Full-Length Article

Assessing & treating trauma: *Music psychotherapy for parents of neonates*

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Abstract

Parents of neonates represent an integral area of potential clinical focus for practice consideration in NICU care. Fostering parents' music as a unique forum, pre-emptive to the music they use for bonding with their infant, or for/with them exclusively, when their infants are not referred, can open many doors of critical relevance. Assessing the impact that early birth may have, and recognizing the experience of trauma that may potentially linger, can infringe upon valuable NICU time for parents and their infants. To address stress, and the potential of trauma, along with its definition and possible impact warrants knowledge of its symptomatology. In this article, stress will be defined, and the potential for acute stress and post traumatic stress disorder will be exemplified prior to addressing the potential parameters for music therapy involvement. Music psychotherapy for referred parents, with focused relevance to the ways in which impending fragility can be addressed with a holding environment of musical nurturance may provide meaningful moments of secured support. These moments, in turn, may likely serve as a safe space for the emergence of music connection with their infants. Our multi-disciplinary team will reflect upon experiences of collaborative practice with families who have experienced trauma related to premature birth. A case vignette highlighting the focal features of music psychotherapy with two parents and a video excerpt exemplifying their experience utilizing song of kin will follow.

Keywords*: NICU MT, neonatology, song of kin, music medicine, infant stimulation, trauma*

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Introduction

Threatened roles and vulnerability for parents and families

A variety of circumstances can result in early birth. Specific incidences, influential factors, conditions and risks leading to an admission to the NICU include high blood pressure (hypertension), bleeding, sexually transmitted diseases, multiple pregnancy (twins or triplets), too little or too much amniotic fluid, and/or premature rupture of membranes, a mother's age; being younger than age 16 or older than age 40, drug or alcohol use, and/or diabetes (https://www.acog.org/womens-health/faqs/preterm-labor-and-birth). Factors that may confound delivery include changes in an infant's level of oxygen (fetal distress or birth asphyxia), breech or other abnormal position of birthing, meconium passed into the amniotic fluid, nuchal cording, or cesarean delivery.

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These conditions can take a toll and recognizably involve the need for concentrated medical focus on the neonate. Survival is often dependent on how astutely and quickly the delivery of attention and care is provided. In such circumstances, however, much less obvious is the extreme toll that such stressors may take on pregnant parents.

Neonatal survival rates for premature infants (<32 weeks' gestation) have improved dramatically in the past 10 years, however, preterm birth is still a major contributor to perinatal mortality [1]. Accounting for 35% of the global neonatal deaths that occur annually, [2] preterm birth complications were the cause of close to one million deaths in 2015 [1]. Although an increasing number of neonates survive preterm birth [3], the infants' sequelae and lasting health issues can have devastating effects not only on the infants, but on their parents as well [4].

Neonatal hospitalization and the potential for trauma

Having a newborn infant hospitalized in the neonatal intensive care unit (NICU) is an unexpected and traumatic event [5]. A medicalized environment, disruption of parents 'everyday life' and a sense of powerlessness, and/or extremely distressing experiences of bearing witness to neonatal suffering and medical insecurity, can lead to an altered sense of parental roles and increase vulnerable feelings such as anxiety, depression, anger, helplessness, and confusion [6],

with a considerable body of research that has examined the sources of parental stress in the NICU. The specific domains of stress affecting parents of infants in the NICU were explicitly identified in a seminal study, by a team that developed a Parental Stressor Scale [7]. This work highlights the importance of the adverse effects resulting from the loss of an expected parental role. Parents of NICU infants exhibit higher levels of stress compared to parents of healthy infants [8-10].

