



32 (2) 2023

## Music therapy spanning from NICU to home: An interpretative phenomenological analysis of Israeli parents' experiences in the LongSTEP Trial

Shulamit Epstein, Cochavit Elefant, Shmuel Arnon & Claire Ghetti

**To cite this article:** Shulamit Epstein, Cochavit Elefant, Shmuel Arnon & Claire Ghetti (2023): Music therapy spanning from NICU to home: An interpretative phenomenological analysis of Israeli parents' experiences in the LongSTEP Trial, Nordic Journal of Music Therapy, DOI: [10.1080/08098131.2023.2180773](https://doi.org/10.1080/08098131.2023.2180773)

**To link to this article:** <https://doi.org/10.1080/08098131.2023.2180773>



© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 09 Mar 2023.



Submit your article to this journal [↗](#)



Article views: 494




View related articles [↗](#)



View Crossmark data [↗](#)

# Music therapy spanning from NICU to home: An interpretative phenomenological analysis of Israeli parents' experiences in the LongSTEP Trial

Shulamit Epstein<sup>a</sup>, Cochavit Elefant<sup>b</sup>, Shmuel Arnon<sup>c,d</sup> and Claire Ghetti<sup>e</sup> 

<sup>a</sup>School for Creative Arts Therapies, University of Haifa, Haifa, Tel Aviv, Israel; <sup>b</sup>School for Creative Arts Therapies, University of Haifa, Haifa, Israel; <sup>c</sup>Department of Neonatology, Meir Medical Center, Kfar Saba, Israel; <sup>d</sup>Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel; <sup>e</sup>GAMUT, The Grieg Academy—Department of Music, University of Bergen, Bergen, Norway

## ABSTRACT

**Introduction:** Music therapy (MT) is a part of standard care in neonatal intensive care units (NICU) in many countries, and in some countries is provided as a post-discharge service as well. However, it is rare that preterm families are offered continuous MT services from birth through their first months at home. Affiliated with a recent longitudinal, controlled trial of MT for parent-infant bonding and an associated qualitative study exploring lived experiences of MT post-discharge in an Israeli cohort of parent participants, this study aimed to understand parents' experiences of engaging in longer-term MT with their preterm infants, spanning from birth into six months in a different Israeli cohort from the main trial.

**Method:** We completed an Interpretative Phenomenological Analysis (IPA) of parents' experiences of music therapy with their preterm infants. Semi-structured interviews intertwining listening to audio recordings from MT sessions were conducted with seven participants from five families of the main trial. The interviews were transcribed and analyzed following principles of IPA.

**Results:** The analysis resulted in the construction of two super-ordinate themes: (a) MT as a therapeutic haven, and (b) MT enabling integration of music into relationship over time.

**Discussion:** Experiences of a small cohort of Israeli parents suggest that MT spanning from birth to home may play a role in supporting parental musical agency and enhancing parent-infant relationship building.

**ARTICLE HISTORY** Received 22 June 2022; Accepted 25 January 2023

**KEYWORDS** Music therapy; preterm infants; preterm families; post-discharge treatment; family-centered care; IPA

## Introduction

### *Preterm infants and parents from birth to home*

Preterm birth poses challenges to preterm infants and their families that may persist long after birth (Saigal & Doyle, 2008). Parents are essential for infants' physiological and psychological development, however, emotional challenges caused by preterm birth may jeopardize their parental self-image as well as their ability to bond with

**CONTACT** Shulamit Epstein  [shushuq@gmail.com](mailto:shushuq@gmail.com)  School for Creative Arts Therapies, University of Haifa, Kehilat Warsha 31/14, Tel Aviv, Haifa, Israel

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.  
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

their preterm infants (Trumello et al., 2018). The period from an infant's conception until the infant reaches two years of age critically impacts the child's long-term health and development (Leadsom et al., 2013). Therefore, early intervention programs focused on parents, or parent-infant relationship – in the NICU and post-discharge – are becoming a main priority in care services in many countries around the world (Puthussery et al., 2018). Of those, programs that include both home and facility-based components are associated with better outcomes for both parents and preterm infants (Puthussery et al., 2018).

### ***Music therapy (MT) for preterm families from birth to home***

MT for preterm families encompasses multiple interventions and approaches in the NICU to support preterm infants' health and development, as well as parent-infant well-being and relationship-building (Haslbeck, 2012; Standley & Gutierrez, 2020; Loewy, 2015; Shoemark, 2018). The experimental evidence base for MT in NICU shows positive impact of MT on preterm infants' physiological parameters such as heart rate (Standley, 2012); respiratory rate (Bieleninik et al., 2016; Standley, 2012); heart rate variability (Arnon et al., 2014); feeding ability (Loewy et al., 2013; Standley, 2012; Yue et al., 2021); reduced hospitalization days (Standley, 2012) and short-term neurodevelopment outcomes (Haslbeck et al., 2020). MT decreases preterm infants' stress levels (Yue et al., 2021) and is also associated with decreased maternal anxiety (Bieleninik et al., 2016).

Some post-discharge MT programs are offered to preterm families as well, mostly in the US, usually through facility-based structured parent-infant MT groups (Hamm et al., 2017; Standley & Gutierrez, 2020; Standley et al., 2009; Walworth, 2009). These programs are associated with preterm infants' improved social, cognitive and communicational skills (Hamm et al., 2017; Standley & Gutierrez, 2020; Standley et al., 2009; Walworth, 2009), however, are uncommon.

Qualitative explorations of parents' experiences of MT in the NICU describe MT's potential to support the emergence of parental identity (McLean et al., 2019) and transformation (Haslbeck et al., 2021), as well as supporting parents' feelings of closeness to their infants (Ettenberger et al., 2017; Ghetti et al., 2021; McLean, 2016b). Parents describe becoming more sensitive to their preterm infants' communication signals during MT in the NICU (McLean et al., 2019). Studies indicate the importance of considering cultural and musical preferences of families as well as considering emotional availability of parents before implementing MT interventions in the NICU and post-discharge (Epstein et al., 2022; McLean, 2016a).

A recent pragmatic, randomized controlled trial named Longitudinal study of Music Therapy's effectiveness for premature infants and their caregivers (LongSTEP, Ghetti et al., 2019) evaluated longer-term effects on parent-infant bonding of a resource-oriented form of MT emphasizing parent-led, infant-directed singing during NICU hospitalization and/or for six months post-discharge (Ghetti et al., 2019; Gaden et al., 2022). To begin to understand parental perceptions of the MT approach used in the trial, we conducted a qualitative study exploring the lived experiences of a cohort of Israeli parents who were offered MT with their preterm infants in their homes for six months following discharge from the NICU (Epstein et al., 2022). Findings suggested that MT experienced post-discharge can offer a means for parents to transform in their resourcefulness and parental agency. Parents who engage in MT only after discharge

from the NICU may have experiences that differ from parents who receive continuous MT services spanning from NICU hospitalization and continuing for six months at home. We were not able to identify any studies that explore parental experiences of music therapy spanning from NICU hospitalization to services at home, which we consider a unique phenomenon worthy of study.

This study seeks to address this gap in research by focusing on the unique experiences of an Israeli cohort of families who participated in longer-term MT in LongSTEP – beginning shortly after preterm birth and continuing until six months post-discharge from NICU. Our main research question was: What is the lived experience of Israeli parents who received MT spanning from NICU hospitalization to home? As we specifically wished to explore their experience over time, the secondary research question was: How are parents' experiences of longer-term MT shaped through time?

## Method

This study was carried out as part of a larger qualitative study using Interpretative Phenomenological Analysis (IPA) to explore Israeli parents' experiences of MT in the LongSTEP trial. Under the factorial design of the LongSTEP trial, families were offered MT during NICU hospitalization, post-discharge, both time periods, or neither. Our first qualitative study (Epstein et al., 2022), used IPA that integrated semi-structured interviews and inter-personal process recall (IPR) to explore Israeli parents' experiences of engaging in MT post-discharge in their homes. This study uses a similar methodology with a separate cohort of parents from the main trial, namely those who were offered MT throughout NICU hospitalization and during a six-month period post-discharge.

### *Epistemological orientation and methodology*

In this qualitative study, consistent with our previous study (Epstein et al., 2022) focusing on participants' lived experiences, we took a phenomenological approach, seeking to explore experiences under their own conditions and in their natural settings. We adopted a constructionist epistemology to our study, where knowledge is considered a construction of the interpretations of the researcher and the participants (Alvesson & Skoldberg, 2009; Denzin & Lincoln, 2017).

