

EVALUATING NICU MUSIC THERAPY EMPLOYMENT TRENDS IN TOP U.S.  
HOSPITALS FOR NEONATOLOGY

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Master of Music

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by

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## ABSTRACT

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Though research has documented the positive effects of music therapy on infants in the Neonatal Intensive Care Unit (NICU), a paucity of research exists specifically evaluating the characteristics and trends of employment for the music therapists working in the NICU. For this reason, the purpose of this study was to examine the employment characteristics of NICU music therapists along with potential challenges that NICU music therapists face in gaining employment, and potential means of overcoming these challenges. Twenty NICU music therapists currently working for one of the 97 Top Hospitals for Neonatology (as determined by The U.S. News and World Report) participated in a thirteen-question phone interview which evaluated characteristics of employment in addition to therapist perceptions of employment trends, advocates and critics of NICU music therapy, challenges for NICU music therapists, and ways of overcoming these challenges. Results indicated that a majority of top hospitals for neonatology employ NICU music therapists and that current NICU music therapists had positive perceptions about future NICU music therapy employment trends. Additionally, NICU music therapists believed that newer and unfamiliar hospital staff members required further education regarding the benefits of NICU music therapy, and that educating these unfamiliar staff members would improve the NICU music therapy labor market in the future.

KEY WORDS: Music therapy, Neonatology, Neonatal Intensive Care Unit (NICU), Employment

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“Silent gratitude isn’t very much to anyone.” – Gertrude Stein

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## **CHAPTER I**

### **Introduction**

#### **Statement of the Problem**

Neonatology and Neonatal Intensive Care Units (NICU) were developed in the 1960s and 1970s to provide life-sustaining care for high-risk and preterm infants. With access to increased specialized care, neonatal mortality declined significantly from 40 infant deaths for every 1000 births in 1900 to 6.8 infant deaths in 1000 births by 2007. Additionally, advances in neonatal care have led to increased survival rates for preterm infants, with half of babies born at only 25 weeks' gestation expected to survive with limited long-term impairments (Lissauer & Fanaroff, 2011). In 2011, between six and ten percent of newborn infants were admitted to a neonatal unit, and one to two percent of those required intensive care treatment.

Once admitted to a NICU, the infant receives continual assessment and monitoring depending on gestational age and individual medical problems. Many factors, including growth rates, oxygen saturation levels, and feeding ability, influence whether or when an infant can be released from the hospital (Standley, 2003). The care that the infant receives in the NICU is dedicated to helping the infant both survive and thrive, so that they may be safely discharged.

Researchers have explored uses of music in the NICU for over thirty years, with significant positive outcomes reported. For example, infants who receive music therapy in the NICU demonstrate increased self-regulation, decreased irritability, and increased tolerance to handling (Malloch et al., 2012). Additionally, preterm infants who receive music therapy demonstrate increased oxygen saturation levels, decreased heart rate, and

improved feeding skills, all of which lead to decreased hospital length of stay (Standley, 2003). Furthermore, music therapy can provide a structured parent-infant interaction leading to increased attachment and bonding (Edwards, 2011).

Though the benefits of music therapy in the NICU are extensive, music therapists are not currently considered to be essential NICU staff in the United States (Standley, 2014). In fact, as recently as 2014, only half of top U.S. children's hospitals had music therapy in their NICUs (Standley, 2014). It is unclear why, with so many documented benefits, music therapy is not more prevalent in NICU settings. For this reason, investigating the challenges that NICU music therapists face in addition to NICU music therapy's advocates and critics, may provide important information that could aid NICU music therapists in obtaining additional employment.

### **Need for the Study**

**Theoretical Relevance.** This research provided insight into the current employment status of music therapists in top neonatology hospitals, and specifically in those hospitals' NICUs. Music therapy employment in schools, mental health, and general medicine had been previously evaluated (Coddington, 2002; Eyre & Lee, 2015; Silverman, 2007; Hodkinson et al., 2014; Heuzey et al., 2010; Smith & Hairston, 2011), yet a paucity of research exists exploring comparable trends in NICU music therapy. Thus, the information gathered in this current study can be compared with previous research in other settings to identify which trends, problems, or key areas of practice, if any, are unique to the NICU and which overlap with other settings.

**Practical Relevance.** With the decrease in neonatal mortality, more and more infants require long-term care within a NICU. Every day that an infant spends in the

NICU costs over \$3,500 (Manjiri et al., 2011). Research has established that music therapy can decrease the length of stay for these infants (Standley, 2010) and thus overall costs for each infant. However, despite the fact that a \$50,000 yearly music therapist salary could be paid for by a one-day reduction in length of stay for a mere 15 infants, music therapy is not yet included in standard NICU medical care. The researcher hoped to uncover potential reasons why music therapists have difficulty obtaining NICU employment, and possible ways to overcome those challenges. These findings may be useful in generating or developing additional employment opportunities for NICU music therapists.

### **Purpose of the Study**

The purpose of this study is to investigate the current employment characteristics of music therapists in top U.S. neonatology hospitals and predict future trends in the NICU labor market. Further, this study will examine current NICU music therapists' opinions on challenges to NICU employment and potential strategies to overcome these challenges.

### **Definition of Terms**

**Allied health professionals.** Allied health professionals are those employees in a medical or health care setting who are not doctors or nurses (DeLuca, 2016). This field includes paramedical occupations such as physical therapy, occupational therapy, medical technology, dietetics, and speech/language pathology, among many others. Music therapists are considered allied health workers according to the Commission on Accreditation of Allied Health Education Programs, which reviews and accredits thousands of educational programs within health science occupations.

**Hospital operating budget.** The hospital operating budget is the hospital's plan for managing revenue and expenses (Danna, 2016). The hospital operating budget includes both employment costs and non-salary expenses. While salaries for employees can be included in the hospital operating budget, specific staff members may also receive their compensation from outside sources.

**Neonatal Intensive Care Unit (NICU).** The NICU is a hospital unit where specialized and monitored health care is provided to preterm, very low-birth-weight, and seriously ill babies (Martin & McFerran, 2008).

**NICU music therapy.** NICU music therapy is music therapy treatment directed specifically to babies residing in a hospital's NICU. Music therapy can only be provided by a board-certified music therapist (MT-BC) who has completed the minimum prerequisite bachelor's degree in music therapy, including 1200 hours of clinical training, and passed the board-certification exam administered by the Certification Board for Music Therapists. Music therapists practicing in this setting can also complete additional specialized NICU music therapy trainings from either the National Institute for Infant & Child Medical Music Therapy or International First Sounds: Rhythm, Breath, & Lullaby in Clinical Practice. These trainings can be completed in weekend workshops or spread out over the course of a year.

**Top neonatology hospital.** Hospitals were deemed best hospitals for pediatric neonatology by the U.S. News & World Report 2016 rankings. The U.S. News clinical survey annually evaluates readmission rates and patient volume alongside other neonatology specific variables to determine 85 percent of the hospital's score. Fifteen percent of hospitals' scores are determined by practitioner surveys. The top 50 hospitals

are given specific rankings, while other notable hospitals are listed in alphabetical order.

In total, the U.S. News and World Report has identified 97 hospitals as “Best Hospitals for Pediatric Neonatology.”

## **CHAPTER II**

### **Review of Literature**

This chapter includes a review of literature related to understanding music therapy employment trends. The first section briefly reviews current research documenting the benefits of music therapy within the Neonatal Intensive Care Unit (NICU), and then evaluates research informing various aspects of medical music therapy employment. The second section describes research regarding current employment trends within other music therapy settings. Finally, the third section focuses on what aspects of music therapy employment require further study, especially in regard to NICU specific positions.

#### **Music Therapists' Roles in Healthcare**

Music therapy's beneficial effects for premature infants in the NICU have been widely documented. As early as 1991, studies were conducted with this population to determine the positive effect of music therapy on stress behaviors, weight, food intake, and length of hospital stays (Caine, 1991; Standley, 1998). Further studies have documented increased head circumference after regular music therapy sessions (Cassidy, 2009) and examined whether the availability of music therapy treatment led to increased parental visits to the NICU (Whipple, 2000). In fact, integrative reviews (Haslbeck, 2012) and meta analyses (Standley, 2010) looking at various methods of music therapy in the NICU have been performed to consolidate the multitude of research on benefits of NICU music therapy.

