



Original Article

Parents' musical engagement with their baby in the neonatal unit to support emerging parental identity: A grounded theory study

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1. Background

Parents' experience of a premature birth and neonatal unit (NU) admission with their baby is often negatively characterized by distress, trauma, depression, separation, a lack of control, adapting to risk, oscillation between hope and hopelessness, feelings of exclusion and attempting to preserve the family unit (Obeidat et al., 2009; Swartz, 2005; Yaman and Altay, 2015). Furthermore, early intervention in the NU that targets parental trauma and supports sensitive and responsive parenting has been shown to have the greatest potential to improve later childhood development and parent mental health outcomes (Benzies et al., 2013; Brecht et al., 2012; Colditz et al., 2015; McManus and Poehlmann, 2012; Newnham et al., 2009; Treyvaud et al., 2009). In response to these findings, there is a growing body of literature exploring both the experience and process of 'becoming a parent' to a premature infant in a NU, and the way in which health care practices can support and assist this significant process of transition.

Several factors have been found to influence the process of becoming a parent to a premature baby in a NU, including: the amount of parental contact with and proximity to the baby (Flacking et al., 2006; Vazquez and Cong, 2014); quality of parents' relationship with nursing staff (Fenwick et al., 2008); quality of information parents receive about their baby (Ballantyne et al., 2017); and the level of social support parents receive from peers (Rossman et al., 2015; Vazquez and

Cong, 2014). While medical intervention in the NU is essential in the care of preterm infants, it creates a well documented disruption to a parent's developing sense of parental identity (Fenwick et al., 2008; Gibbs et al., 2015, 2016; Rossman et al., 2015; Vazquez and Cong, 2014). Studies have illuminated the profoundly challenging process of attempting to establish ones' identity as a mother or father prematurely, while simultaneously being confronted with intense stress and possible trauma (Curran et al., 2017; Steinberg and Patterson, 2017). Despite this, we have little research exploring this multifaceted process of parental identity formation in the medicalised NU context in order to support the timely development of a healthy parent-infant relationship.

Emerging music therapy research and practice highlights the importance of family-centered approaches that support parents to interact musically and connect parents with their hospitalised baby (Haslbeck and Hugoson, 2017; McLean, 2016a; Shoemark, 2017b), support the infant's physiological and developmental needs (Bieleninik et al., 2016; Loewy et al., 2013; Malloch et al., 2012) and address the psychological well-being and state of the preterm infant and their parent and family system (Bieleninik et al., 2016; Ettenberger et al., 2017; Haslbeck, 2017) through music and psychotherapy approaches (Loewy, 2015; Mondanaro et al., 2016). Some contemporary research has adopted qualitative approaches to explore the complex musical and interpersonal processes unfolding across neonatal music therapy practice for infants and their families (Ettenberger et al., 2014, 2017; Haslbeck,

Abbreviations: NU, Neonatal unit; NICU, Neonatal intensive care unit; CGT, Constructivist grounded theory

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2014b; McLean, 2016b; Shoemark and Arnup, 2014). Music therapists aim to empower parents in their 'musical' role as caregiver by offering support and education about parents' use of their own voice to connect, engage and soothe their baby. The therapist can also support parents to interpret and respond to their baby's complex physical, neurological and behavioural responses during musical moments together (Haslbeck, 2014a; McLean, 2016a; Shoemark, 2017a, 2017b). Assessing the often-complex psychodynamics emerging for parents through exploring their musical connections and culture, such as their preferred 'song-of kin' or familial lullaby music (Loewy, 2015; Mondanaro et al., 2016)) becomes a key aspect of supporting parents' emerging identity during music therapy in the NU setting.

Results from a previous study by the first author highlighted the potential of singing and voice interactions for validating parent's identity through their baby's perceived recognition of their unique voice (reference withheld for de-identification). Based on these findings, we sought to explore the potential relationship between a parent's musical engagement with their baby and their sense of identity as a parent in the NU. While international music therapy research has produced promising results demonstrating the value of musical interactions for supportively empowering parents in their parenting role in the NU (Ettenberger et al., 2017; Haslbeck, 2014a), little is known explicitly about parental identity constructs and how parents experience and perceive being supported in developing their parental identity through engagement in musical interactions with their baby. This project aimed to answer the question: *How does a parent's musical engagement with their baby contribute to their parental identity across the NU journey?*

Our definition of 'musical engagement' incorporates the well-established intrinsic and innate musical nature of human interaction (Malloch and Trevarthen, 2010; Papousek, 1996; Trainor, 1996) where parents interact musically in different, multi-modal ways with their baby, through humming, rhythmic movement, singing a lullaby or using their voice to read a book, as well as the influence of parents' own pre-existing relationship and connection to music in their life (Custodero and Johnson-Green, 2008).