While technological advances in the NICU continue to contribute to increased survival rates of fragile infants, not enough attention has been paid to the psychobiological well-being of the infant's parents [11]. Though mothers continue to have high rates of psychological distress beyond those observed in parents of full-term infants [12], one study found that 35% of mothers, and importantly, 24% of fathers in the sample met the criteria for Acute Stress Disorder (ASD) at infant NICU admission, and 15% of mothers and 8% of fathers in the sample met diagnostic criteria for Post-Traumatic Stress Disorder (PTSD) 30 days later [13]. ASD, the form of traumatic stress that is experienced in the first weeks after a traumatic event, is considered to be a precursor to PTSD.

Other studies suggest a relationship between parental stress and symptoms of anxiety and depression [14-17]. Moreover, posttraumatic stress disorder (PTSD) has been identified as a model to describe and explain the psychobiological reaction of parents to their NICU experience [18-21]. In examining NICU hospitalization as a traumatic event, numerous parallels can be found in the literature describing PTSD in parents of children with cancer and other pediatric medical conditions [22,23]. To date, interventions developed to reduce psychological distress in parents of preterm infants have been primarily supportive or educational in nature [24]. This underscores the need for discreet interventions, such as those employed by the RBL model of music therapy NICU care, to address distress in NICU parents and preempt PTSD. Survivors of trauma are a unique cohort that requires specialized knowledge and multifaceted considerations on behalf of counselors [25].

Traumatic stress

Researchers and trauma theorists agree that in the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*), trauma and post-traumatic stress disorder, as a diagnostic condition, have been cloaked in controversy regarding the boundaries of the condition, its diagnostic criteria, central assumptions and clinical utility. The DSM IV defines trauma as "direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate. The response to the event must involve intense fear, helplessness, or horror" [26]. In a broader sense, an event can be considered traumatic if it is upsetting enough to at least temporarily overwhelm an individual's internal resources [27]. This broader definition is based on the clinical observation that people who experience major threats to psychological integrity are prone to suffering of an equal intensity to those traumatized by physical injury or life threat [27].

All-encompassing definitions have been made more difficult due to stressors containing varying dimensions such as magnitude, frequency, complexity, duration, predictability, and controllability. Magnitude of stressors also encompass several meanings such as threat of harm, life threat, interpersonal loss, and property destruction [28]. Overt exposure to traumatic events is common on the NICU. Such events affect parents and staff alike, and precipitate numerous diagnoses, perhaps most notably, post-traumatic stress disorder [29]. Clinical manifestations of medical trauma as experienced by NICU parents can be widely varied and can include: post traumatic stress, PTSD, ASD and other anxiety disorders, depression, interrupted bonding and attachment, inability to provide a context for functional secure attachment, moral injury, and dissociation, which can be described as a disruption in the normally integrated self and a defensive response to a traumatic event [30]. Medical trauma is a "set of psychological and physiological responses of patients and their families to pain, injury, serious illness, medical procedures, and invasive or frightening treatment experiences" [31].

Addressing issues and setting goals

In clinical medical music psychotherapy practice, staff witnesses definition clusters from the DSM IV and V firsthand. NICU mental health professionals – including music therapists - should strive to meet with referred parents and/or primary caregivers within 1-3 days of admission to establish a working therapeutic relationship, address emotional distress, and evaluate risk factors for vicarious trauma. Screening of both mothers and fathers should take place within the first week and repeated when practical, especially before discharge and in cases where concerns arise.

Common goals for recovery and healing include addressing threats to the sympathetic nervous system, repairing a broken or fragmented sense of self-protection, building agency and resilience, and integrating the memory of the event(s) [32]. Trauma incidence in NICU fathers and mothers can have a compound effect on an already medically traumatized neonate by interfering with secure, functional parenting models [6]. The disruption of constructive parental roles and familial functioning can affect PTSD development [33].