Despite the research demonstrating the benefits of music therapy for infants in the NICU, a lack of research exists exploring employment trends for music therapists

providing services in the NICU; however, research does exist focused on issues that could help inform aspects of music therapy employment with this population, such as developing a professional identity (Isenberg, 2004), educating related medical professionals about the profession (Li et al., 2013), and developing and expanding hospital music therapy programs (Edwards, 2005; Crowe, 1985; Silverman, 2011).

In her 2004 study, Isenberg details the challenges that music therapists face in achieving a professional status. Her research focused on uncovering variables that may be keeping music therapists from gaining professional status, defined as the degree of respect from fellow professionals that could result in our ability to serve as consultants to the greater healthcare community. More specifically, she argued that to convince others of the therapeutic nature of the musical medium, music therapists also have to acknowledge that there is the potential for harm in music therapy. Isenberg ascertained that music therapists must admit that their work has the power to both help patients and harm them, in order to gain true recognition from other health professionals.

In a related study, Li et al. (2013) focused specifically on nurses' attitudes toward music therapy. After surveying 1,486 members of the nursing staff at six Taiwanese hospitals, the researchers determined that nurses had an overall positive attitude toward music therapy, with 80% of participants believing in both music therapy's positive effect on the human body and its significance in the current health care environment. Additionally, a majority of nurses (62.6%) believed that their supervisors would support the addition of music therapy to patient care protocols. Furthermore, results indicated that a significant relationship existed between perceptions of music therapy and level of nursing experience and higher education statuses. Specifically, nurses with more

extensive nursing experience and/or higher education levels were more likely to feel positive about music therapy than those with less experience or education.

Collaboration with nursing staff and other medical professionals is an essential component of developing a music therapy program. Edwards (2005) published a reflection on her development of a music therapy program for the Royal Children's Hospital in Brisbane, Australia. Though her program originated in the burn and general surgical units, eventually the position expanded to serve the NICU as well. In her experience, presenting at grand rounds (a hospital-wide educational in-service) on music therapy's research-based outcomes with hospitalized children directly led to her music therapy position being created at the hospital. To determine the scope of practice for her position, Edwards repeatedly interviewed staff members to determine their needs and expectations for the position, leading to a smooth implementation of services.

Silverman (2011) provided a twenty-minute in-service for eighteen nurses and one social worker from a Midwest hospital's surgical oncology unit to determine whether the in-service presentation led to changes in these staff members' perceptions of music therapy. A twenty-question survey was issued before and after the presentation, showing increased awareness and agreeableness toward music therapy after the in-service. In 11 of 13 survey items, participants reported improved attitudes toward music therapy from pre- to post-test. Additionally, on their post-tests, several participants indicated excitement concerning the addition of music therapy to patient care.

Crowe (1985) specifically looked at the employment trends for music therapists in the general hospital physical medicine setting. Crowe ascertained that several informational areas must be addressed for music therapists to gain employment in



hospital settings, from uses of music therapy techniques for medical patients, to the financial means of promoting music therapy's benefits, to the substantive history of music and healing. Crowe argued for presenting extensive research documenting the medical benefits of music therapy, from perception of pain to emotional expression. Also, Crowe advocated for presenting the financial arguments for music therapy: music therapists require minimal initial resources; music therapists can serve patients in multiple areas of the hospital; and music therapy reduces other hospital costs (length of stay, medications provided). Finally, Crowe recommended discussing the extensive history of music in human healing. Crowe believed that the potential music therapist could offer this information via existing staff development programs, through additional research in the field, and by demonstrating the music therapy process on a time-limited, voluntary basis.

These studies demonstrate that music therapy has a place in healthcare; however, they also document the challenges that music therapists face in gaining employment within hospitals. Specifically, music therapists must investigate the extent of awareness of NICU music therapy in hospitals, and continue to expand on that knowledge whether it be through in-services, grand rounds, one-on-one advocacy, or otherwise.

### **Music Therapy Employment Trends**

Music therapy's employment trends and perceptions of music therapists in settings other than the NICU have been researched in the last twenty-five years. Multiple researchers have studied music therapy in mental health and psychiatry (Coddington 2002; Eyre & Lee, 2015; Silverman, 2007). Additional researchers have evaluated employment trends in medical music therapy (Hodkinson et al., 2014) and considered music therapy in

school settings (Heuzey et al., 2010, Smith & Hairston, 2011). While not NICU-specific, an analysis of this research can reveal overall music therapy trends, and potential investigative threads that are important for future research regarding NICU music therapists' employment.

Using a survey, Coddling (2002) evaluated music therapy employment specifically in correctional psychiatry environments, including music therapists' credentials, type, and number of positions, and how positions were funded. Eighty-seven percent of respondents identified as Board-Certified Music Therapists (MT-BC) and sixteen percent of those MT-BCs had an additional credential to the traditional music therapy credential. Eighty-four percent of respondents reported that at least one full-time music therapy position existed at their facility, with 13% of respondents reporting the existence of part-time positions, and two respondents reporting contract positions only. Over 90% of the respondents reported that their programs were funded by state, county, or city funds, while 6% of respondents worked in federally funded programs.

Eyre and Lee (2015) surveyed music therapists to determine current perspectives of music therapy practice in mental health settings including demographic information, work conditions, and growth possibilities in the field, in addition to specific techniques of practice. With regard to demographics, a majority of respondents (59.49%) reported working as a music therapist between one and ten years, with 18.1% reporting working 11 to 19 years, and 22.41% reported 20 or more years of work experience. Eighty-five respondents also reported having completed specialized training in addition to the MT-BC certification.

Most participants (82.99%) reported that they were satisfied or very satisfied with their job conditions. Participants reported three areas of concern with regards to potential growth in music therapy practice in mental health. Respondents perceived advocacy to be essential to improving professional recognition and growth with the absence of recognition of music therapy leading to a lack of funding for positions. Additionally, respondents reported problems with professional identity, with several participants having taken non-music therapy jobs due to lack of available positions. Finally, participants commented on the potential increase in education requirements for music therapists. While some respondents advocated increasing education requirement in order to make music therapists competitive with other therapeutic fields, many reported that the increase in education would not lead to additional mental health music therapy jobs (Eyre & Lee, 2015).

In his 2007 study, Silverman analyzed current trends in psychiatric music therapy, evaluating music therapists in the psychiatric setting and the institutions in which they worked. A majority of participants (59.1%) indicated that they worked in their positions full time. Additionally, 67.1% of respondents indicated that they completed their music therapy internship requirement in a psychiatric setting. Furthermore, participants indicated working an average of 8.4 years in their current position. Silverman compared his findings to employment statistics from 1979, noting a significant increase over time in the number of music therapists in psychiatric settings, length of work in any psychiatric setting after the completed internship, and length of work at the present institution.

Hodkinson et al. (2014) specifically surveyed 43 children's hospices in the United Kingdom to determine their utilization of music therapy in addition to reasons some

hospices were hesitant to offer music therapy. Of the 43 surveyed, 28 hospices offered some form of music therapy, with the average therapist working 13 hours per week. Of those hospices that did not offer music therapy, all but one utilized music in a non-music therapy capacity, with volunteers or nurses providing the musical activities. These hospices mentioned overall costs, demands for other services, and their currently existing structures as deterrents for initiating music therapy within their facilities; however, nearly all of these facilities also requested additional information on accessing and providing music therapy.

Smith and Hairston (1999) specifically investigated music therapy employment in school settings, surveying 244 music therapists across the United States. A majority of respondents reported full-time music therapy positions in Texas, New York, and Michigan. A majority (84%) of those therapists employed full-time were employed directly by school systems, while a majority (88%) of part-time therapists were self-employed. For 39% of respondents, a valid teaching certificate was an additional requirement for their position. Compared to an earlier study (McCormick, 1988), Smith and Hairston found a 33% increase in overall school setting music therapy employment over ten years.

The American Music Therapy Association (AMTA) surveys its membership in its yearly Member Survey and Workforce Analysis (AMTA, 2015). This survey evaluates certain employment trends, but the most recently published analysis is limited to only those music therapists who are current AMTA members, therefore excluding any music therapist not currently a member of AMTA. The 2015 survey had 1562 responses, with 81.3% indicating that they were currently practicing music therapists.

This survey provides a great deal of information about the employment trends of music therapists; however, information that can be gathered about NICU-specific music therapists is limited. When inquiring about populations served by music therapists, the survey does not provide the option for music therapists to select that they work with infants or neonates. Furthermore, though the survey investigates the facilities in which music therapists are employed, a NICU music therapist would have to designate either General Hospital, Children's Hospital or Unit, or Other, as NICU is not one of the options. Although there are sections of the survey on both Salary by Age Range Served and Age Groups Served, in both of these categories, infants and children are grouped together, making it difficult to determine NICU specific information (AMTA, 2015).