We chose Interpretative Phenomenological Analysis (IPA) (Smith et al., 2009) as the methodology for this study, as it enables exploring lived experience of specific phenomena by engaging in deep interpretative processes held both by the participants and the researchers ("double hermeneutic"; Smith et al., 2009, p. 35). By applying IPA methodology, we aspired to maintain the idiographic nature of the phenomenon (MT with preterm families) by representing each participant's detailed account, while searching for ties and connections between cases. Diverse experiences were embraced to create a rich and detailed representation of the phenomenon. Following a guiding principle of IPA, we continuously applied the hermeneutic circle, understanding parts of the text in relation to their wholes and vice versa (Alvesson & Skolberg, 2009; Smith et al., 2009). Since we regard context as an essential part of creating knowledge, a fundamental part of our methodology was disclosing our backgrounds and previous assumptions that shaped our understandings as a part of our process of reflexivity (Finlay, 2002; Gearing, 2004; Stige et al., 2009).

### ***Participants and recruitment***

Seven participants who experienced MT both in the NICU and post-discharge in their homes as a part of the LongSTEP study at the Israeli site held at Meir Medical Center, Kfar-Saba, were selected in a purposeful sampling process (Smith & Osborn, 2008; Smith et al., 2009). Participants were selected based on their lived experience of the phenomenon in question. The inclusion criteria for the study were: (a) families who participated in MT during their NICU hospitalization and post-discharge in their homes, with the first author as their music therapist for one or both of these phases; (b) parents who had completed the intervention period of the main study within the past three months; and (c) parents whose language skills were sufficient to be interviewed in Hebrew.

Nine parents of six families met the inclusion criteria. One family declined participation due to their busy schedule. Out of the remaining seven participants, one father asked to answer the interview guide in writing, and six participants (five mothers and one father) were interviewed in person in a total of five interviews. Table 1 summarizes participants' demographics.

### ***Data collection***

Two data collection methods were chosen for this study: Semi-structured interviews and Inter-Personal Process Recall (IPR) procedure.

#### ***Semi-structured interviews***

Semi-structured interviews were chosen as the main data collection tool for the study as they allowed us to explore the participants' in-depth experiences of MT spanning from NICU to home (Kvale, 2008). By using semi-structured interviews, the interviewer was flexible in exploring new insights or ideas that emerged during the interviews, reaching new understandings constructed through the dialogue between the interviewer and the interviewee (Smith et al., 2009).

#### ***Inter-personal process recall (IPR)***

The secondary data collection tool for the study was IPR (Elliott & Timulak, 2005; Larsen et al., 2008). IPR is often used in psychotherapy studies, wherein clients and psychotherapists view segments from their conversations during sessions in order to collect close-to-the-experience impressions (Elliott, 1983; Rennie, 2000). In our study, we used an adapted form of IPR by playing the participants musical segments from their MT sessions (Rolvsjord, 2016). The purpose of using IPR in this study was to encourage the participants to come closer to their experience of MT rather than relying only on recollections. In this way, we hoped to gain access to more vivid and rich descriptions of their experience.

### ***Procedure***

The participants were interviewed in one data collection meeting consisting of two parts: In the first part, the participants were interviewed in an in-depth semi-structured interview (Kvale, 2008), exploring their experience of MT from NICU to home. In the second part, the participants listened to two recordings of their choice from their MT

**Table 1.** Participants.

Name	Length of hospitalization (days)	Baby's GA (Gestational age) at birth	Parenting history	Prior NICU experience	Total number of MT sessions (NICU + Home)
1 "Rita"	21	33(4)	Fourth time mother	yes	12 (6 + 6)
2 "Shoshana"	81	29(0)	First time mother	no	29 (23 + 6)
3 "William"	81	29(0)	First time father	no	6 (NICU)
4 "Marry"	113	26(2)	Second time mother	no	33 (27 + 6)
5 "Iris"	55	30	Second time mother	yes	19 (15 + 4)
6 "Martha"	42	31(1)	First time mother	no	18 (13 + 5)
7 "Gregory"	42	31(1)	First time father	no	2 (NICU)

sessions in an adapted IPR procedure (Elliott & Timulak, 2005; Rolvsjord, 2016) and dialogued with the interviewer on their recalled feelings and reflections on the segment and how they perceive their experience of MT after listening to the musical segments.

### *Selection of musical segments*

Before the data collection meeting, the first author indexed all musical events in the sessions according to their exact time and duration; participants; and main musical content (song, improvisation, vocalization, musical instruments if used). The researcher shared the indexed list with the participants in advance and asked them to choose their preferred two segments.

### *Data analysis*

Data analysis was performed based on IPA guidelines (Smith et al., 2009) and according to the following steps detailed in Figure 1: (1) Interviews, including IPR, were transcribed and read several times thoroughly. Some initial comments were written on important ideas of a whole case to maintain the individual voice of each participant; (2) each interview was analyzed in a detailed descriptive, linguistic and conceptual annotations process. In Table 2, we provide an example of raw data that we have coded through descriptive, linguistic and conceptual annotations; (3) emerging themes were identified within every single case; (4) a cross-case analysis was performed by searching for similarities and differences between cases, and superordinate themes were constructed capturing the lived experience of the entire group. To improve the study's trustworthiness, a distilled summary of each interview was sent to the corresponding participant after the third step of analysis to assemble their responses and further thoughts on the analysis (Tong et al., 2007). We followed the consolidated criteria for reporting qualitative research (COREQ, Tong et al., 2007) as well as reflected upon the EPICURE agenda (Stige et al., 2009) to enhance the credibility and validity of our findings.

### *Ethical considerations*

The main study, Longitudinal Study of Music Therapy's Effectiveness for Premature infants and their caregivers (LongSTEP, Ghetti et al., 2019), was approved by the Regional Committees for Medical and Health Research Ethics (2018/994/REK Nord, date of approval: 3 July 2018). The Institutional Review Board approved a protocol for

feasibility trials in Israel, approval no: 0172–18-MMC, date of approval: 15. This study was approved by the ethics committee for the Evaluation of Research with Human Subjects of the Faculty of Social Welfare & Health Sciences, University of Haifa, Israel, approval no: 076/20, date of approval: 5 December 2019.

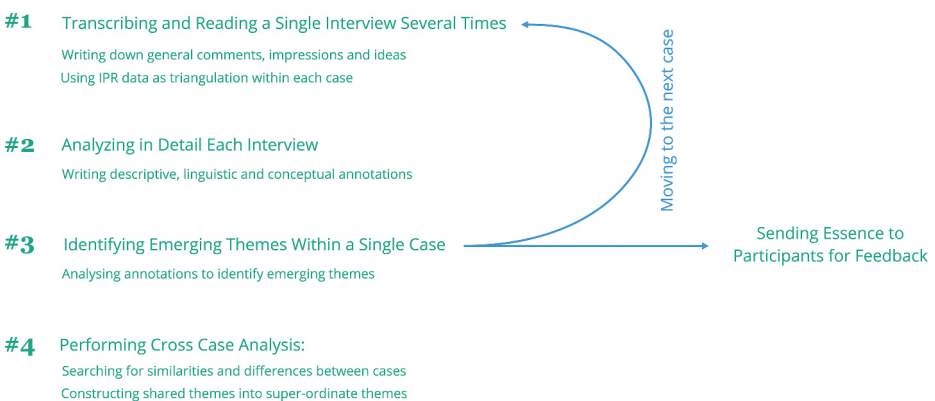
A second music therapist familiar with the LongSTEP trial but who had no clinical involvement with the families acted as a third party and performed the recruitment. Participants signed a consent form that included information on research goals, data collection methods, procedures and confidentiality. Participants were offered time to consider their participation before signing the consent form.

Participants were recruited after the completion of the main trial's intervention period to avoid influencing results in the main trial and to reduce likelihood of feeling coerced to participate. The main researcher and supervisors protected participants' anonymity throughout the study stages by using pseudonyms and by removing personal details that would reveal participants' identities. The possibility that the interview process, as well as listening to audio recordings from MT, may raise sensitive and painful emotions for the participants was taken under consideration and discussed by the researcher and supervisors. We planned to offer the participants an additional session to talk through sensitive reactions and a reference for further support according to participants' needs, however, no participant requested such a session.

### **Researcher reflexivity**

We will use the next section to situate the first author, who was the primary researcher, and discuss her preconceptions, therefore presented in first person<sup>1</sup>

While conducting this research, I had nine years of experience as a music therapist, working two years in the NICU at the Meir Medical Center in Kfar Saba, Israel. In my work and private life, I believe that music and singing, in



**Figure 1.** Four analysis steps according to IPA (Smith et al., 2009), adapted for this study.

<sup>1</sup>The second and fourth authors served as supervisors of the first author's doctoral research. The third author served as site co-investigator for the Israeli site in the main trial and provided critical interdisciplinary perspectives on the current findings. The fourth author led the development of the resource-oriented music therapy intervention used in the main trial.