Three types of parenting styles are suggested as having the potential to negatively impact a child's post-trauma adjustment: overprotective, reenacting, and withdrawn parenting. Parents who have a withdrawn style, are unresponsive, and unavailable to provide support to their child. This parenting style may be most often observed in parents with previous trauma histories [34]. Overprotective parents often have a fear that their child will be re-traumatized in some way, or they may feel guilty because they were unable to protect their child from experiencing a trauma. Therefore, they become overprotective and may risk constricting their child's development. Finally, the reenacting type of parent becomes preoccupied with trauma reminders. A parent exhibiting this style may repeatedly discuss the trauma or obsess on the traumatic event itself. All three of these parenting styles are suggested as risking exacerbation in the child's PTSD symptoms and might hinder natural recovery following a trauma. Clinically, this model suggests that clinicians should attend to the caregiver's symptomatology as well as attending to the child's symptoms [34] in order for the parent to be better able to respond to the needs of the child. Music therapy may provide a natural, unobtrusive means of inviting resources which nourished parents' relationships throughout their history, thus preemptively easing the effects of what may be experienced as a potentially traumatic event.

Music psychotherapy assessment with parents

While music therapists have attended to parents of neonates within the NICU setting and study has expanded the focus of parental involvement related to support, continuity of care [35], and the fostering of parents' music as a unique forum for bonding [36], less attention has considered the critical relevance and potential impact that the experience of trauma may have on the fragility of this novel meeting time for vulnerable parents [24].

Careful steps taken in assessing parents' perceptions about the NICU, their experience of preterm birth, and significant issues that arise through listening and observation will ensure that no assumptions are made about parents and families whose infants are receiving care in the NICU-physiologically, mentally, emotionally or culturally. As such, focused attention will provide leads to relevant referrals, critical outcomes and successful recommendations, resulting from the astute music therapy assessment of parents. In this way, determinants and treatment protocols are addressed and attended to with sensitivity, creativity, and most importantly, with focused relevance to the ways in which impending parental fragility aligned with an unexpected traumatic event can be treated within a holding environment of musical nurturance.

Establishing a relationship with music to foster/honor the expression and comfort of themes

Our Assessment form (Appendix A) has been formerly published, and we have a new Caregiver Assessment form (Appendix B) subsequently implemented in neonatal units. These forms provide a format for music therapists to document vital information related to neonatal needs, and parent/caregiver needs including updates on progress level from a developmental standpoint.

Music psychotherapy consults with parents can occur at any point within the infant's NICU admittance. Parental assessment may occur prior to music therapy treatment of their infants; after assessing their infants; at the same time as the assessment of their infants (in tandem), or, in instances where we have not been referred to their infants-but only to address parent/s needs, or when/if their infants were discharged, in instances where mother, required further hospitalization or if/when parents seek follow up for music therapy sessions post discharge.

Each of these entry points provide unique opportunities - overtures for offering a context for the potential development of a therapeutic relationship. This can be particularly meaningful, when constituted with awareness that the effects of the impending birth or post birth events are still fresh and present in the parents' realm of experience. The music therapist's entrance and introduction of self, role and service may cathect a host of various responses-of gratitude or mistrust, of avoidance or need, of parental transferences, or unexpected responses altogether.

For this reason-adopting an informative, yet informal, 'non-invasive' stance that includes a conceptual presentation framework of an 'offering' is recommended. Respit, comfort, wellness, relaxation, are terms that come to mind, and should translate toward the idea that there is 'nothing required' of parents who choose to partake in music therapy. Once an acceptance of service is made, and a seat is taken by the therapist (we do not work standing up, as we have found that standing creates a potential for a non-productive shift in the locus of power in the therapeutic alliance), the assessment begins-and the model implemented is one of receptivity. There are no set rules beyond - privacy, space, comfort, 'connectedness' and live music, if desired. The theme of 'culture' is a theoretical stance that is an implicit cornerstone of each and every action taken. Listening and learning about the parents' culture is inclusive of how they are perceiving the experience of the care in the NICU, which warrants a methodological approach in which a provision of a sense of safety within our hospital environment is paramount. This is melded with the therapist's goal to discover and employ the aspects of safety, nurturance and music that are characterized as meaningful to the family's implicit belief-system and cultural orientation.