The previous studies demonstrate that music therapists are expanding their employment possibilities in psychiatric, medical, and school settings. Many music therapists are gaining full-time employment directly from facilities, though there are opportunities for contracted work as well. These studies seem to indicate that music therapists are either required to pursue additional certifications or that the music therapists themselves feel additional certifications benefit them professionally.

### **Music Therapy Employment in the NICU**

Though music therapists can gain important information on employment trends from existing research, studies focusing on employment trends of music therapists specifically in the NICU are necessary to facilitate the additional creation of jobs within this setting. Peczeniuk-Hoffman (2012) evaluated current employment trends and specific techniques implemented by music therapists within the NICU, though her focus was mainly on the level of training that NICU music therapists completed and the techniques

they used in their practice. The author surveyed 318 music therapists, finding that a majority of respondents (67.5%) had practiced NICU music therapy for one to ten years. The highest percentage of these therapists (41%) spent between one and four hours per week in the NICU, with 38.5% spending five to nine hours working in the NICU. A majority of respondents (56.8%) were paid hourly for their time in the NICU, while 43.2% were salary based. Additionally, Peczeniuk-Hoffman found a moderately positive, though statistically insignificant, correlation between the years the therapist had practiced and the income that he/she earned. The researcher determined that there was not a statistically significant income benefit to additional NICU certification. In other words, while obtaining additional NICU certification may benefit music therapists' ability to practice competently, their employers did not necessarily compensate their employees with greater salaries for doing so. This study did not investigate whether music therapists with the additional certifications felt that these advanced qualifications assisted them in obtaining their positions.

Although this study examined certain employment trends for NICU music therapists, the author did not address several essential questions about employment with this population. In a position paper from 2014, Dr. Jayne Standley put forth the question of why NICU music therapists were not considered a part of standard medical care. Specifically, Standley compared NICU music therapy to child life, a profession based on child development theory that involves normalizing the hospital experience for children and their families. Though the benefits of NICU music therapy have been supported by research for over 25 years, and though child life services have only recently come to

prominence, child life services are included in pediatric standards of care, while NICU music therapy services are not.

### **Summary of the Literature Review**

The benefits of music therapy in the NICU have been widely documented; however, music therapy is not yet considered necessary in the NICU environment. Music therapists face significant challenges in gaining employment in a multitude of settings, particularly in healthcare; however, previous research has examined ways of overcoming those challenges in areas aside from the NICU. Additionally, researchers have previously looked into the employment trends of music therapists; however, these studies have not specifically considered the employment trends for music therapists in the NICU itself.

The question of why music therapists have not gained such prominence and what music therapists can do to increase their nationwide employment must still be addressed. By specifically looking at music therapist employment trends at the top hospitals for neonatology, and surveying the music therapists currently serving the NICUs at these hospitals, this additional information can be gained. By determining the extent of NICU music therapist employment for therapists in these hospitals, how these therapists obtained their positions, and what factors contribute to continued NICU music therapy employment at these hospitals, future music therapists pursuing employment in a NICU setting may have better strategies for obtaining their own positions.

### **Research Questions**

The purpose of this study was to determine the extent of employment of music therapists in the NICU at the Top Hospitals for Neonatology according to *U.S. News and World Report*. Additionally, this study evaluated the ways in which those music

therapists obtained their positions, and those therapists' opinions on the future of the NICU music therapy labor market. The following broad research questions were addressed:

1. How many of the *U.S. News and World Report's Top Hospitals for Neonatology* employ music therapists in their NICUs?
2. What are the characteristics of NICU employment for music therapists employed by top hospitals for neonatology?
3. Who are the advocates and critics of NICU music therapy in the hospital?
4. What challenges must a music therapist overcome to gain employment in a NICU and what are potential strategies that can be used to overcome them?
5. What are current music therapists' perspectives on the future labor market for NICU music therapy?



## CHAPTER III

### Method

#### Participants

Individuals were eligible to participate in this study if they were board-certified music therapists employed by one of the 97 hospitals listed on the *U.S. News and World Report's* 2015 Top Hospitals for Neonatology. To identify these potential participants, the researcher evaluated each hospital's website to determine whether they employed music therapists and to obtain contact information for those music therapists.

Additionally, the researcher utilized both word-of-mouth and personal contacts to complete the list of eligible participants. The researcher contacted potential participants by email to evaluate their willingness to be interviewed for this study (see Appendix A for the initial contact and letter of informed consent). In this email, potential participants were provided with a letter of informed consent. Once an individual agreed to participate, the researcher scheduled a time for an individual phone interview. The researcher also made follow-up calls and emails to participants who did not initially respond in an attempt to gain more participants. The researcher hoped to interview a minimum of 25 music therapists out of the 42 names gathered from the 66 top hospitals for neonatology that employed music therapists.

#### Instruments

The participants were asked to respond to 13 researcher-developed interview questions (see Appendix B). The 13 items consisted of both multiple-choice and open-ended questions designed to gain insight specifically into NICU music therapy employment trends in the following broad areas: the characteristics of employment, the

advocates and critics of NICU music therapy within the hospital, the challenges a music therapist faces, and perspectives on the future labor market for NICU music therapy. These questions were peer-reviewed prior to administration to insure clarity and validity.

### **Procedures**

The researcher consulted with the thesis committee upon completion of a research proposal, then with the committee's approval submitted to the Sam Houston State University Institutional Review Board for study approval. Once approval was granted (see Appendix C for IRB approval notice), the researcher initiated email contact with music therapists employed by the 97 Top Neonatology Hospitals with the letter of informed consent, study intentions and the request to respond with interest in being interviewed along with availability for interview times and dates. The researcher subsequently interviewed 20 willing participants currently employed by 18 of the top 97 hospitals for neonatology, using the researcher created interview questions. At the beginning of the interview, the researcher verbally confirmed informed consent before asking survey questions (see Appendix A). The researcher personally dictated participants' answers to survey questions in a word document, using a numerical code in place of participants' names and places of work.

Upon completion of all interviews, results were tabulated for both quantitative and qualitative evaluation. Questions one through eight required statistical evaluation, while questions nine through thirteen were evaluated for content themes. For the qualitative questions, the researcher analyzed themes found in answers to determine potential trends.

## CHAPTER IV

### Results

The purpose of this study was to investigate the current employment characteristics of music therapists in top U.S. neonatology hospitals and predict future trends in the NICU labor market. Further this study examined current NICU music therapists' opinions on challenges to NICU employment and potential strategies to overcome these challenges. Twenty of the music therapists contacted both provided NICU music therapy services and agreed to participate in phone interviews.

In this chapter, the researcher will interpret the statistical analysis and qualitative themes found in the phone interview results, organized by research question. The limitations of the study and recommendations for future research will be discussed. Finally, the theoretical and practical implications of the study will be examined.