**Table 2.** Example for second step of a case analysis including descriptive, linguistic and conceptual comments.

Text	Descriptive comments	Linguistic comments	Conceptual (interpretive) comments	Subthemes
<p>Shoshana: "In the beginning [of MT sessions in the NICU] it was a little embarrassing [laughs]. It was embarrassing. To sing when everyone hears, or to sing even without anyone hearing, was embarrassing at the very beginning. But quite fast, I think even very quickly, it became a natural thing. It was pleasant [to sing]. It was a pause, something that helped pass time even if... I don't know... most of the time it felt more for me than for them [her baby twins]. It wasn't totally... it's hard to say what effect it had on them, I mean I'm sure it had, but I think it was mainly through the effect it had on me as... as something that buffered a little bit, the less pleasant aspects of the NICU."</p>	<p>Shoshana explains how singing that was embarrassing at first, has become a natural behavior with her twins. Embarrassment was related to other people hearing her voice, as well as directly to singing. She describes how MT was an opportunity for her to pause and pass time in the NICU, and to ease unpleasant aspects of the NICU. She suggests that MT affected her twins indirectly, through her.</p>	<p>There are a lot of repetitions of the word "Embarrassment". Repetitions of words that address the speed of her process with singing: "quickly" and "fast" describe experience of MT and who it was mainly for, Shoshana pauses a lot and uses unsure tone of language: "I don't know" "It wasn't totally... it's hard to say" "I'm not sure" Treating difficult emotions gently or with cynicism. "less pleasant aspects of the NICU."</p>	<p>Explicit: Shoshana describes a change process through MT where she transitioned from feeling uncomfortable with singing, into becoming comfortable with singing to her babies. She explains how MT was an opportunity for her to cope with the NICU, and how she feels MT was mainly a supportive experience for her, that has passed to her twins through her. Implicit Repeating the word "embarrassment" and laughing when speaking about being embarrassed to sing suggests a tension between her apparent words that she is no longer embarrassed, and her actual experience which may suggest that Shoshana might still experiences some tension with singing, perhaps in other settings today, or that the interview is triggering her some emotions from the past. She emphasizes twice how fast her change process with singing has occurred. This might place it as a meaningful change for her. Shoshana is quite hesitant when speaking about who MT affected more. This suggests that she perceives MT as an experience for both her and her preterm infants. Her tone is more confident when saying that MT was first for her and then through her for her twins. Shoshana's careful and often cynical tone throughout the interview implies that she is speaking about sensitive experiences. It seems she is addressing sensitive or painful feelings with cynicism as a way of coping (e.g. careful choice of words "less pleasant" to describe the NICU may imply that it was a very difficult experience for her).</p>	<p>Reluctance to sing in the beginning of NICU hospitalization. Singing becomes natural over time. Music becomes integrated into parent-infant relationship with time. Existential dimensions in MT: MT offers a chance to pause NICU reality; MT helps pass time. Therapeutic dimension in MT: MT may provide support in difficult times. In MT, parents are offered an opportunity to disconnect themselves from painful reality and go through therapeutic process in order to build their relationship with their preterm infants.</p>



particular, are critical for infants' development, but I constantly wonder how it actually occurs. As a mother of two young infants, I am often occupied by the transition to parenthood and how it has influenced my personality and daily life. These personal experiences and pre-assumptions have shaped the way I conducted this study and influenced my understanding of the participants' accounts. For example, my belief that music has a unique role early in life drew my attention to similar notions while listening to the participants' interviews and reading their transcripts. Throughout the research process, I used a researcher's diary to reflect on these presumptions and understandings. These reflections were examined in dialogue with my supervisors in our regular meetings (second and fourth author) as part of a process of flexible bracketing (Gearing, 2004). To improve the trustworthiness of the analysis, the research supervisors participated in reading and discussing some of the transcripts and the steps of the analysis with the main researcher.

### ***Researcher dual role***

In this study, I had a dual role of being the music therapist of the participating families and the main researcher who conducted the interviews and analysis. Based on my epistemological stance, I see this dual role as an advantage in creating in-depth dialogues between the participants and the therapist–researcher. Our mutual insights exchanged in the interview constructed the knowledge offered in this article. However, I acknowledge that this dual role may have shaped the participants' responses during the interview to please me as their former therapist and may have reinforced unequal power relations by positioning me as a person of knowledge. To reduce this potential imbalance, participants were encouraged to reflect on uncomfortable experiences and things that did not work during the MT process.

### ***MT in the LongSTEP project***

The MT intervention in LongSTEP study was informed by several theories and child developmental care models such as family-centered care (Roué et al., 2017), resource-oriented MT (Rolvjord, 2010), mutual regulation model (Beeghly & Tronick, 2011) and communicative musicality (Malloch & Trevarthen, 2010) specified in the intervention protocol (Ghetti et al., 2019). The main elements of the intervention included dialoguing about both infant and parents' current needs; placing parental voice as central during the parent–infant interaction; incorporating family's musical culture into the session; and adjusting musical interactions to the infants' developmental and individual needs (Gaden et al., 2021). In the main trial, the intervention was delivered by music therapists trained in neonatal MT, and the study's intervention protocol in Argentina, Colombia, Israel, Norway and Poland following the essential guiding principles of the intervention. In this study, the first author was the music therapist of the families for at least one of the intervention periods (either during the NICU plus at home or post-discharge at home only). [Table 1](#) details the number of MT sessions received by each participant.

In the NICU, MT was offered three times a week for a duration of 30–45 minutes to allow parents significant amount of time to adjust, practise and repeat the musical interactions. Music was carried out by parents or the music therapist and tailored according to infants' tolerance to last between 15 and 30 minutes each session. For

young preterm infants (26–32 weeks GA) music was offered through careful use of vocal toning and singing, preferably without musical instruments. At this stage, music was tailored to support infants' sleep with a repetitive slow pattern or state of relative alertness with vocalizations entrained to infant's responses. For more mature preterm infants (32 weeks and onward), the intervention expanded into supporting early infant--parent communication during alert states and included more musical complexity and variation and cautious use of musical instruments (Gaden et al., 2021).

In the post-discharge phase of the intervention, MT was offered monthly (twice in the first month) in the family's homes for a one-hour session across six months. The intervention was tailored to each infant's developmental stage, with increased musical complexity and multisensory engagement as tolerated. Due to the long gap between sessions in the post-discharge phase, the first part of the meeting was dedicated to dialogue on infant and parents' needs in order to discuss musical applications to address these needs. Parents were encouraged to practise and repeat these applications between the meetings to create continuity and increase their comfort with using music daily (Gaden et al., 2021).

## Findings

Our analysis resulted in the construction of two super-ordinate themes: (a) MT as a therapeutic haven; and (b) MT enabling integration of music into relationship over time.

### *Music therapy as a therapeutic haven*

The participants described how engaging in MT that spanned from birth to home enabled them to pause their lives, create an alternative to their present circumstances, express themselves, process preterm birth and find resources. We understood the participants' descriptions to represent an experience of a therapeutic haven.<sup>2</sup> The notion of therapeutic haven illustrates MT as an experience of being protected against an unpleasant reality, while going through dynamic therapeutic processes. The participants' descriptions reflected two dimensions of therapeutic haven, represented in the subthemes: (a) Existential dimension of therapeutic haven; and (b) intra-personal dimension of therapeutic haven. [Figure 2](#) depicts the therapeutic haven with subthemes. We present subthemes with examples taken from participants' interviews.

### *Existential dimension of therapeutic haven*

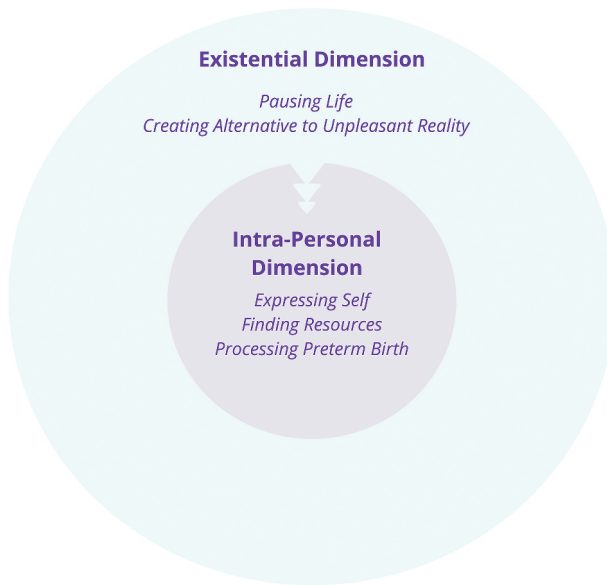
Participants described their experience of MT in relation to the space, time or the circumstances in which it took place. They related to MT as either offering them a chance to disconnect or pause their lives, or as an alternative to the reality they were experiencing. Shoshana<sup>3</sup> described how MT helped her to disconnect from unpleasant experiences of the NICU and step into a more positive experience:

MT in the NICU distracted me from the less pleasant aspects of the NICU. Through MT I have learnt that I can turn very scary things into natural and comfortable [experiences]. I always

---

<sup>2</sup>A safe haven is "a place, a situation, or an activity which provides people with an opportunity to escape from things that they find unpleasant or worrying" (Collins dictionary).