NICU Music Therapy Assessment/ Parents

The following section, beginning with pertinent questions, which move into the live music assessing experience- inclusive of song of kin, and the relevant themes its use may unravel or fortify, will augment the potential benefits of music therapy treatment for parents and families.

These assessment procedures for parents include recommendations from the multi-disciplinary team and are implemented within a live music context. In this way, a parent/s' role can be defined from their perspective and strengthened in the way s/he deems it to be, with special consideration for the unique issues that will inform the therapist and team of the most pertinent and beneficial treatment strategies that can accompany the hospital stay or visit.

Initial considerations

a. What significant information is received from a referral/rounds?
b. What does the caregiver need-essential, unique elements that are critical to individualized care?
c. Who are the family's gatekeepers?
d. Are grandparents, friends helpful or hindering?
e. How are needs expressed? (metaphorically, directly, or unexpressed/private)
f. In what way can live sounds/music create a safe/healing environment?
g. Alternately to music, is there a desire for conversation? ie verbally process rather than processing in the music, and/or post music?
h. Does mother/father/parents/family prefer to talk?
i. Does mother/father/parents/family prefer to listen?

Music assessing: offering of a live music experience

A unique aspect of the RBL (Rhythm, Breath and Lullaby) model, is the pure, simple provision of live, soothing sounds, which replicate inter-uterine sounds of flow, accompanied with order and predictability. These are the sounds that the neonate experiences auditorily in the womb [38-39]. One might say: "These are the sounds of comfort that your body provided for your baby for all of these months." Making provisions for parents of how nurturing these sounds can be may provide ease of entry into a first music therapy experiential whereby the ocean disc or gato box entrained to mother and/or father's breathing may prompt an immediate and profound relaxation response. This may elicit sleep, tears, pleasure, letting go, or, a mere acceptance, and the fostering of trust within an emerging therapeutic alliance. Sometimes parents may ask to "have a try" at the instruments. This is where we welcome play, inviting them to share in their playing of the sounds, and then after the music, processing with them how their developing infants were exposed to such sounds and relied upon them for months prior. This provides a backdrop for discussion on how deep, slow breathing nourishes the body, relating this concept to how our physiology relies on rhythm and breath, and how both of these are also musical elements which we can control and shift to influence healthful activities such as exercise, sleep, and meditation etc. This is good take-home, wellness material [40] and can foster continuity of healthy care practices perhaps forgotten at a time when so much attention is taken to their infants.

Song of Kin (SOK)

The most potentially intimate part of the assessment is the offering/ suggestion of a significant song and/or lullaby. Although, at times, this might start the assessment, as parents may meet the music therapist and have songs in mind, it is more usual to have this process occur later in the assessment consult, as it can be a more intimate and clinically relevant sharing. This is because, when provided with opportunities for warming up with breathing, relaxation and/or conversation, the process of selecting a meaningful favorite, comforting song may ensue with deeper authenticity when conversation and/or trust has been built through participation in the above stages. For instance, a mother, having just experienced an entrained music offering, and one in which her breathing patterns were being held by a live soundscape, may have experienced an elicited a sense of trust whereby the sharing of songs may be more natural than if simply being asked at the onset: "What's your favorite song?" (which is not, in and of itself what the therapist relegates to using as a SOK). Perhaps several songs are requested and shared by the therapist, or framed and sung by the mother or partner, or maybe there is a joint singing of songs. The singing and processing of associations with the songs can lead into a SOK decision-making process.