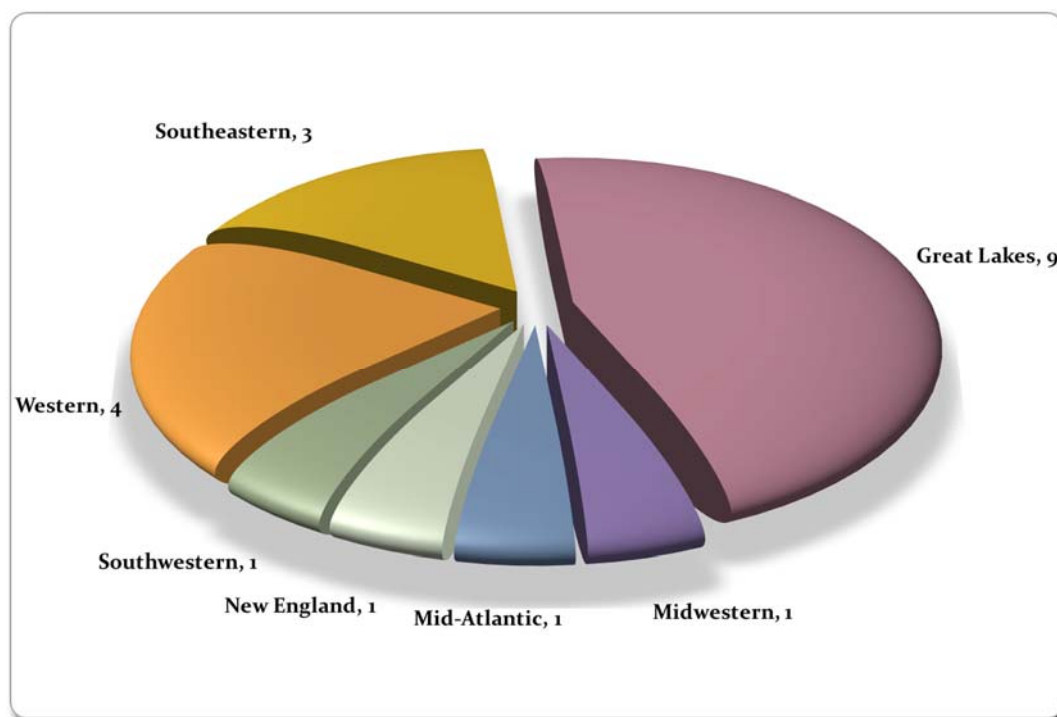
#### **Demographic Results**

Of the 97 *Top U.S. Hospitals for Neonatology*, 66 hospitals currently employ music therapists. Of these, contact information could be found for music therapists employed by 42 hospitals. Music therapists from 34 hospitals responded to emails and phone calls requesting study participation, with 20 music therapists, who were currently providing NICU services at 18 different hospitals, agreeing to phone interviews. Participants who responded but were not interviewed were either not currently providing NICU services or were not willing to be interviewed. Music therapists from all seven American Music Therapy Association (AMTA) regions were interviewed. Table 1 and Figure 1 include detailed information regarding participant demographics.

Table 1

*Frequency of Participant Demographics*

Demographic Variable		Frequency	Number of Hospitals Represented
Gender	Male	1	1
	Female	19	17
AMTA Region			
	Western	4	4
	Southwestern	1	1
	Mid-Western	1	1
	Mid-Atlantic	1	1
	Great Lakes	9	7
	Southeastern	3	3
	New England	1	1



*Figure 1.* Distribution of Participants by AMTA Region.

### **Research Question #1**

The first research question investigated the number of top neonatology hospitals that employed music therapists who worked in their NICUs. Due to high turnover rates, the researcher had difficulty gathering contact information for all 97 top neonatology hospitals; therefore, the researcher limited the results for this research question to only the top 25 hospitals for neonatology. Of the top 25 hospitals for neonatology, 22 currently employ music therapists. Of these 22, 18 responded to requests for employment information, with 16 of these music therapists currently offering music therapy within their hospitals' NICU. Based off this available information, the researcher determined that a majority (i.e., at least sixty-four percent) of the top 25 neonatology hospitals currently offer music therapy in their NICU. Table 2 presents the music therapy presence at the top 25 hospitals for neonatology.

Table 2

*Music Therapy Employment Frequency at Top Neonatology Hospitals (N=25)*

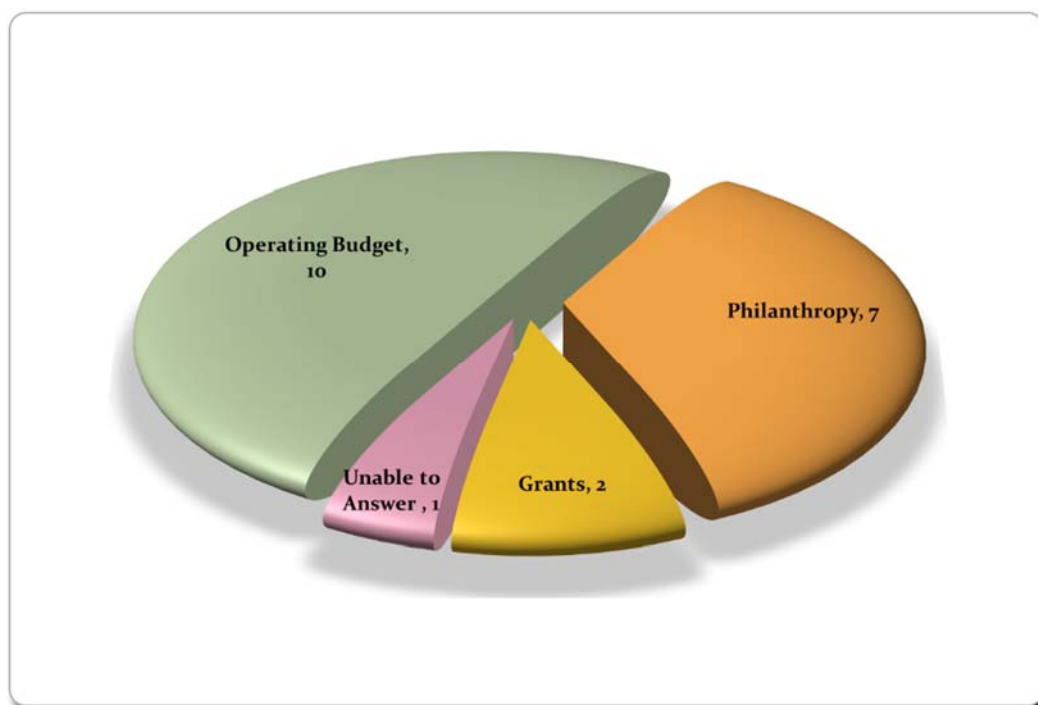
Hospital Music Therapy Employment Variables	Frequency (%)
Employ Music Therapist(s)	22 (88)
Do Not Employ Music Therapists	3 (12)
Offer NICU Music Therapy Services	16 (64)
Do Not Offer NICU Music Therapy Services	2 (8)
Unable to Determine NICU Music Therapy Presence	4 (16)

**Research Question #2**

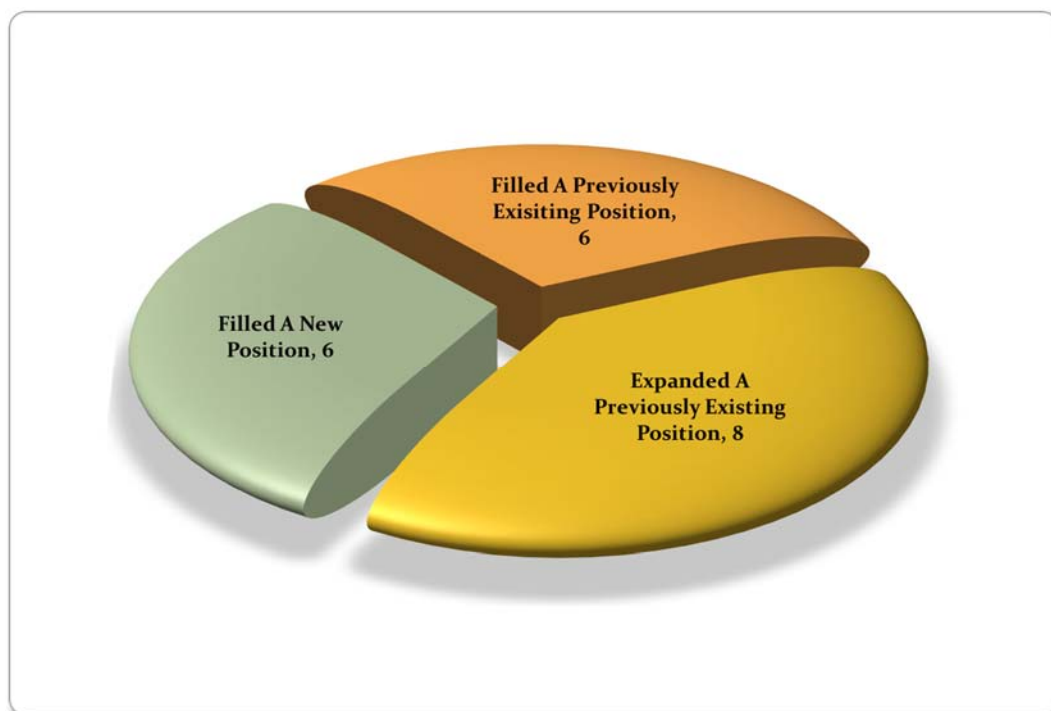
The second research question evaluated the characteristics of employment for music therapists employed by top hospitals for neonatology. Characteristics of employment were determined based off of phone interview responses from the twenty participants. Participants were asked whether they were directly employed by the hospital or if they were a contracted employee, how their current position was funded, whether they created a new position or filled an existing position, whether they received a salary or an hourly wage, and to provide their current salary or hourly wage. Every interview participant provided NICU music therapy services for one of the top hospitals for neonatology. A majority of participants (ninety percent) were employed full time and directly by the hospital; however, one participant was a contractor at his or her hospital and one was a part-time employee. Half of the participants indicated that their position

was funded through the hospital operating budget, while the rest were funded through grants (two) and philanthropy (seven). While six music therapists filled or created a new position for themselves at their hospital, fourteen filled previously existing positions. Eight of those participants who filled previously existing positions expanded their positions by increasing the number of hours worked per week.

