Enjoyable
- Tiring
- Challenging
- Fulfilling
- Overwhelming
- Exhilarating
- Vigorous
- Frustrating
- Exciting
- Emotionally draining
- Relaxed atmosphere
- Burned out
- Stressful
- Accomplished
- Other: _____

Page Break

End of Block: Section Two: This section will ask questions regarding your job BEFORE COVID-19.

Start of Block: Section Three: This section is about how your job has been impacted by COVID-19.

Q12 Were you furloughed at any point during COVID-19/shutdowns?

- Yes
- No

Skip To: Q14 If Were you furloughed at any point during COVID-19/shutdowns? = No

Q13 How long were you furloughed?

- Two weeks or less
 - 3-4 weeks
 - 4-6 weeks
 - 6-8 weeks
 - 8-10 weeks
 - 10-12 weeks
 - 12 weeks or more
 - I am still furloughed
-

Q14 Were your hours impacted by the coronavirus?

- Yes
 - No
-

Q15 Did your hours increase or decrease? By how much?

- Increase _____
 - Decrease _____
-

Q19 Have you, or has your facility, returned to in person treatment?

- Yes
- No

Skip To: Q17 If Have you, or has your facility, returned to in person treatment? = No

Q20 If you have been providing in-person treatment, what kind(s) of PPE have you been wearing? Select all that apply.

- Gloves
 - Mask
 - Face shield
 - Gown
 - Protective eye wear
 - Other _____
 - I do not have to wear PPE
-

Q22 Have there been social distancing regulations? Select all that apply.

- Plexiglass shield
 - Less than 6 feet
 - 6 feet
 - More than 6 feet
 - At the door of the room
 - Other: _____
-

Q24 Are other people allowed to be in the room with you during sessions? If so, whom?

- None
 - Medical staff
 - Family/caregiver(s)
 - Other _____
-

Q25 Have patients been able to sing and/or use instruments during sessions?

- Yes
 - No
 - Only singing
 - No singing, only instruments
 - Other _____
-

Q26 Have *you* been allowed to sing during in-person sessions?

- Yes
 - No
-

Q17 How are you delivering music therapy services now? Select all that apply.

- In person
- Via telehealth
- Other: _____

End of Block: Section Three: This section is about how your job has been impacted by COVID-19.

Start of Block: Section Four: This section is specifically about telehealth.

Q31 Did you at any point use a telehealth platform to deliver music therapy services during COVID?

- Yes
- No

Skip To: End of Block If Did you at any point use a telehealth platform to deliver music therapy services during COVID? = No

Q37 Was your remote location for telehealth services:

- At home
 - In-facility/office
 - Other _____
-

Q38 How did patients have access to telehealth? Select all that apply.

- Nursing or medical staff
 - Family/caregiver
 - Patient did not require assistance
 - Caregiver's cell phone or other device
 - Patient's cell phone or other device
 - Hospital-provided computer cart
 - Other: _____
-

Q32 What telehealth platform(s) are you using for your music therapy services? Select all that apply.

- Zoom for Healthcare
 - Doxy.me
 - Skype for Business/Microsoft Teams
 - Updox
 - Vsee
 - Google Meet
 - Webex Teams/Cisco Webex Meetings
 - Amazon Chime
 - Other: _____
-

Q30 Did you self-select to work remotely or was it an administrative decision?

- I self-selected to work remotely
 - It was an administrative decision
 - Other: _____
-

Q33 Are patients able to sing or play instruments during telehealth sessions?

- Yes, they are able to sing and play instruments
 - They are able to sing, but are not provided instruments
 - They are not able to sing, but are provided instruments by other staff
 - No, they are not able to sing nor play instruments during telehealth sessions
 - Other: _____
-

Q39 If patients are allowed to sing, are they required to wear PPE?

- Yes
- No

Skip To: Q34 If patients are allowed to sing, are they required to wear PPE? = No

Q40 What kinds of PPE are they required to wear? Select all that apply.

- Mask or shield
 - Gloves
 - Other _____
-

Q34 What are challenges you have experienced, or are experiencing, with using telehealth to provide music therapy services? Select all that apply.

- Internet connection
- Audio quality
- Accessibility to internet services or technology
- Other, please explain: _____

End of Block: Section Four: This section is specifically about telehealth.

Start of Block: Wrap Up

Q41 How would you describe your job now? Select all that apply.

- Enjoyable
 - Tiring
 - Challenging
 - Fulfilling
 - Overwhelming
 - Exhilarating
 - Vigorous
 - Frustrating
 - Exciting
 - Emotionally drained
 - Relaxed atmosphere
 - Burned out
 - Stressful
 - Accomplished
 - Other: _____
-

Q42 What is working for you now?

Q43 What are challenges you are experiencing now?

Q45 By clicking submit, you agree to have your responses included in this study. If you do not wish to have your responses included, please email Dr. Patricia Winter, pwinter3@radford.edu.

Q46 We recognize that this is a very stressful time for healthcare providers. We hope that if you experienced any stress in completing this survey that you will reach out to your professional organizations (AMTA or CBMT) for resources.

End of Block: Wrap Up