Essential elements contributing to developing SOK's [40] therapeutic benefit:

+Preferable, meaningful associations
+Choosing a comfortable key for parents to sing in
+Simplifying their mentioned "best part" or most musically identifiable 'hook' to ensure repetition and clarity for eventual use with baby
+Adjusting the accompaniment to its simplest, structure so parents' voice/s can be featured and their comfort and vocal expression can be represented as a pronounced theme
+Reinforcing parents' natural delivery of singing
+Suggestions for SOK use-continuity of care

Sharing rationale for SOK's use with parents

Once SOK is affirmed and adapted to the most memorable, easily sung, a cappela format, a reinforcing discussion of simple yet salient information is provided that informs parent/s on the neurologically supportive effects of comfort, familiarity, the importance of repetition [41], and how the SOK can be of aid in transitions, and moments of irritability or pain [42] and/or use for sleep [41]. The benefits of skin to skin, live singing is thought to affect heart rate variability and can enhance bonding [43] through vibration, kangaroo holding [44], holding baby on the left side, over the heart can be emphasized. Emphasis is given to the concept that SOK has little to do with a parent's quality of singing voice, and sung rather to emphasize safety and familiarity, as research shows that their voice is more readily recognized by their infant when compared to other voices [45].

Identifying/strengthening roles of parents/ gatekeepers

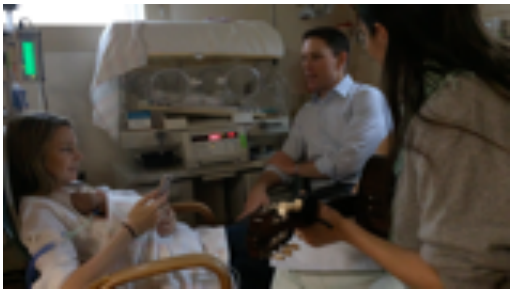
Through the assessment, observation, discussion and music engagement disclose the needs and desires of the family. Careful attunement and openness to what is expressed and not expressed leads toward unique, individualized options for treatment. Each parent and family is distinct, and has their own way of coping. Sometimes grandparents are at the helm. At other times, parents prefer silence, and/or privacy. In some cases, it is not uncommon for parents to request that the music therapist "decide the best music". This takes further delving into what the parents may need at such a time. Grief and loss are often a part of the most authentic expression of parents. From severe loss, where an impending death is expected, to receiving news that there will likely be developmental delays, or awaiting results of tests and outcomes, each parent may experience fear, doubt, shame and/or blame. The music therapy assessment may provide insight into the family dynamics and render ideas for how a treatment plan can support their needs, ideas and special requests. The music therapists work closely with the medical team, sharing the music therapy assessment information, while at the same time gathering information and feedback to integrate into the music therapy treatment plan moving forward.

Some parents have kept in touch with our team. We interviewed several to learn about their experiences in hindsight as a quality improvemnet project. We sought to understand their mechanisms of coping, and whether music therapy was remembered, and if so, in what ways it influenced their NICU stay. One particularly resilient couple who endured traumatic moments, willingly provided insight about their stay in the NICU 6 years prior, and the aspects of their journey with their son, that were most impressionable to them at that time, and in particular what they've taken away in looking back today.

Case vignette - Wendi and Nick: First time parents

Wendi and Nick said their perspective in reflecting upon their NICU time has not changed over time. They described their experience as a "shock to the system" initially. No issues occurred in the pregnancy up until the day their son Hudson was born. It was an "unexpected experience" and they had to "get right with that perspective really quickly as parents" As first time parents, they reflected on how that made the experience filled with "additional complexity" that they had to "wrap their minds around" - because they had no expectations of what to compare this experience to. Comparisons, as such, in hindsight they see, might have not been helpful, because a new, "good perspective", kept them clear - with an "open mind." But in retrospect, although Wendi felt it was hard, she stated several times that she and her husband had each other. She pointed out that having such an experience can either break you as a couple or make you stronger, and that they were fortunate to be "in the latter group - we relied heavily on each other-we had no friends, or family close by". She said they relied fully on the professionals to do what was right for Hudson. Wendi's friends that have subsequently gone through this and did not relinquish control-have had a harder time, because they did not rely on medical experts. She felt confident in the team's abilities, to the extent that she said that the staff was her "mini family". Emotional support through all the bad news helped her to feel comforted, and she names nurses and their comfort expertise, and perspective as examples. The hardest part of their stay was at 1 month when an MRI revealed significant brain abnormalities, and they had to accept that their journey would extend beyond the NICU. Even then she recalls that having things "explained directly- which provided no false hope, but also no shut doors on hope- we learned just the facts…. hard to face facts, but we worked to come to terms with those facts". Wendi and Nick were very involved with music therapy and she recalls "noticeable improvement in his (Hudson's) vitals" during music therapy times. A memorable songwriting experience with a favorite song of the couples is seen here