Twelve participants reported earning a yearly salary, while eight were paid by the hour. After adjusting salary figures to determine equivalent hourly wage, the researcher determined that the average hourly wage for participants was \$23.26, indicating a yearly salary for full-time employment of \$48,381. The median hourly wage was slightly lower, at \$22.60, generating just over \$47,000 in gross yearly wages. Mean hourly wages per region ranged from \$18.27 to \$29.35. In order to ensure participant confidentiality, the researcher will not disclose mean wages for specific regions. Figures 2 and 3, below, provide detailed information regarding employment characteristics.



*Figure 2.* Distribution of Music Therapy Position Funding Sources.



*Figure 3.* Music Therapy Position Details.



The circumstances of the participants' NICU music therapy services were also investigated. Participants were asked the average hours per week they dedicated to NICU music therapy services, whether their NICUs contained open pods or individual rooms, the number of beds held in their NICUs, which NICU Level they served, whether they had received specialized NICU music therapy training, which training they received, and whether that training assisted them in gaining or maintaining NICU music therapy employment. On average, participants dedicated 13.53 hours per week to NICU music therapy services, including planning and documentation time. A majority of the music therapists interviewed provided services in NICUs that either contained individual rooms only (nine) or a combination of individual rooms and open pods (nine). Two participants worked in NICUs that contained open pods only. The total number of beds in NICUs receiving music therapy ranged from 19 to 175, with a mean of 71 beds. The participating music therapists provided services to all four NICU Levels, with most music therapists providing services to multiple levels within their hospitals. A majority of participants (15) provided services to Level IV NICUs. Table 4 provides detailed information regarding frequency of levels served across participants.

Table 3

*Frequency of NICU Level Served*

NICU Level Served	Frequency
Level I	2
Level II	5
Level III	9
Level IV	15
Total Number of Participants	20

The participants were also interviewed about NICU specific training. Sixteen of the participants had completed some form of specialized training in NICU music therapy, while four had not. Of these, 14 had completed the NICU-MT training through Florida State University, and four had completed the Rhythm, Breath, Lullaby training through The Louis Armstrong Center for Music & Medicine; two participants had undertaken both NICU music therapy trainings. The participants were also asked whether they believed that participating in these additional trainings assisted them in gaining or maintaining their employment. Five participants indicated that the trainings assisted them in gaining employment; five indicated that having additional NICU training assisted them in maintaining their current employment. Six of the participants indicated that the additional training had no effect on gaining or maintaining their employment.

**Research Question #3**

The third research question investigated the perceived advocates and critics of NICU music therapy in the hospital. Participants were initially prompted to name

advocates of music therapy within their hospitals. Fourteen participants indicated that NICU nurses, including nurse managers and clinical nursing supervisors, were strong advocates for NICU music therapy. Participants stated that “once rapport had been built” the “nurses who have seen it” strongly advocate for NICU music therapy. One participant stated, “the nursing (staff) that knows me and knows my work” advocates for NICU music therapy services. Following nursing, other Allied Health Professionals were the next referenced group of NICU music therapy advocates. Speech therapists, occupational therapists, physical therapists, lactation consultants, art therapists, social workers, and respiratory therapists were all specifically mentioned, with one participant stating that “all other therapists” were NICU music therapy advocates in her hospital. Other music therapists were also mentioned as NICU music therapy advocates within the hospital.

Six participants indicated that the physicians at their hospitals were strong advocates for NICU music therapy. Neonatologists and NICU medical directors were specifically referenced among strong NICU music therapy supporters. Six participants indicated that staff within the Child Life Department were strong advocates for NICU music therapy, with one participant stating that the Child Life Department has “been very supportive of my work to increase services in the NICU.” Additional supporters mentioned by participants include NICU parents, hospital administration, and the Palliative Care Team.

When prompted to indicate the potential critics of NICU music therapy in their hospitals, participants most often cited physicians. Ten participants stated that physicians at their hospital required additional education regarding NICU music therapy. One

participant stated that “at this time, music therapy does not participate in rounding” and because of this “the music therapist needs to create additional opportunities to speak directly with NICU physicians.”

Eight participants also mentioned that some nurses were critics of NICU music therapy at their hospitals. While this would seem to counter the idea that nurses were strong advocates for NICU music therapy, evaluating specific responses shows that it does not. Many of the participants indicated that nurses were both advocates and critics of music therapy, and that, at times, the new, unfamiliar nursing staff that required education regarding NICU music therapy. One participant stated that nursing staff could be NICU music therapy’s strongest supporters or greatest critics “due to the high nursing turnover rate.” Another participant mentioned that “the more seasoned nurses are aware and are strong advocates but the others could use more education and understanding.”

Six individual participants indicated that new staff members in general required additional education about NICU music therapy. One participant elaborated saying, “we’re also a teaching hospital, where there is constant turnover, so it requires constant advocacy on my part, teaching why I’m there and why it’s important.” Another participant stated, “there’s always new staff and we can always deepen the awareness of everyone.” Other NICU music therapy critics mentioned included Child Life Specialists, other Allied Health Professionals, and hospital administration. Multiple participants mentioned that the administration and management overseeing their positions would benefit from additional education on NICU music therapy.

**Research Question #4**

This research question investigated the challenges that NICU music therapists face when trying to gain employment in a NICU and potential strategies that could be used to overcome these challenges. Respondents indicated several challenges to NICU music therapy employment including a general lack of understanding, funding, the protective nature of NICU staff, finding an advocate to assist in communication with management, and lack of research in the field. Fifteen of the 20 participants indicated that a general lack of understanding of NICU music therapy was a challenge for those seeking NICU music therapy employment. One participant noted that some hospital staff think “that we don’t have training and don’t know what we’re doing when in fact we tend to have more NICU specialized training than other therapists.” Another respondent stated that her NICU staff required “education of what music therapy is and what it can provide so that people have a realistic expectation for what we do.”

Participants had several recommendations for overcoming the lack of NICU music therapy awareness, with 12 respondents mentioning either providing bedside explanations of interventions or formal in-service presentations for NICU staff. One respondent stated that “informal face-to-face conversation, often at the bedside, is the best way” to educate staff members on the benefits of NICU music therapy. More specifically, one participant mentioned that “live events are the best teaching points,” because “you have an opportunity in the moment to showcase the benefits like highlighting changes in heart rate” as you provide the interventions.

Formal and informal in-services were also frequently mentioned when discussing ways to overcome the lack of NICU music therapy awareness on the part of hospital staff

members. Specifically, these formal presentations were noted as ideal places to share the research supporting NICU music therapy. One respondent mentioned that “the research gets us respect” from medical professionals. Several respondents (three) recommended providing food at these presentations because “if you have food, people will come.” Other presentations at committee or unit meetings were also recommended by five participants.

Handbooks, fliers, pamphlets, and newsletters were additional ways of providing education that many respondents (seven) mentioned. One participant mentioned that her fliers stated, “what we do and who I am, alongside the goals I address.” Another participant’s handbook “includes a bibliography so that readers can look further into the research, if they’d like.” One music therapist created Music Therapy Notes, which are left crib-side after each music therapy session. These notes show “what has been done with the child in each session. These notes are especially useful in the NICU, where parents can’t always be there all of the time. The note shows that we’ve been there.”

Nine participants cited funding as the greatest challenge to NICU music therapy employment. One participant stated that funding was a challenge no matter the size of the hospital, because “small hospitals have less funding available, but in large hospitals it’s harder to feel the impact of music therapy.” Additionally, one participant mentioned that “it is expensive to care for an infant in the NICU so it’s hard to get the hospital to buy into the idea that they should increase those costs even more to employ a NICU music therapist.” Another mentioned specifically hearing that “we just don’t have the money in the budget to hire a music therapist right now.”

Participants referenced two ways of overcoming the obstacle of costs: generating more NICU music therapy research and finding a music therapy advocate. One respondent stated that the profession needs “more research to show that music therapy can reduce NICU costs, whether it be by combating nurse burn-out or by decreasing infant length of stay.” Another participant indicated that because “it takes a lot of convincing to show upper level management that our work is truly helpful to our patients,” it is important to have “a research base to show the evidence behind what we do.” Yet another participant emphasized the importance of “finding the right person to be your advocate.” This same participant believes that “once you have an advocate you can get through to the administration” and even more specifically, “if you can get the physician to be your champion, they can be incredibly effective at overcoming barriers because they know and understand the research and can further it for you and open the doors you need opened.”