<sup>3</sup>All names are pseudonyms.



**Figure 2.** Therapeutic haven: Existential and intra-personal dimensions of experience in MT.

*Note:* In MT parents are offered an opportunity to create an alternative to unpleasant reality that enables them to engage in internal therapeutic processes.

loved music, but seeing the calming effect of music and how music created a safe place for me, a release and a disconnection from the NICU, was very special.

Shoshana's experience illustrates her active agency of being able to transform a very scary experience into a comfortable one through MT. Similarly, Rita was able to use MT post-discharge to create a pause in her life while being in her home:

The fact that I'm sitting with her [her baby] and kind of halting life . . . you [refers to herself] observe from the outside what you are doing and it's very important. I don't think I would voluntarily do so [initiate a pause].

### ***Intra-personal dimension of therapeutic haven***

The second dimension in the experiences of the participants was their intra-personal experiences within MT where they received opportunity to express themselves, process preterm birth and find resources in the NICU and at home. These intra-personal experiences form the therapeutic aspect in the conception of MT as a therapeutic haven.

### ***Expressing self***

The participants portrayed how MT supported them in expressing themselves and releasing emotions. Gregory described being able to express himself as a cleansing experience in the NICU: "Every time there was a song when I was there [refers to MT in the NICU], I would cry. I didn't care if anyone heard me, it was ok. I began crying . . . It felt as if . . . I was cleaning myself". MT offered Gregory means to feel, connect to his emotions and cry without worrying about his surroundings. He had the agency to use music to get what he needed – clean himself emotionally. His ability to utilize music for

his needs is an essential therapeutic aspect enabled through MT. Shoshana described how she felt when expressing herself during MT in the NICU and at home:

MT was an hour that was just for me and no one else. I could say what I want without being judged, sing how I want without being judged, choose songs [without being judged]. It was very liberating.

Shoshana's feelings of being secure and not judged in MT allowed her to express herself freely and experience liberation.

**Processing preterm birth.** This subtheme refers to the opportunity to process the experience of preterm birth and NICU hospitalization through MT. Martha described a moment of singing a Shabbat<sup>4</sup> song during MT in the NICU:

This song is something you say when you light the candles [in Shabbat]. During that week I was still hospitalized and, wow, it suddenly hit me, the meaning of it [the song]! You [refers to herself] suddenly realize that you are hospitalized because you gave birth.

Martha's words describe an experience of not being entirely aware of the totality of her situation. Singing her chosen song in MT enabled her to become aware of her recent hospitalization and giving birth. Some participants emphasized the ability to process preterm birth through continuing MT into their homes. Shoshana shared what supported her in processing her experience of hospitalization in the NICU:

The continuity [of MT] has a meaning. It could have ended at the time we were discharged from the NICU and then we would have left this whole period behind us and closed the door. But here there was room to continue to dialogue about these past experiences and watch the babies grow and what they are able to do today. It allowed us continuity and gradual parting. It makes more sense to process things this way.

Shoshana's words emphasize the affordance of continuity of care in MT, in allowing her to process what she had been through with her babies since their NICU hospitalization. Her words suggest that MT offered a bridge between the NICU experiences and life at home, that would otherwise remain disconnected. For Rita, processing preterm birth was ambivalent. Rita appreciated and enjoyed MT, however, among her emotional experiences in MT, she also experienced pain, due to the association of MT with NICU hospitalization: "I don't want this constant memory of her [her baby] being a preterm infant. Enough of it, I want to move on with my life, raise her and not be reminded constantly about her chronological age". Rita's experience brings to fore the possibility of experiencing pain by being reminded of the past, an important essence of experience in a continuous service that accompanies families from birth to home. However, her experience of pain was only a portion of the emotional experience, and expands the notion of "therapeutic haven" into a more complex experience where MT provided a means for letting difficult feelings arise and processing them constructively in a safe and supportive environment.

**Finding resources.** The participants portrayed how MT offered them an opportunity to gain resources in difficult times. In their descriptions they referred mainly to finding calmness and the feeling of being recharged through music. William described: "Music therapy in the NICU helped me mainly calm down, it helped me become more

---

<sup>4</sup>The holy day of the week celebrated by Jewish orthodox every Friday evening.

peaceful, sometimes even for a few minutes”. His words suggest that finding calmness in the NICU was often difficult. Rita explained how her singing transformed in MT to become a resource that was hidden inside of her: “Because I had it in me, I told you that I had always done it [sing], but I never understood the meaning of it, what it can do, and then, through MT [I did]”. Through MT Rita was able to realize the role of music in her life. Marry, who experienced the longest hospitalization with her baby daughter in the NICU, as well as a difficult transition to home, described MT’s potential of protecting her against psychological distress:

It wasn’t easy, it is such a difficult and long period and I really needed that [MT]. I don’t know if I could have gone through this [refers to hospitalization and post-discharge period] in such a . . . how to say. I didn’t come out of it with distress, I came out feeling as a whole.

Marry’s strong words suggest that she experienced meaningful support in MT, where she managed to cope with her painful reality and come out “feeling as a whole”.

### ***MT enabling integration of music into relationship over time***

We constructed the second super-ordinate theme by focusing on our participants’ accounts that addressed the dimension of time in their experiences. Participants described a process over time in which music and singing transitioned from being new and unfamiliar to being an integral part of their parenting and relationship. This process in MT is represented in two subthemes: (a) Parents increased their musical agency over time; and (b) infants were perceived as becoming musical partners over time. Table 3 summarizes the theme of integration of music into relationship over time with subthemes.

#### ***Parents increased their musical agency over time***

In the first subtheme, participants described their diverging experiences when being introduced to MT and singing to their infants in the NICU. They further portrayed how they experienced freedom in singing and using music with their babies post-discharge and how they have integrated music into their parenting over time, which we understood as an increase in their musical agency.

***Diverging experiences of willingness to sing.*** Participants shared their experience when first introduced to singing to their babies in MT in the NICU. Most of the participants described being embarrassed when first introduced to MT, as Iris described:

I was embarrassed to sing while there are people surrounding me [in the NICU], and I didn’t know the music therapist at that time. So for me it was not like sitting with a friend that we can sing and laugh together. It embarrasses me, I’m very shy. So, I preferred she [the music therapist] would sing.

Iris’s words “it’s not like sitting with a friend” emphasize her need to feel intimate in the NICU environment and perhaps with the music therapist as well in order to avoid feeling embarrassed to sing to her baby during those days. Martha experienced a change in her relationship with singing during MT in the NICU: “In the beginning I didn’t want to sing, because I’m not a, you may say my voice is not too great, but later on I joined in [singing]”. Martha’s words reflect her insecurity about her voice and a perception that she needs to have a beautiful voice in order to sing. When asked what

**Table 3.** MT enabling integration of music into relationship over time.

Subtheme	NICU early days	NICU later days	Post-discharge early days	Post-discharge~6 months
Parents increased their musical agency over time	Diverging experiences of willingness to sing: Most parents express reluctance to sing	Willingness to sing: Reluctance to sing less prominent	Experiencing freedom in singing at home	Parents integrate music into their parenting and use music spontaneously with their babies
Infants were perceived to become musical partners over time	Being uncertain about infants' responses	Emerging feelings of closeness	Noticing baby's clear reactions to music	Infant active and encouraging parental musicking

supported her to join in later and sing to her babies in the NICU, Martha answered: “Being there, being listened to, that someone listened to my voice”. Her answer suggests that the therapeutic relationship with the music therapist was a potential means to open her to being musical with her babies. She also proposes that sounding her own symbolic voice (her feelings and thoughts) to someone who listened, enabled her to vocalize with her preterm infants.