Video excerpts. *Please click on the EXCERPT text below the photo*



Excerpt 1: *Sharing/Listening to the SOK*

Excerpt 2: *Shifting to a Lullaby context*
Repetition of the hook-simplifying/shifting to 6/8
Excerpt 3: Creating new lyrics
"Moonlight on Hudson"
"Spend your whole life dreaming"
"feel your heart"
Excerpt 4: Continuity of Care
"Daddy likes mommy singing" transitions, ritual, routine, calm, sleep

Wendi provided the video and is grateful to "have this song and a memoir". She recalled re-writing the lyrics, and shifting "Midnight in Harlem" by Tedeschi Trucks Band (Appendix C) to "Midnight with Hudson". She reflects:

"To this day, Hudson is so responsive to music. We listen to the original song and I always change Harlem to Hudson when I sing it. Singing his name within our favorite song is special-it is ours and Hudson loves hearing his name in a song, so he lights up. I recently had a song made for my husband for Valentine's Day that includes a verse about special moments he shares with each of our three kids and they all love to hear that special verse that includes their names. The song was special back then because it was one we really enjoyed in the moment and it was personalized, so that made it even better. Music has always been special to me, so to be able to share the experience of personalizing a song with Hudson was therapeutic for all of us. In looking back on the experience-I'd say transfer of trust is a key element, as well as reliance on your spouse."

Wendi and Nick currently have two more children- a 3 year old, Holden, and a daughter Hensley who is 8 months. Wendi and Nick have created a foundation called 'Enriching Escapes' (https://enrichingescapes.org/about/). Its mission is to "improve the quality of life, mental health, and development of special needs children and their families". Wendi's final words: "Hudson is happy-and at the end of the day, that's what really counts".

Recommendations for building resilience

The vignette of Wendi and Nick, like those of many families who experience traumatic birth and loss, exemplifies the potential of music therapy in fortifying family-infant bonding through music time, and furthermore enhancing personalized options that can accentuate the sacredness of culture at a time of extreme vulnerability.

By first coming into the relationship through referral and an astute clinical assessment, music therapist Kristy Lee (then a graduate intern), recently reflected on the music psychotherapy treatment plan and how the SOK enhanced family intimacy:

Hudson's family were among my first in using SOK. This specific intervention provided me with an immediate window into their relationship, as the song and the band had historic meaning for them, and contained the hopes and dreams for their son, as we implemented and added "Midnight on Hudson" like the river-also his name- rather than maintaining the original song title "Midnight in Harlem." The song became a shared safe space for all of us within each session. It became a ritual for the family during their stay. I remember the way the father would hold the mother as she held Hudson. It felt poignant, even then before I knew as a NICU mother myself, how desperately this family needed these safe musical moments of connection, hopefulness, intimacy and safety in the changing, uncertain world of the NICU. Anecdotally, I found SOK as an immediate rapport builder for the therapeutic alliance and it often appeared as fun for the family, which is not an experience typically had in the NICU. Even in the large open area of the NICU, "Midnight on Hudson" appeared to be a place of private respite for the family. Grief is so sneaky, fluid and ever-present in so many hidden areas of life that we need these holding spaces and a song is such an easily accessible and appropriate safe space - we need more grieving songs!