A final challenge for NICU music therapists that was mentioned by five participants is the protective nature of the NICU staff. One participant indicated that “medical staff in the NICU are very protective of their patient, as they should be, due to the overstimulation concerns.” One respondent stated that “NICU nurses are like mama bears; you have to win them over before you get to baby bear.” Participants stated that the best way to overcome this challenge was through education and research. When nurses are provided “appropriate education to show that the interventions we provide are actually good for infant stimulation and growth” NICU music therapy is successful. Furthermore, one respondent emphasized the importance of “providing or building trust and a good relationship with the nurses and medical staff in the NICUs so that they

understand your training and that you're not causing harm to their patients." Finally, one participant stated that "if you can spit out research off the top of your head and know it and use it in any conversation, you're going to go far in this particular environment."

### **Research Question #5**

The fifth research question investigated current NICU music therapists' opinions on the future NICU music therapy labor market. Nineteen out of twenty participants had positive feelings about the future of NICU music therapy employment. The one participant with a negative outlook stated that it was due to "this uneasy time of healthcare" rather than specific negative thoughts about NICU music therapy. Thirteen participants specifically indicated that they believed that there would be an increase of job availability over the next few years. One participant stated that the "NICU music therapy market is the fastest growing field for music therapists." Another "wouldn't be surprised to see most NICUs with a music therapist at least part time."

Furthermore, five participants specifically indicated that they perceived NICU music therapy becoming a standard of medical care within the hospital. One participant stated "Ideally, I think every Level II and III NICU should have a NICU music therapist available to them. I think it should be standard of care for certain cases and that we as music therapists should draft those national standards for determining a baby's need for music therapy in the NICU." Another participant thought that NICU music therapy "would continue to grow and be available everywhere like speech language pathologists, physical therapists, and occupational therapists."

Many participants (seven) indicated that the future of the NICU labor market was going to center around growth in research opportunities. One respondent stated that we



needed to further our “experimental, quantitative research and (enhance) evidence based practice.” Another participant indicated that “right now the hot topic in NICUs is the auditory environment and how that effects the infant’s sensory processing... so if we can continue to show that this is what we’re the expert in and that we can improve the auditory environment, then... there will be a significant need for us.” The same participant also stated that we needed to “continue to build on our research and look at physiological parameters and long-term outcomes.” Another participant indicated that “the more research that we get out there, the better off we are, and the more we’re accepted by the medical community.” Additionally, a participant indicated that growing our research could lead to “increased reimbursement” opportunities.

Four participants indicated that the NICU music therapy labor market would gain more acceptance in the coming years. Several mentioned that utilization of media outlets and other publicity opportunities would aid in growing the field. One participant believed that “more and more hospitals are learning about NICU music therapy through media attention.” Another stated that NICU music therapy “is getting more attention in the media” and hopes that the field will “continue to grow as people become more aware.”

When prompted to provide ideas for expanding NICU music therapy employment opportunities, 12 participants indicated increasing focused research studies. One participant stated that “research is an incredibly important outlet to voice what we’re doing and why.” Another participant elaborated stating “getting that research into the hands of physicians and administrators within the hospital” was essential. Many participants (11) spoke of presenting NICU music therapy research at non-music therapy

conferences and publishing studies in non-music therapy journals. One participant said that “getting this research published in other journals that are not just music therapy journals is a really big thing.” Another recommended a music therapy presence at “lactation conferences, neonatal nursing conferences, and neonatology conferences” endorsing going “together with interdisciplinary staff members and (doing) presentations jointly.”

Additionally, 11 participants stated that supporting one another was another way of building up the NICU music therapy labor market. Two participants indicated that task forces dedicated to pediatric and NICU music therapy could be beneficial. One participant stated that “the biggest thing is for us to be open with each other about what works and what does not” and that this way “we can walk in the door with resources that are proven effective in other facilities.” Another participant talked about the importance of “just being available to talk to other people and give them support.”

## CHAPTER V

### Discussion

The purpose of this study was to investigate the current employment characteristics of music therapists in top U.S. neonatology hospitals and predict future trends in the NICU labor market. Further this study examined current NICU music therapists' opinions on challenges to NICU employment and potential strategies to overcome these challenges. Twenty of the music therapists contacted both provided NICU music therapy services and agreed to participate in phone interviews.

In this chapter, the researcher will interpret the statistical analysis and qualitative themes found in the phone interview results, organized by research question. The limitations of the study and recommendations for future research will be discussed. Finally, the theoretical and practical implications of the study will be examined.

#### Discussion of the Research Questions

**The number of top neonatology hospitals that employ music therapists in their NICUs.** The first research question evaluated the number of top hospitals for neonatology that employ music therapists within their NICUs. Although the researcher was unable to obtain contact information for all of the music therapists working in the top 25 hospitals for neonatology, it was determined that 22 of the top 25 hospitals do at least employ music therapists for the hospital. Additionally, of the hospitals that employ music therapists, a majority provided music therapy services within their NICUs. This key statistic, that a majority of the top hospitals for neonatology provide music therapy services in their NICU, could be important in advocating for advancing employment opportunities for NICU music therapists.

**The characteristics of employment for NICU music therapists.** The second research question investigated how music therapists were employed at top hospitals for neonatology. Ninety percent of these music therapists were employed full time at their hospitals, and 95 percent were directly employed by the hospital as opposed to contract workers. These statistics seem to line up with previous music therapy employment studies, as Coddington (2002), Silverman (2007), and Smith and Hairston (1999) all found that most participants worked full time, and were directly employed by their facilities.

This study also investigated the ways in which top neonatology hospital music therapy programs were funded. Half of all participants (ten) indicated that their position was funded through the hospital operating budget, while seven indicated that they were funded solely by philanthropy and two indicated funding through grants (one participant was unable to answer). Positions funded by hospital operating budgets are traditionally considered more stable, as they are not dependent on yearly donation accruals or renewal of grant funding; therefore, it is promising that a majority of NICU music therapy positions receive their funding through the hospital operating budget.

Even more promising were the responses regarding the positions that participants filled at their hospitals. Six of the 20 respondents indicated that they filled a new position at their hospital, while 14 indicated that they filled a previously existing position. However, a majority of the respondents who filled previously existing positions at their hospitals expanded the position that they filled. Eight participants indicated that they grew their position from part to full time. This statistic, combined with the six respondents who indicated that they filled a new position, indicates that NICU music

therapy employment opportunities are growing which is in line with the greater music therapy field, as indicated by Silverman (2007) and Smith and Hairston (1999).

The responses regarding current NICU music therapy income were surprisingly varied. The lowest paid participant received \$18.27 per hour while the highest paid received \$30.00 per hour. Interestingly, the higher paid NICU music therapists seemed to work in the western portions of the United States. Cost of living in each region was not evaluated in this study, but may play a factor in wages offered in different regions. Although Peczeniuk-Hoffman (2012) found that a majority of NICU music therapists were paid hourly, a majority (12) of the participants in the present study received a yearly salary.

As there were limited existing studies evaluating the NICU environments served by NICU music therapists, this study investigated the number of NICU beds, the NICU Levels present, the layout of NICU rooms, and the number of hours specifically spent in the NICU in hospitals with NICU music therapy services. Again, respondents reported a wide range for the number of beds within their NICUs, with the lowest being 19 and the highest being 175. On average, top hospitals for neonatology with NICU music therapy services contained 71 beds. Participants indicated serving all NICU Levels, with the majority of participants serving Level IV NICUs. Most participants indicated that their NICUs contained either individual rooms (nine) or a combination of individual rooms and open pods (nine); however, two participants reported working solely in open pods. These results indicate that NICU music therapy services can be successfully implemented at both large and small facilities, whether they contain open pods, individual rooms, or

both. Furthermore, NICU music therapy services are successfully provided to infants in all NICU levels.

Most of the participants (17) indicated that they served other hospital departments in addition to the NICU. Three participants indicated that they were solely dedicated to NICU music therapy services. The average number of hours per week dedicated to NICU music therapy services for all participants was 13.53 hours, with one respondent indicating that their NICU music therapy services could not be provided in hours per week as it was dependent on whether a referral existed. The number of NICU music therapy hours per week has seemingly grown since Peczeniuk-Hoffman's 2012 study, which found that a majority (nearly 79 percent) of NICU music therapists spent fewer than ten hours in the NICU.