Marry had a previous background with singing, which had shaped her experience of MT: “I love music, I sang to my baby from the first day [in the NICU]. And when you approached me [to recruit for the study] I didn’t even think twice and said ‘yes!’”. For Marry, singing to her baby was something she loved to do and did naturally outside of MT. Iris, Martha and Marry’s experiences express the potential influence of divergent musical and personal backgrounds on the engagement of parents in musical dialogues during MT.

*Experiencing freedom in singing at home.* All of the participants spoke about a meaningful change they experienced in their freedom with singing after returning home. As the NICU at Meir Medical Center is an open bay unit, it is reasonable to assume that their experience of lack of intimacy in the NICU was partially related to the unit structure, as reflected in Iris’s words: “Here at home I sing freely to her. There is intimacy. The entire atmosphere [is different]. It makes the difference if you [refers to herself during MT] are there [in the NICU] or here”. Rita too described how her singing occurred independently and spontaneously after returning home:

In the NICU I wouldn’t sing to her because I was more embarrassed, only when you [the music therapist – [S.E.] would come [to the MT session], I would sing to her. At home I would sing to her during bath, diaper change or when she had Colic.

*Increasing musical agency.* The participants provided examples of how they have become independent agents of music with their babies, choosing when and how to sing or play music at home. Rita explained how MT provided her tools to cope with difficult moments with her baby post-discharge:

MT gave me tools. I once told you that I would sing before [being introduced to MT], but the fact that it brought to my attention that I can use music to achieve certain goals, such as work on our relationship and calm her down with it, or when I’m stressed I can calm both of us down. All these tools have really helped us.

Rita’s words demonstrate her musical agency in her ability to use music in her relationship with her baby daughter. After her IPR (listening to recordings as a part of Interpersonal Process Recall procedure), Shoshanna concluded how MT reminded her that music is a resource within her life that she can use when managing difficulties:

Listening to the recording has clarified for me that music has a special place in my life, and . . . it reminded me of the power it has, especially in difficult times. It reminded me to use it [music], take music with me to those places, and never forget to do so.

### *Infants were perceived as becoming musical partners over time*

Participants described the emergence of feelings of closeness toward their babies during MT in the NICU along with recognizing early signs of responses from their young infants. They have further portrayed how they were able to notice their babies’

responses while singing to them at home and how with time they experienced their babies as active musical partners they could share joy and enjoyment with.

*Emerging feelings of closeness in MT in the NICU.* During the early days in the NICU, the participants described the emergence of their connection to their babies when they were initiating musical contact during MT. They described being uncertain about their preterm infants' responses. Marry described the transition from not feeling a connection to her baby, into the emergent feelings of closeness toward her baby while singing during MT in the NICU:

During the first days I was not very connected to her. She was so small and not . . . there was no option [to hold her], but as we began doing Kangaroo [care] and sing, it . . . It really brought me closer and connected me to her.

Rita who has had previous preterm deliveries, described how participating in MT changed her experience of bonding with her new baby compared to her previous experiences:

MT is obviously connecting. It connected me to her and contributed to our relationship a lot. I think I once told you that it usually takes me time to bond [refers to relationship with her older children that were born premature], and the NICU experience only distances the baby from me, but this time I felt that this [MT] has helped me bond with her, it built our relationship more thoroughly.

Rita perceived that while the NICU distanced her from her baby, MT offered her a bridge to bond with her.

*Noticing baby's reactions to music after returning home.* After returning home, participants described being able to notice more clearly their infants' responses. Martha explained how she was more easily able to notice her twins' reactions to MT at home:

In the NICU they are not . . . they sleep but they are not [present] . . . They are there. But here [at home] they are awake, they are listening, smiling, it's completely different. The fact that they are awake, listening to the music and being able to enjoy it, for me it was quality time with them.

Martha emphasized the importance of her babies' reactions to her in motivating her enjoyment while singing to them. She implied that in the NICU she wasn't sure whether the babies were actually present, a fragile experience shared by other participants as well. Shoshana expressed how her babies' reactions shaped her musical selections during MT in the NICU and at home:

In the NICU we [her husband William and her] would only sing 'grown-up' songs, however at home we would sing only children's songs. I think it represents our parenthood, maybe . . . cause in the NICU you are not really a parent.

At home it was natural for Shoshana to choose children's songs that would suit her babies, while in the NICU they were not entirely perceived as her children yet, and therefore were not a priority while selecting musical repertoire.

*Infant encouraging parental musicking.* Participants described how they continued to sing or play music with their babies post intervention. In their descriptions, they



attributed their musical choices to their babies' needs and expectations. They perceived their babies as partners in the music who ask them through their responses and communication signals to sing for them. Iris described her baby's love of her singing as unique compared to her older son:

It's unbelievable, I can really notice how she loves it when I sing to her. He [her older son] wasn't like that. Maybe it has to do with [MT], I'm not sure, but she really loves it, it really calms her down. It's quite out of the ordinary in my opinion.

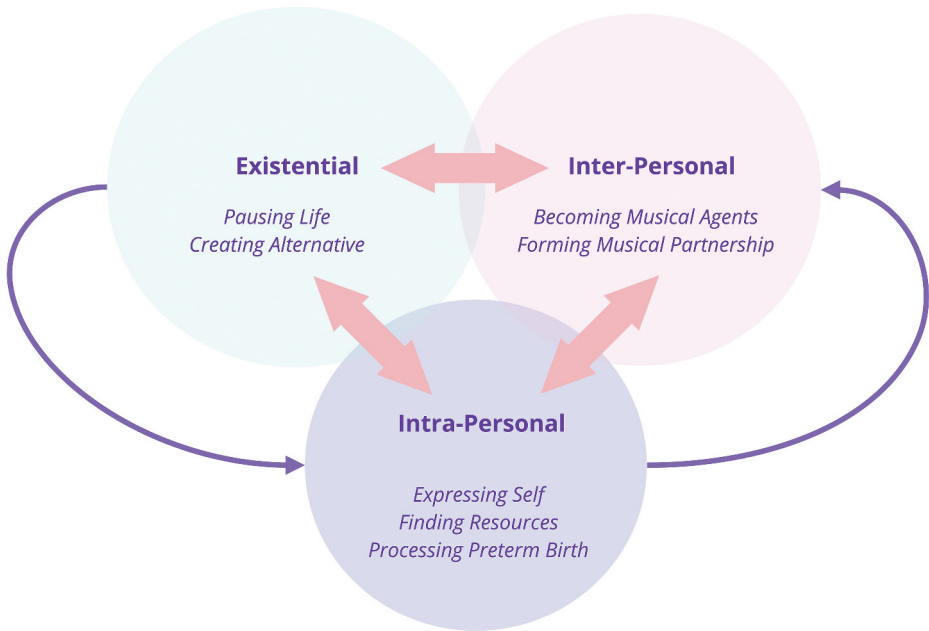
Iris's older son was a preterm infant too. At the time of his birth they did not experience MT. In her interview, she illustrated a difference between her children's responses to singing and music, which she suspects is due to participating in MT from NICU to home with one of them and not the other. Marry expressed the centrality of her baby daughter's reaction to her voice as motivating her to sing to her: "I sing for her, I never play [recorded music]. It's only my voice, she loves it and I do whatever she loves [laughs]!" Marry's laughter implies that through answering her daughter's wish to sing for her, they experienced mutual enjoyment.

## Discussion

Our participants offer unique insight into the experiences of Israeli parents who engage in MT from NICU through the first six months after returning home. Such extended engagement in MT may be an uncommon phenomenon in clinical practise and research has primarily been conducted within the US with preterm families in the NICU or in follow-up developmental groups, rather than as a continuous service. Our findings suggest that MT can be experienced as a therapeutic haven for parents, and that it enables integration of music into the parent-infant relationship over time. Bringing together our two super-ordinate themes, we illustrate MT as a three-dimensional experience combining existential, intra-personal and inter-personal dimensions that may support parent-infant relationship building. By being protected against an unpleasant reality and going through dynamic therapeutic processes in MT, and by engaging in musical interactions with their preterm infants from hospital to home, parents' and preterm infants' musical relationships may be enhanced. [Figure 3](#) summarizes parents' process in MT spanning from birth to home with a constant movement between three dimensions of experience.

Musical partnerships are vital in the early lives of parents and their children. Music is considered a primary language that allows coordinated companionship and intimacy to arise and serves as the basis for all types of verbal conversations (Malloch & Trevarthen, 2010; Malloch, 1999). Active music making is linked to emotional and social competence (Saarikallio & Baltazar, 2018) and studies on parent-infant synchronicity offer a potential mechanism to explain the positive impact of musical interactions on parents and their babies' bonds (Bieleninik et al., 2021; Feldman, 2007). Hospitalization and health concerns of both preterm infants and their parents may challenge parents in expressing natural behaviors such as singing to their infants (Fancourt & Perkins, 2018; Trehub et al., 2015). It is therefore important to discuss ways to enhance families' capacities to nurture their musical relationships under these unique conditions.