Conclusion

Through an overview of reported research, discussion and a case vignette that included a glimpse of a music therapy treatment experience from parents and an actual music therapy session, we have provided rationale and description of how music psychotherapy assessment can lead to intimate and effective practice inclusive of significant support for parents. Most particularly, parents who are presented with difficult information may find refuge in non-invasive, nurturing-and will often readily welcome and receive live music tendering that is aligned with their historic or cultural background. A parallel process might ensue, whereby the therapist's attunement to parents, may in turn prepare them to feel more accessibly available to their infant. This should be a process involving awareness and attention. As Kristen Stewart [46] writes, the therapist's capacity for attunement is deeply imbedded in self-awareness:

Endeavoring in self exploratory experiences that deepen self-knowledge is commonly emphasized among therapy professionals, particularly in terms of countertransference, yet attention to physiological states within this schema often receives less attention than emotional and psychological ones. The therapist not only must be highly familiar with one's inner landscape and areas of vulnerability but also must notice the impact of responses to the NICU environment and be able to access and effectively utilize coping tools that help to maintain inner calm and focus. This is key to facilitating organized and regulated states for the infant, whose immature system is reliant on external conditions to guide inner states." [46, p.125]

Coda

Professional caregiver support- music meditations/healing circles

Music therapy can also provide support to staff (nurses, doctors, social workers, and others) whose everyday practice is concerned with the health of numerous neonates, and who also continuously face the questions, concerns and tensions of parents and families. Environmental Music Therapy (EMT) can ease the anxiety experienced by staff on the unit [47]. Additional, useful program planning can be inclusive of music meditation times, grief support groups with music rituals, parent groups, mothers' groups, fathers' groups [48], sibling music times.

The critical conditions of managing preterm infants, parents and staff in a NICU can take a toll and recognizably involve the need for attention to these three sectors of the NICU environmental inhabitance. Survival is often dependent on how sensitively the delivery of attention and care is provided. It is hoped that this article will lay the groundwork for further inquiries of how asssessment and treatment of parental trauma can be provided in an efficascious non-invasive way. Music therapy may provide a viable means for such access.

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Biographical Statements

Joanne Loewy DA, LCAT, MT-BC is the founding Director of the Louis Armstrong Center for Music and Medicine at Mount Sinai Beth Israel, and is Associate Professor in the Icahn School of Medicine at Mount Sinai.

Andrew Rossetti PhD cand. LCAT, MMT, MT-BC is a Senior clinician and Supervisor of the Louis Armstrong Center for Music & Medicine's multi-site Music Therapy Program in Radiation Oncology in the Mount Sinai Healthcare System. His practice includes trauma and post-traumatic stress of infants and parents and Environmental Music Therapy in fragile areas.

Ann-Marie Dassler RN, MSN, FNP, IBCLC, has spent the last 25 years working in Neonatology. She has lectured internationally on Music Therapy with the Louis Armstrong Center for Music and Medicine, and having witnessed the profound effects of Music Therapy on neonates and their families in the NICU, and post discharge, is an ardent supporter of Music Therapy.

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Appendix A
Infant Assessment

MOUNT SINAI HEALTH SYSTEM

THE LOUIS ARMSTRONG MUSIC THERAPY DEPARMENT
NICU MUSIC THERAPY ASSESSMENT

Patient:_____

Date of Birth:_____

Average Heart Rate:

Sleeping: _____ bpm Awake: _____ bpm Stress: _____bpm

Respiratory:

Does infant become tachypneic? [ ] YES [ ] NO

Define stressors: _____

Crying / Comfort Sounds:

Pitch: [ ] HIGH [ ] LOW [ ] AVERAGE Absence of Cry: [ ] YES [ ] NO

Colic: [ ] YES [ ] NO Irritable? [ ] YES [ ] NO

Feeding Noise: _____

Psycho-Social Needs:

ACS Hold: [ ] YES [ ] NO

Intrauterine exposure to drugs/alcohol? [ ] YES [ ] NO

If yes, what? _____

How can music therapy benefit the infant? _____

_____

Who in this family can help the infant benefit? _____

Family's religious preference: _____

Feeding / Intake / Weight Gain / Voiding:

[ ] Breast [ ] Reflux

[ ] Gavage [ ] Bottle

Is the patient's suck response in need of assistance? [ ] YES [ ] NO

Is Physical or Occupational Therapy involved? [ ] YES [ ] NO

Can the infant self regulate? [ ] YES [ ] NO

Feed Schedule: _____

Sleep: Irritable [ ] YES [ ] NO

Stimulation:

Does the baby like propreoceptic stimulus? [ ] YES [ ] NO

Pain: Please describe physiological indicators, location and perceived level (1-10):

_____

_____

On-going Procedures: (which may benefit from music therapy assistance)

_____

_____

Development: Is the infant organized in: Sound [ ] YES [ ] NO

Touch [ ] YES [ ] NO

Movement [ ] YES [ ] NO

Is the infant developing appropriate muscle tone? [ ] YES [ ] NO

Sedation: Is the infant on a sedative? [ ] YES [ ] NO

Medication(s): _____

Time(s): _____

Music therapist: _____ **Date:** _____ **Time:** _____

Extension or beeper: _____

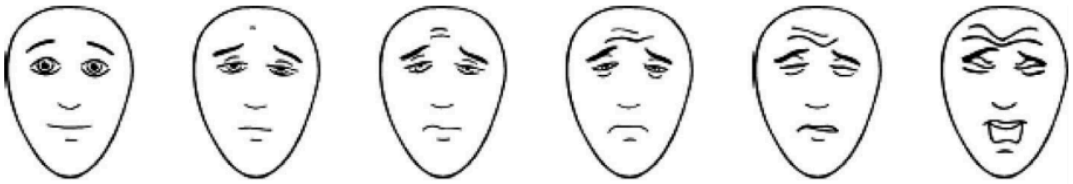
Appendix B
Caregiver/Parent Assessment

Appendix B. Parent/Caregiver Intake Survey

Name: _____

Relationship to Infant:
_____ mother _____ father _____ sibling
_____ foster parent _____ relative _____ friend

Rate your stress level from 0-10:



0 2 4 6 8 10

What is the most stressful part of having a baby in the NICU?

Are there any additional stressors at this time?

Describe the ways you notice this stress affects ...
Your body:
Your mind:
Your emotions:
Your beliefs:
Your behavior:

What helps you when you feel stressed?

Do you have family and/or friends available to support you at this time?

Is music a part of your daily life?
If yes, how so?

What type of music do you use for yourself?

Did you use music during your pregnancy?
In what capacity?

Favorite song/song of kin/lullaby?

To be evaluated by the music therapist:
Vocal range/preferred key?

Source: Adapted from an unpublished survey by J. V. Loewy.

Appendix C

Midnight in Harlem (Tedeschi Trucks Band -Susan Tedeschi-https://www.youtube.com/watch?v=6GkdCiqsFUI

Well, I came to the city
I was running from the past
My heart was bleeding
And it hurt my bones to laugh
Stayed in the city
No exception to the rules, to the rule
He was born to love me
I was raised to be his fool, his fool

Walk that line, torn apart
Spend your whole life trying
Ride that train, free your heart
It's midnight up in Harlem

I went down to the river
And I took a look around
There were old man's shoes
There were needles on the ground
No more mysteries, baby
No more secrets, no more clues
The stars are out there
You can almost see the moon
The streets are windy
And the subway's closing down
Gonna carry this dream
To the other side of town.

Walk that line, torn apart
Spend your whole life trying
Ride that train, free your heart
It's midnight up in Harlem