Participants were also asked about any specialized training in NICU music therapy that they had received. Sixteen participants had received specialized NICU music therapy training, with 14 having completed the NICU-MT training through Florida State University and four having completed the Rhythm, Breath, Lullaby training through The Louis Armstrong Center for Music & Medicine. While ten participants indicated that this additional specialized training helped them either gain or maintain their employment, six of the participants indicated that the additional training had no effect on their employment. These findings seem to be consistent with Peczeniuk-Hoffman's 2012 study which found that although there was a slight increase in reported income for participants who had completed additional specialized NICU music therapy training, it was not statistically significant.

**Advocates and critics of NICU music therapy.** The third research question investigated which hospital staff members advocated for NICU music therapy and which were critical of NICU music therapy, or lacked requisite education of NICU music therapy services. Overall, nurses were found to be the strongest advocates for NICU music therapy. This result is in line with previous research as Li et al. (2013) found that nurses had a positive attitude toward music therapy and believed in music therapy's positive effect on the human body. Participants in the current study also indicated that other allied health professionals, physicians, and child life specialists were advocates for NICU music therapy in their hospitals.

Interestingly nurses were also found to be among the critics of music therapy in the hospital; however, participants indicated that it was new nursing staff, those unfamiliar with NICU music therapy, who criticized NICU music therapy. This is again consistent with the Li et al.'s 2013 findings that nurses with more extensive nursing experience were more likely to feel positive about music therapy than those with less experience. Physicians were also mentioned as potential critics of NICU music therapy, along with new staff members in general. Overall, the responses seem to indicate uninformed staff members were the greatest critics of NICU music therapy, but that these critics could turn into advocates with additional education and exposure to NICU music therapy services.

**NICU music therapy challenges and ways to overcome them.** The fourth research question sought to identify the challenges a NICU music therapist faces when trying to gain employment and potential strategies that can be used to overcome these challenges. A general lack of understanding of NICU music therapy was the most often

identified challenge. Participants indicated that other hospital staff members have misconceptions about what NICU music therapy is and what training music therapists go through to become NICU music therapists. Additionally, participants mentioned that hospital staff is not necessarily aware of the research that supports NICU music therapy intervention. These findings coincide with previous studies by Isenberg (2004), Silverman (2011), and Crowe (1985), which indicated that providing education to staff members improved overall perceptions of music therapy.

Participants indicated several ways in which to go about educating hospital staff members. Previous studies by Edwards (2005) and Silverman (2011) indicated that hospital in-services were useful in educating staff members on music therapy, and participants in the present study agreed, with 12 participants specifically mentioning in-services as a way of overcoming the education barrier; however, an equal number of participants advocated for providing observational opportunities at the bedside. Participants indicated that presenting research and descriptions of services would only go so far, but that demonstrating the effectiveness of NICU music therapy in-the-moment was a sure way of convincing someone of its merits. This idea was introduced by Crowe (1985), who indicated that providing time-limited, voluntary music therapy could be a way of introducing staff to music therapy, as part of an overall effort to gain additional employment in the hospital setting. Participants in the present study also indicated that fliers, pamphlets, and handbooks could also be effective in educating staff members about NICU music therapy. Participants indicated that providing anecdotal stories alongside supportive research would solidify the effectiveness of printed materials.



Another oft-cited challenge of NICU music therapy was funding, as 11 participants indicated that lack of funding could inhibit job creation and growth. Based off the fact that many participants filled new positions or expanded their positions; however, it seems that funding is a challenge only prior to the NICU music therapy position being created. In fact, one participant indicated that once services have been offered to a NICU, the issue of funding is overcome through the newly perceived need for NICU music therapy services. It seems, then, that the challenge is advocating for funding for the initial creation of a position. Participants indicated that finding a physician, nurse, or administrator to advocate on the music therapist's behalf was the best way to overcome this challenge. Additionally, participants mentioned that more NICU music therapy research that specifically targets cost-reducing outcomes could be helpful in overcoming the funding challenge.

**Perceptions on the future of the NICU music therapy labor market.** The final research question investigated current NICU music therapists' perspectives on the future of the NICU music therapy labor market. The responses given were overwhelmingly positive, with only one respondent indicating doubts about future growth. Overall, participants indicated that more jobs would become available (thirteen), that more focused research would increase opportunities for NICU music therapists (seven), that NICU music therapy would gain more acceptance from the medical community (four), and that NICU music therapy would become a part of the standard treatment of care (five). Respondents also indicated that current publicity in the media was drawing attention to the field and having a positive effect on perceptions of NICU music therapy.

Participants were also prompted to indicate ways in which current NICU music therapists could improve the labor market for future NICU music therapists. A majority of respondents indicated that additional research would benefit the field. Again, participants mentioned the importance studying the cost-effectiveness of NICU music therapy services. Although previous research studies indicate that NICU music therapy can reduce length of stay (Standley 2003), more studies are needed to solidify the overall cost-effectiveness of NICU music therapy.

Eleven participants indicated that while conducting research could help with growth in the NICU music therapy field, they emphasized the importance of ensuring that this research is shared with medical professionals, not strictly music therapists. Participants stressed the importance of publishing NICU music therapy studies in journals other than *The Journal of Music Therapy* and *Music Therapy Perspectives*, as these journals are not typically read by neonatologists or other NICU staff. Furthermore, participants advocated for presenting at non-music therapy conferences, specifically neonatology conferences and neonatal nursing conferences. These ideas seem to show that though there is a growing body of research on NICU music therapy, these studies cannot effectively enhance the field unless they are shared with non-music therapists.

Eleven participants also stressed the importance of supporting one another as NICU music therapists. Respondents advocated for sharing resources, like documentation strategies, to enable NICU music therapists to enter their NICUs with resources that have already been proven effective. One method identified for sharing resources was a NICU Music Therapy Task Force. Although a task force for Pediatric Music Therapy presently exists, participants indicated that a NICU specific task force

could be beneficial. A NICU Music Therapy Task Force would also provide opportunities for NICU music therapists to network with one another, which was another means of mutual support that participants indicated.

Participants were asked at the conclusion of the interview if they had any additional comments or concerns that were relevant to improving the NICU music therapy labor market or generally improving NICU music therapy opportunities. The subject of NICU specialized training was brought up by several participants. Three participants indicated that the presence of two conflicting NICU specialized trainings was detrimental to the field. Two of these participants indicated that combining these into one training would benefit overall practice. These participants believed that the two trainings offered differing techniques, and that each had a place in NICU music therapy. One participant indicated that one training was in fact harmful to neonates and should be discontinued in the pursuit of best practice. These conflicting responses may indicate a divide among NICU music therapists that could be potentially harmful to the NICU music therapy field as a whole.

### **Study Limitations and Recommendations for Future Research**

The current study provided insight into current NICU music therapists' employment and opinions on the labor market through the phone interview of twenty NICU music therapists employed by top neonatology hospitals. Due to time constraints, however, it was difficult for the researcher to identify contact information for all 97 top hospitals for neonatology, therefore, further studies should attempt to reach a broader participant base. Additionally, two present study participants were unable to provide

exact figures for their current salary and recommended requesting a range of salaries rather than an exact figure in any future studies.

Now that several means of educating hospital staff members on NICU music therapy have been identified, future studies could systematically compare various methods of education to determine the most effective way of educating unfamiliar hospital staff members about NICU music therapy. Also, based off this study's results, future research studies on NICU music therapy should focus on cost-saving outcomes, to better justify the addition of music therapy to a NICU. Additionally, every effort should be made to present these studies to non-music therapists, either in non-music therapy journals or at non-music therapy conferences, to better inform neonatologists and neonatal nurses as well as other neonatal allied health professionals of the benefits of music therapy.

### **Study Implications**

The current study's findings contribute both theoretical and practical implications regarding NICU music therapy employment at top hospitals for neonatology.

Theoretically, this study provides information about current NICU music therapy employment that can be compared to existing employment information from school, mental health, and general medicine settings. Additionally, the practical implications of this study can assist in furthering NICU music therapy employment opportunities.

**Theoretical implications.** This provided insight into the current employment status of music therapists in top neonatology hospitals. Specifically, this study found that a majority of top hospitals for neonatology employ music therapists that work in their NICUs. Additionally, the specific characteristics of employment were investigated, with

results indicating that a majority of these NICU music therapists are employed full time, directly by the hospital, receive a salary, and maintain positions that are funded through the hospital operating budget. Additionally, this study found that NICU music therapy is a growing field, with many respondents indicating that they filled new or expanded positions in their hospitals. These NICU specific employment trends seemed to follow music therapy employment trends in schools, mental health, and general medicine.