Previous studies on parental experiences of MT in the NICU describe how parents become intimate and communicative with their babies through singing and engaging



**Figure 3.** Parents' process in MT spanning from birth to home.

*Note:* Parents constantly move between the three dimensions during MT. Over time MT supports their relationship building with their preterm infants.

in musical interactions (Ettenberger et al., 2017; Ghetti et al., 2021; McLean et al., 2019). McLean and colleagues and (2019) explored the influence of time on parental experience and musical engagement with their preterm infants during different stages in their NICU hospitalization in Australia. Similar to our findings, they describe parents' hesitation to sing in early stages of the NICU, and parents' growing confidence in finding their voice over time in the NICU. Moreover, they describe a transition between intrapersonal interactions during early MT sessions in the NICU, and interpersonal interactions at later stages of hospitalization when preterm infants' responsiveness increases (McLean et al., 2019). Our findings describe a similar transition over time and offer a perspective on parental experiences that extend beyond the NICU period. We illustrate how participants' musical agency develops as they participate in MT across time, and their perception of their preterm infants' role in music-making changes from passive receivers to active participants, enhancing their musical relationship. In the following section we elaborate on musical agency as a framework to discuss our participants' process in MT with their preterm infants.

### ***Music therapy's potential to increase musical agency for preterm families***

Having agency means being able to control, make choices and direct one's actions, roles and intentions in different life scenes (Pacherie, 2007). Musical agency is the capacity to be aware of one's musical resources, to utilize them within the surroundings and to become an active partner in music (Karlsen, 2011; Ruud, 2020). Musical agency is discussed in some fields as a musical capacity, such as to perform music or play an

instrument (Karlsen, 2011), however, in the field of sociology, musical agency is commonly understood as the use of music for non-musical affordances, such as emotional, physical and social affordances (Batt-Rawden & DeNora, 2005; DeNora, 2000; Ruud, 2020). Throughout our findings, the participants have provided examples of their agency to utilize music during MT and outside of it for individual and social (parental) needs (Karlsen, 2011). In the superordinate theme of therapeutic haven, we understood the participants' musical agency as directed toward individual affordances, such as seen in William's ability to calm down even for a few minutes in the NICU, Gregory's ability to use music to release emotions, and Marry's description of "coming out as a whole" from her challenging NICU experience. In the superordinate theme of integrating MT into the parent-infant relationship, the participants' musical agency was directed toward their relationship affordances such as communication and coregulation, as shown in Rita's description of her use of music in difficult moments with her baby and Marry's enjoyment of singing to her daughter.

Music has transformational power and agency of its own, however without active engagement of agents, such transformation is not possible (DeNora, 2000; Ruud, 2020). By using agency as a framework we emphasize our participants' active role in MT, rather than discussing MT's effect on them (Solli & Rolvsjord, 2014). Although quantitative findings from the main trial suggest no impact of LongSTEP's MT approach on mother-infant bonding at discharge from NICU (Gaden et al., 2022), the participants of our study provide various descriptions of how MT afforded them relation and bonding with their preterm infants. The qualitative findings of this study help capture individuality and nuance in the parents' experiences of music therapy that were not possible to capture with the standardized, quantitative outcomes of the main trial. Following our participants' experiences, we suggest agency as a way to explain what MT affords some preterm families. In agreement with Ruud's (2020) definition of MT as a "way to give new possibilities to increase our agency through music" (pp. 113), we propose that MT provides a means for the participating parents' (and perhaps infants') musical agency to develop, inspiring other forms of agency such as their personal and parental agency.

In our previous study on parents' experiences of MT post-discharge with their preterm infants in the LongSTEP trial, we illustrated musical agency as the potential peak point for parents' transformation in MT, a potential manifested only for some parents under specific conditions (Epstein et al., 2022). In this study, agency was dominant throughout all of the participants' reports. Although the two studies explore experiences of two very small groups of Israeli participants of the main trial, the difference between findings may increase understanding about the phenomenon of MT in the NICU and post-discharge. Participants in the two studies experienced different duration and frequency of MT (post-discharge vs. NICU plus post-discharge), which may have contributed to variations in their lived experiences of MT. This study's participants had longer time to form their therapeutic bond with the music therapist and had more opportunities to experience and engage in musical interactions with their preterm infants. In addition, this study's participants experienced MT in two different life periods and locations – while being hospitalized and after being discharged, in their homes. Combining facility and home-based components leads to better outcomes for preterm infants and parents (Puthussery et al., 2018). It is possible that differences in the timing and scope of MT that these two groups experienced were essential in shaping the clearer sense of agency present in this

study participants' reports. This discrepancy may be important to consider when planning future MT interventions for preterm families. We also acknowledge that the previous study has shaped our preunderstandings while conducting this study, and may have led to noticing more representations of agency in the participants' reports.

### Critical reflections

Our findings should be understood as representing a small group of Israeli parents who received a specific MT intervention. We are only partially able to situate our qualitative findings in light of the quantitative findings from the main trial, as only data from preliminary time points in the longitudinal trial have been published (Gaden et al., 2022).

The participants' increased use of music at home may be a natural response to returning to their private environment, rather than a result of MT sessions provided at home. However, our findings highlight that MT that continues post-discharge offers parents a unique opportunity to appreciate and experience their infants' development and increased responsiveness to music over time, and with the music therapist, in the home environment.

One participant described experiencing pain from MT by being constantly reminded of her past in the NICU, clearly illustrating individual differences between participants in their reaction to MT that spanned from the NICU into their homes. Similar to other psychotherapeutic processes, we understand experiencing painful feelings during MT as not necessarily harmful, but rather an integral part of growth and personal development. However, we hope that highlighting this specific experience in our research may increase therapists' awareness of and sensitivity to individual differences in parents. Being aware that parents might experience painful feelings during post-discharge MT may help therapists ensure that they do not unknowingly contribute to harm.

We acknowledge that by offering the participants a chance to select their preferred musical segments as part of the IPR (interpersonal process recall) procedure, we may have encouraged their choice of more positive memories from MT. However, in doing so we were prioritizing their preferences, rather than imposing recollections driven by our understandings. We tried to balance the potential for positive memories being triggered by the IPR segments with questions that invited participants to reflect upon aspects of MT that were challenging or unexpected.

Four of the interviews were single interviews and one was dyadic interview, interviewing a couple. While we aimed to maintain individual voices during this interview, we acknowledge that the dynamics between the individuals within the couple may have shaped their answers during the interview. One interview was conducted in writing, limiting its potential for exchange of ideas between the interviewer and interviewee as we aimed for in our in-depth exploration.

Existing research demonstrates that parents' emotional stress caused by preterm birth and hospitalization is associated with parental depression, anxiety and post-traumatic stress (Pace et al., 2016; Trumello et al., 2018). The parents in our study described experiencing difficulties and stress due to preterm birth and hospitalization, experiences that we integrated within our first theme of MT being a therapeutic haven that has the potential to buffer participants from stressful aspects of their reality. However, our findings neither support nor counter the possibility that MT provides

a means for preventing traumatic stress in parents of premature infants (Gooding & Trainor, 2018; Haslbeck & Bassler, 2020). In this study, we did not specifically aim to explore experiences of traumatization but we recommend that future research consider the contextual factors underlying the relationships among MT, parental agency and trauma prevention.

## Conclusion

This study explored an understudied phenomenon of MT that spans from birth and NICU hospitalization to services at home through the experiences of a group of Israeli parents. The findings illustrate the potential of MT to support parent-infant relationship building and enhance parental musical agency for this particular group of participants. Based on our interpretations of our participants' experiences, we suggest that MT consisted of a three-dimensional process involving existential, interpersonal, and intrapersonal aspects. We understand MT as potentially providing participants a means of experiencing musical agency that may in turn increase their sense of self and parental agency. This study may be used to inform MT interventions to support preterm infants and their parents' relationship-building from hospitalization to home. We recommend future research to explore individuals' experiences of MT from other cultures to create a deeper understanding of this phenomenon and discuss music therapists' role in supporting parental as well as infants' agency in MT.

## Disclosure statement

Claire Ghetti is Associate editor of the Nordic Journal of Music Therapy. To avoid conflict of interest, Ghetti was fully masked to the editorial process including peer review and editorial decisions and had no access to records of this manuscript. No other potential conflict of interest was reported by the authors.

## Funding

This research received funding from the PhD Excellence Scholarship for 2019-2023 academic years of the Graduate Studies Authority at Haifa University, Israel.

## Notes on contributors

*Shulamit Epstein* is a music therapist and a PhD candidate at the University of Haifa. She practices Neonatal music therapy and is a research assistant at the Meir medical center in Israel. Shulamit also works as a clinical practice supervisor for music therapists and music therapy MA students at the University of Haifa. In the last 10 years, she has specialized in working with autistic children and their families. She has published articles on music therapy with preterm infants and children on the autistic spectrum with international collaborations.

*Shmuel Arnon* is a Doctor of Medicine, head of the well-baby unit at Meir Medical Center, Kfar-Saba, Israel. He is an associate professor in the Faculty of Medicine at Tel-Aviv University and the secretary of the Israeli Neonatal Society. His main research interests are music therapy for preterm infants and postnatal morbidity of the very low birthweight infants.

*Claire Ghetti* is a Professor of Music Therapy at the Grieg Academy Music Therapy Research Centre (GAMUT), The Grieg Academy -- Department of Music, University of Bergen. Claire's research centers on how music and the relationships that are enabled through musicking serve as resources for health in intensive medical contexts. She has been a principal investigator of the multinational

randomized controlled trial LongSTEP evaluating the impact of music therapy on parent-infant bonding in the context of prematurity (Research Council of Norway, RCN 273534). Claire has published research and theoretical work in the area of music therapy as a resource for parents of premature infants, music therapy as procedural support for invasive medical procedures, and music therapy for children, youth and their families in intensive medical contexts.

**Cochavit Elefant** (Ph.D.) is a Music Therapist and Head of graduate training course in music therapy at the School for Creative Arts Therapies, University of Haifa, Israel and a researcher at the Emily Sagol Research Center. Previously worked as Associate Professor at the University of Bergen, Norway. She received her PhD in Music Therapy from Aalborg University. She has an extensive clinical experience with children, Autism and developmental disabilities. Her research areas include music therapy and communication in children with developmental disabilities, autism, mental health, neurological disorders, neonatal and Community Music therapy. She has published many articles and co-authored a book titled 'Where Music Helps. Community Music Therapy in Action and Reflection' and co-edited a book in Music Therapy research in Hebrew.

## ORCID

Claire Ghetti  <http://orcid.org/0000-0002-3892-4706>

## References

- Alvesson, M., & Skoldberg, K. (2009). *Reflexive methodology: New vistas for qualitative research* (2nd ed.). Sage.
- Arnon, S., Diamant, C., Bauer, S., Regev, R., Sirota, G., & Litmanovitz, I. (2014). Maternal singing during kangaroo care led to autonomic stability in preterm infants and reduced maternal anxiety. *Acta Paediatrica, International Journal of Paediatrics*, 103(10), 1039–1044. <https://doi.org/10.1111/apa.12744>
- Batt-Rawden, K., & DeNora, T. (2005). Music and informal learning in everyday life. *Music Education Research*, 7(3), 289–304. <https://doi.org/10.1080/14613800500324507>
- Beeghly, M., & Tronick, E. (2011). Early resilience in the context of parent-infant relationships: A social developmental perspective. *Current Problems in Pediatric and Adolescent Health Care*, 41(7), 197–201. <https://doi.org/10.1016/j.cppeds.2011.02.005>
- Bieleninik, Ł., Etenberger, M., Epstein, S., Elefant, C., & Arnon, S. (2021). Potential psychological and biological mechanisms underlying the effectiveness of neonatal music therapy during kangaroo mother care for preterm infants and their parents. *International Journal of Environmental Research and Public Health*, 18(16). <https://doi.org/10.3390/ijerph18168557>
- Bieleninik, Ł., Ghetti, C., & Gold, C. (2016). Music therapy for preterm infants and their parents: A meta-analysis. *Pediatrics*, 138(3). <https://doi.org/10.1542/peds.2016-0971>
- DeNora, T. (2000). *Music in everyday life*. Cambridge University Press.
- Denzin, N. K., & Lincoln, Y. S. (2017). *The Sage handbook of qualitative research* (5th ed.). Sage.
- Elliott, R. (1983). Fitting process research to the practicing psychotherapist. *Psychotherapy*, 20(1), 47–55. <https://doi.org/10.1037/h0088478>
- Elliott, R., & Timulak, L. (2005). Descriptive and interpretive approaches to qualitative research. In J. Miles & P. Gilbert (Eds.), *A handbook of research methods for clinical and health psychology* (pp. 147–160). Oxford University Press. <https://doi.org/10.1093/med:psych/9780198527565.001.0001>
- Epstein, S., Elefant, C., & Ghetti, C. (2022). Israeli parents' lived experiences of music therapy with their preterm infants post-hospitalization. *Journal of Music Therapy*, 59(3), 239–268. <https://doi.org/10.1093/jmt/thac006>
- Etenberger, M., Rojas Cárdenas, C., Parker, M., & Odell-Miller, H. (2017). Family-centred music therapy with preterm infants and their parents in the Neonatal Intensive Care Unit (NICU) in Colombia—A mixed-methods study. *Nordic Journal of Music Therapy*, 26(3), 207–234. <https://doi.org/10.1080/08098131.2016.1205650>
- Fancourt, D., & Perkins, R. (2018). The effects of mother–infant singing on emotional closeness, affect, anxiety, and stress hormones. *Music & Science*, 1, 1–10. <https://doi.org/10.1177/2059204317745746>

- Feldman, R. (2007). Parent-infant synchrony and the construction of shared timing; physiological precursors, developmental outcomes, and risk conditions. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 48(3–4), 329–354. <https://doi.org/10.1111/j.1469-7610.2006.01701.x>
- Finlay, L. (2002). “Outing” the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12(4), 531–545. <https://doi.org/10.1177/104973202129120052>
- Gaden, T., Ghetti, C., Kvestad, I., Bieleninik, Ł., Stordal, A. S., Assmus, J., Arnon, S., Elefant, C., Epstein, S., Ettenberger, M., & Lichtensztejn, M. (2022). *Short-term music therapy for families with preterm infants : A randomized trial*. 149(2). <https://doi.org/10.1542/peds.2021-052797>
- Gaden, T., Ghetti, C., Kvestad, I., & Gold, C. (2021). The LongSTEP approach: Theoretical framework and intervention protocol for using parent-driven infant-directed singing as resource-oriented music therapy. *Nordic Journal of Music Therapy*, 00(00), 1–26. <https://doi.org/10.1080/08098131.2021.1921014>
- Gearing, R. E. (2004). Bracketing in research: A typology. *Qualitative Health Research*, 14(10), 1429–1452. <https://doi.org/10.1177/1049732304270394>
- Ghetti, C., Bieleninik, Ł., Hysing, M., Kvestad, I., Assmus, J., Romeo, R., Ettenberger, M., Arnon, S., Vederhus, B. J., Söderström Gaden, T., & Gold, C. (2019). Longitudinal study of music therapy’s effectiveness for premature infants and their caregivers (LongSTEP): Protocol for an international randomised trial. *BMJ Open*, 9(8), 1–16. <https://doi.org/10.1136/bmjopen-2018-025062>
- Ghetti, C., Vederhus, B. J., Söderström Gaden, T., Brenner, A. K., Bieleninik, Ł., Kvestad, I., Assmus, J., & Gold, C. (2021). Longitudinal study of music therapy’s effectiveness for premature infants and their caregivers (LongSTEP): Feasibility study with a Norwegian Cohort. *Journal of Music Therapy*, 58(2), 201–240. <https://doi.org/10.1093/jmt/thaa023>
- Gooding, L. F., & Trainor, B. (2018). Working with parents in the neonatal intensive care unit: An analysis of music therapy practice in the United States of America. *The Arts in Psychotherapy*, 59, 1–6. <https://doi.org/10.1016/j.aip.2017.12.005>
- Hamm, E. L., Chorna, O. D., Flanery, A., & Maitre, N. L. (2017). A parent–infant music therapy intervention to improve neurodevelopment after neonatal intensive care. *Acta Paediatrica, International Journal of Paediatrics*, 106(10), 1703–1704. <https://doi.org/10.1111/apa.13952>
- Haslbeck, F. B. (2012). Music therapy for premature infants and their parents: An integrative review. *Nordic Journal of Music Therapy*, 21(3), 203–226. <https://doi.org/10.1080/08098131.2011.648653>
- Haslbeck, F. B., & Bassler, D. (2020). Clinical practice protocol of creative music therapy for preterm infants and their parents in the neonatal intensive care unit. *Journal of Visualized Experiments*, 2020(155), 1–10. <https://doi.org/10.3791/60412>
- Haslbeck, F. B., Jakab, A., Held, U., Bassler, D., Bucher, H. U., & Hagmann, C. (2020). Creative music therapy to promote brain function and brain structure in preterm infants: A randomized controlled pilot study. *NeuroImage: Clinical*, 25(December 2019), 102171. <https://doi.org/10.1016/j.nicl.2020.102171>
- Haslbeck, F. B., Schmidli, L., Bucher, H. U., & Bassler, D. (2021). Music is life—follow-up qualitative study on parental experiences of creative music therapy in the neonatal period. *International Journal of Environmental Research and Public Health*, 18(12). <https://doi.org/10.3390/ijerph18126678>
- Karlsen, S. (2011). Using musical agency as a lens: Researching music education from the angle of experience. *Research Studies in Music Education*, 33(2), 107–121. <https://doi.org/10.1177/1321103X11422005>
- Kvale, S. (2008). *Doing interviews*. Sage.
- Larsen, D., Flesaker, K., & Stege, R. (2008). Qualitative interviewing using interpersonal process recall: Investigating internal experiences during professional-client conversations. *International Journal of Qualitative Methods*, 7(1), 18–37. <https://doi.org/10.1177/160940690800700102>
- Leadsom, A., Field, F., Burstow, P., & Lucas, C. (2013). *The 1001 critical days: The importance of the conception to age two period. A Cross-Party Manifesto*. [https://parentinfantfoundation.org.uk/wp-content/uploads/2019/09/1001-days\\_oct16\\_1st.pdf](https://parentinfantfoundation.org.uk/wp-content/uploads/2019/09/1001-days_oct16_1st.pdf)
- Loewy, J. (2015). NICU music therapy: Song of kin as critical lullaby in research and practice. *Annals of the New York Academy of Sciences*, 1337(1), 178–185. <https://doi.org/10.1111/nyas.12648>
- Loewy, J., Stewart, K., Dassler, A. M., Telsey, A., & Homel, P. (2013). The effects of music therapy on vital signs, feeding, and sleep in premature infants. *Pediatrics*, 131(5), 902–918. <https://doi.org/10.1542/peds.2012-1367>