**Practical implications.** This study found many advocates and critics of NICU music therapy in the hospital setting, with much of the perceived criticism coming from people who had not previously been exposed to or educated about NICU music therapy; therefore, the results of this study indicate that educating the greater medical community about the benefits of NICU music therapy should be considered a high priority in the advancement of NICU music therapy. The participants in this study indicated several ways in which to educate staff, from handbooks and fliers, to hospital in-services, to presentations at non-music therapy conferences. Because this study solely investigated music therapist perceptions of NICU music therapy advocates and critics, future studies investigating perceptions of music therapy from the nurses and physicians themselves could verify whether these music therapists' opinions are accurate.

Although there is significant research on NICU music therapy available, this study's findings indicate that future research should be directed towards cost-saving outcomes. Funding is a significant challenge for NICU music therapists, so attempts should be made to show that NICU music therapy can reduce long-term patient costs. Furthermore, future researchers should make efforts to publish these studies in non-music

therapy journals, so that physicians and nurses working in the NICU have better access to them.

## **Conclusion**

The purpose of this study was to determine the number of top hospitals for neonatology that employ music therapists within their NICU and to investigate the circumstances of these therapists' employment and their perspectives on the future of NICU music therapy. The results indicated that a majority of the top hospitals for neonatology offer NICU music therapy services. These hospitals employ mostly full-time, salaried music therapists in positions that are funded by the hospital operating budget. These music therapists provide NICU specific services an average of 13.5 hours per week. Many of these positions are new or expanding, indicating growth in the NICU music therapy labor market. NICU music therapists themselves believe that the labor market is growing and that it will continue to grow, with the potential of NICU music therapy becoming a standard of care in medical practice.

NICU music therapy has several advocates within the hospital setting, but therapists at times perceive criticism from the newer employees who are unfamiliar with their practice and its benefits. Because of this, additional efforts should be made to educate the medical community on the benefits of NICU music therapy, through publications in non-music therapy journals, presentations at non-music therapy conferences, hospital in-services, fliers, and through direct observation of NICU music therapy sessions. Additionally, NICU music therapists need to make every effort possible to support one another by sharing effective resources and advocating for one another.

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## APPENDIX A

### Initial Email Contact Form Letter



#### Subject Information Sheet

My name is Alix Brickley and I am a graduate student of the music therapy department at Sam Houston State University. I would like to invite you to participate in a research study of employment trends of NICU music therapists at top hospitals for neonatology. I hope that data from this research will help future music therapists interested in NICU music therapy better gain employment. You have been asked to participate in the research because you are a music therapist working at a top hospital for neonatology according to U.S. News and World Report's Top Hospitals for Neonatology list.

The research is relatively straightforward, and we do not expect the research to pose any risk to any of the volunteer participants. If you would like to participate in this research, you will be asked to participate in a brief phone interview. Any data obtained from you will only be used for the purpose of analyzing current employment states and evaluating future labor market trends. Under no circumstances will you or any other participants who participated in this research be identified. In addition, your data will remain confidential. This research will require about 15 minutes of your time. Participants will not be paid or otherwise compensated for their participation in this project.

Participation is voluntary. If you decide to not participate in this research, your decision will not affect your future relations with Sam Houston State University. Also, if at any point during the research you decide to withdraw, or do not wish to, participate in the remainder of the research you are free to withdraw your permission and to discontinue participation at any time without affecting that relationship. If you have any questions, please feel free to ask me using the contact information below. If you are interested, the results of this study will be available at the conclusion of the project.

If you have any questions about this research, please feel free to contact me, Alix Brickley, or my Faculty Sponsor, Dr. Carolyn Dachinger, using our contact information below.

*Alix Brickley*  
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Phone: (936) 294-1366  
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☐ I understand the above and would like to participate.

☐ I do not wish to participate in the current study.

A copy of this permission form is available for your records.

## **APPENDIX B**

### **NICU Music Therapy Employment Trends Interview**

1. Do you work in areas outside of the NICU?
  - a. How many hours per week do you specifically dedicate to NICU music therapy (including planning and documentation time)?
  - b. What NICU level do you serve? How many beds does your NICU hold? Is your NICU open, or are there individual rooms?
2. Do you receive an hourly wage or a salary?
  - a. What is your hourly wage or salary?
  - b. Do you work full-time or part-time?
3. Have you completed additional specialized training in NICU music therapy?
  - a. If so, which training did you complete?
  - b. Do you feel that the additional specialized training assisted you in gaining or maintaining employment?
4. Are you employed directly by the hospital or are you a contracted employee?
5. Did you assist in creating a position, fill a new position, or fill a previously existing position?
  - a. If you assisted in creating your position, who was your initial contact person at the hospital?
    - i. Administration
    - ii. Nursing Personnel
    - iii. Child Life Personnel
    - iv. Other: \_\_\_\_\_

6. How is your music therapy position funded?
  - a. Hospital Operating Budget
  - b. Insurance Reimbursement
  - c. Grants
  - d. Other: \_\_\_\_\_
7. In your opinion, who are the strongest advocates for music therapy in your hospital?
  - a. Nurses
  - b. Physicians
  - c. Allied Health Professionals
  - d. Child Life Staff
  - e. Other: \_\_\_\_\_
8. In your opinion, who at your hospital requires additional awareness of NICU music therapy?
  - a. Nurses
  - b. Physicians
  - c. Allied Health Professionals
  - d. Child Life Staff
  - e. Other: \_\_\_\_\_
9. What is the best way to provide hospital staff members with additional education?
10. What is the greatest challenge for a music therapist to overcome to gain employment in a NICU setting?

11. What does the future of the NICU music therapy labor market look like?
12. What can NICU music therapists do to help spread the word about NICU music therapy and help other music therapists gain employment in this setting?
13. Do you have any additional comments/concerns you'd like to share that were not covered in the interview questions?

## APPENDIX C

### Internal Review Board Exemption Approval Letter



<b>Institutional Review Board</b> <b>Office of Research and Sponsored Programs</b> <b>903 Bowers Blvd, Huntsville, TX 77341-2448</b> <b>Phone: 936.294.4875</b> <b>Fax: 936.294.3622</b> <a href="mailto:irb@shsu.edu">irb@shsu.edu</a> <a href="http://www.shsu.edu/~rgs_www/irb/">www.shsu.edu/~rgs_www/irb/</a>
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DATE: December 6, 2016

TO: Alexandra Brickley [Faculty Sponsor: Dr. Carolyn Dachinger]

FROM: Sam Houston State University (SHSU) IRB

PROJECT TITLE: *Evaluating NICU music therapy employment trends in top U.S. hospitals for neonatology [T/D]*

PROTOCOL #: 2016-11-33143

SUBMISSION TYPE: INITIAL REVIEW

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: December 6, 2016

EXEMPT REVIEW CATEGORY: 2—Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects financial standing, employability, or reputation.

Thank you for your submission of Initial Review materials for this project. The Sam Houston State University (SHSU) IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

**\* What should investigators do when considering changes to an exempt study that could make it nonexempt?**

It is the PI's responsibility to consult with the IRB whenever questions arise about whether planned changes to an exempt study might make that study nonexempt human subjects research. In this case, please make available sufficient information to the IRB so it can make a correct determination.

If you have any questions, please contact the IRB Office at 936-294-4875 or [irb@shsu.edu](mailto:irb@shsu.edu). Please include your project title and protocol number in all correspondence with this committee.

Sincerely,  
 Donna Desforges  
 IRB Chair, PHSC

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Sam Houston State University IRB's records

**VITA**

**Alexandra N. Brickley**

**EDUCATION**

Master of Music in Music Therapy at Sam Houston State University, August 2014-present. Thesis title: "Evaluating NICU Music Therapy Employment Trends in Top U.S. Hospitals for Neonatology."

Bachelor of Music (June 2009) in Vocal Performance, University of Denver, Denver, Colorado.

**PRESENTATIONS**

*Music Therapy During Childbirth.* Unpublished manuscript, Sam Houston State University, Huntsville, Texas.

*Music Therapy and Williams Syndrome.* Unpublished manuscript, Sam Houston State University, Huntsville, Texas.

**ACADEMIC AWARDS**

Music Therapy Scholarship Recipient, Department of Music Therapy, Sam Houston State University, 2015-2016.

**PROFESSIONAL MEMBERSHIP**

American Music Therapy Association