- Malloch, S. (1999). Mothers and infants and communicative musicality. *Musicae Scientiae*, 3(1\_suppl), 29–57. <https://doi.org/10.1177/10298649000030s104>
- Malloch, S., & Trevarthen, C. (2010). Musicality: Communicating the vitality and interests of life. In S. Malloch & C. Trevarthen (Eds.), *Communicative musicality: Exploring the basis of human companionship* (pp. 1–11). Oxford University Press.
- McLean, E. (2016a). Exploring parents' experiences and perceptions of singing and using their voice with their baby in a neonatal unit: An interpretive phenomenological analysis. *Qualitative Inquiries in Music Therapy*, 11, 1–42. <http://search.proquest.com/docview/1956037971/?pq-origsite=primo>
- McLean, E. (2016b). Fostering intimacy through musical beginnings: Exploring the application of communicative musicality through the musical experience of parents in a neonatal intensive care unit. *Voices: A World Forum for Music Therapy*, 16(2). <https://doi.org/10.15845/voices.v16i2.874>
- McLean, E., McFerran, K. S., & Thompson, G. A. (2019). Parents' musical engagement with their baby in the neonatal unit to support emerging parental identity: A grounded theory study. *Journal of Neonatal Nursing*, 25(2), 78–85. <https://doi.org/10.1016/j.jnn.2018.09.005>
- Pace, C. C., Spittle, A. J., Molesworth, C. M. L., Lee, K. J., Northam, E. A., Cheong, J. L. Y., Davis, P. G., Doyle, L. W., Treyvaud, K., & Anderson, P. J. (2016). Evolution of depression and anxiety symptoms in parents of very preterm infants during the newborn period. *JAMA Pediatrics*, 170(9), 863–870. <https://doi.org/10.1001/jamapediatrics.2016.0810>
- Pacherie, E. (2007). The sense of control and the sense of agency. *Psyche*, 13(1), 1–30.
- Puthussery, S., Chutiyami, M., Tseng, P. C., Kilby, L., & Kapadia, J. (2018). Effectiveness of early intervention programs for parents of preterm infants: A meta-review of systematic reviews. *BMC Pediatrics*, 18(1), 1–18. <https://doi.org/10.1186/s12887-018-1205-9>
- Rennie, D. L. (2000). Aspects of the client's conscious control of the psychotherapeutic process. *Journal of Psychotherapy Integration*, 10(2), 151–167. <https://doi.org/10.1023/A:1009496116174>
- Rolvsvjord, R. (2010). *Resource-oriented music therapy in mental health care*. Barcelona Publishers.
- Rolvsvjord, R. (2016). Five episodes of clients' contributions to the therapeutic relationship: A qualitative study in adult mental health care. *Nordic Journal of Music Therapy*, 25(2), 159–184. <https://doi.org/10.1080/08098131.2015.1010562>
- Roué, J. M., Kuhn, P., Lopez Maestro, M., Maastrup, R. A., Mitanchez, D., Westrup, B., & Sizun, J. (2017). Eight principles for patient-centred and family-centred care for newborns in the neonatal intensive care unit. *Archives of Disease in Childhood, Fetal and Neonatal Edition*, 102(4), F364–368. <https://doi.org/10.1136/archdischild-2016-312180>
- Ruud, E. (2020). *Toward a sociology of music therapy: Musicking as a cultural immunogen*. Barcelona Publishers.
- Saarikallio, S., & Baltazar, M. (2018). Music as a forum for social-emotional health. In L. O. Bonde & T. Theorell (Eds.), *Music and public health: A Nordic perspective* (pp. 101–113). Springer.
- Saigal, S., & Doyle, L. W. (2008). An overview of mortality and sequelae of preterm birth from infancy to adulthood. *The Lancet*, 371(9608), 261–269. [https://doi.org/10.1016/S0140-6736\(08\)60136-1](https://doi.org/10.1016/S0140-6736(08)60136-1)
- Shoemark, H. (2018). Time together: A feasible program to promote parent-infant interaction in the NICU. *Music Therapy Perspectives*, 36(1), 6–16. <https://doi.org/10.1093/mtp/mix004>
- Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis: Theory, methods, & research*. Sage.
- Smith, J., & Osborn, M. (2008). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 53–80). Sage.
- Solli, H. P., & Rolvsjord, R. (2014). “The opposite of treatment”: A qualitative study of how patients diagnosed with psychosis experience music therapy. *Nordic Journal of Music Therapy*, 24(1), 67–92. <https://doi.org/10.1080/08098131.2014.890639>
- Standley, J. (2012). Music therapy research in the NICU: An updated meta-analysis. *Neonatal Network*, 31(5), 311–316. <https://doi.org/10.1891/0730-0832.31.5.311>
- Standley, J., & Gutierrez, C. (2020). Benefits of a comprehensive evidence-based NICU-MT program: Family-therapy for premature infants. *Pediatric Nursing*, 46(1), 40–46.
- Standley, J., Walworth, D., & Nguyen, J. (2009). Effect of parent/child group music activities on toddler development: A pilot study. *Music Therapy Perspectives*, 27(1), 11–15. <https://doi.org/10.1093/mtp/27.1.11>
- Stige, B., Malterud, K., & Midtgarden, T. (2009). Toward an agenda for evaluation of qualitative research. *Qualitative Health Research*, 19(10), 1504–1516. <https://doi.org/10.1177/1049732309348501>



- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, 19(6), 349–357. <https://doi.org/10.1093/intqhc/mzm042>
- Trehub, S. E., Becker, J., & Morley, I. (2015). Cross-cultural perspectives on music and musicality. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 370(1664), 1–9. <https://doi.org/10.1098/rstb.2014.0096>
- Trumello, C., Candelori, C., Cofini, M., Cimino, S., Cerniglia, L., Paciello, M., & Babore, A. (2018). Mothers' depression, anxiety, and mental representations after preterm birth: A study during the infant's hospitalization in a neonatal intensive care unit. *Frontiers in Public Health*, 6(DEC), 1–9. <https://doi.org/10.3389/fpubh.2018.00359>
- Walworth, D. D. (2009). Effects of developmental music groups for parents and premature or typical infants under two years on parental responsiveness and infant social development. *Journal of Music Therapy*, 46(1), 32–52. <https://doi.org/10.1093/jmt/46.1.32>
- Yue, W., Han, X., Luo, J., Zeng, Z., & Yang, M. (2021). Effect of music therapy on preterm infants in neonatal intensive care unit: Systematic review and meta-analysis of randomized controlled trials. *Journal of Advanced Nursing*, 77(2), 635–652. <https://doi.org/10.1111/jan.14630>