2. Methods

2.1. Study context

This was a multi-site study, involving two different NU facilities of the one broader health organisation. Five parents were recruited from one facility and four parents from a second facility. While the nurseries differed in size and level of care, the model of care and the music therapy programs were consistent across the two facilities (as described in supplementary 1 material) and were both delivered by the same music therapist (first author). This offered a similar context of clinical service and approach to care when examining these parents' collective experiences. The music therapy program across these two facilities consisted of live, music therapy techniques to support preterm infant's physiological stability and developmental outcomes, as well as time spent supportively educating parents and families on their potential for using parental singing, voice and shared musical interactions to support the development of the parent-infant relationship and foster parental coping and empowerment (see *supplementary material 1* for further program information). Education occurred through both formal parent groups and individual consultations with families.

2.2. Methodology

This study used a grounded theory method to explore social processes through an inductive approach to theory building (Strauss and Corbin, 1998). Specifically, a Constructivist Grounded Theory (CGT) approach was adopted, involving an explicit acknowledgement of the subjectivity of the researcher and the researcher's active involvement in

the construction and interpretation of data (Charmaz, 2014). This methodology was positioned within a paradigm of *social constructivism* (Creswell, 2013) in which researchers seek understanding of the world in which they live through examining subjective experiences.

2.3. Recruitment and sampling

Purposive sampling (Creswell, 2013) was used to recruit a diverse cohort of parents from a large Metropolitan health service in Australia. Parents needed to have a preterm infant in the NU (born at < 35 weeks GA), and be able to participate in a research interview in basic English. In addition, we sought to recruit parents with diverse experiences, including those who had received music therapy services in the NU, and those who had not, as well as first-time parents and those with previous parenting experience.

Since analysis occurred in cycles throughout the data collection process (Charmaz, 2014; Strauss and Corbin, 1998), initial categories arose which required further data collection in order to explore the emerging theoretical ideas. This involved a more responsive approach to sampling across the study through 'checking in' and clarifying and questioning what was theoretically emerging from the data analysis which then guided sampling and the theoretical direction of interviews with later participants (Strauss and Corbin, 1998, p. 144).

Hospital ethics approval was obtained (reference 15340 L), and all parents provided written consent.

2.4. Participants

Nine parents were recruited into the study, representing diverse experiences in the NU. Of these nine parents, seven different families were represented. At the time of the first research interview, the shortest admission was 12 days, and the longest was 280 days. Eight of the nine participants were first-time parents, and all parents had participated in the music therapy service available at the hospital as outlined in *Table 1* (see *supplementary material 1*).

2.5. Intensive interviewing

Each parent in the research engaged in both an initial and follow up interview with the first author. An 'intensive' and emergent approach was adopted, informed by Charmaz (2014) writings of CGT where she encourages a flexible and emergent approach to interviewing, based on the theoretical categories that emerged across the study (See *Table 2*).

2.6. Data analysis process

Data analysis involved iterative and cyclical movements between data collection and analysis. A set of coding steps emerged from each interview, influenced by Charmaz's (2014) CGT approach to analysis and Strauss and Corbin (1998) provision of systematic procedures for grounded theory analysis.

- 1) Initial coding in waves
- 2) Cycles of focused coding leading to final focused codes
- 3) Conceptual mapping

Theoretical storylines (Strauss and Corbin, 1990, p. 116) were then written to support the integration of key theoretical categories and concepts across all of the data collected, leading to a place of theoretical saturation within the data and the uncovering and naming of the central category (See *supplementary material 2* for an example). Data analysis was not a linear process but instead, a highly iterative and flexible application of grounded theory methods (Charmaz, 2006, 2014). Reflexive memo writing took place across all stages of data collection and analysis which assisted the researchers in dissecting and examining the emerging data categories as well as the nature and impact of the first

Table 1
Participant summary.

Participant and baby (Pseudonyms)	Parenting History	Relationship with Music	Engagement in Music Therapy (MT)
“Anna” and “Connor”	First time mother	Lover of “catchy” music in the car that she “can sing to”	1 MT parent group prior to interview
“Lilly” and “Violet”	First time mother	A dancer who has “been around music my whole life”	1 MT parent group prior to interview
“Rachel” and “Lucy”	First time mother	Experienced a very musical childhood and uses music to “enhance certain emotions”	5 weeks of family-based MT prior to interview
“Edward” and “Lucy”	First time father	A musician and music teacher with music “such a major part of my life”	4 weeks of family-based MT prior to interview
“Sahil” and “Evie”	Fourth time father	From a very musical family, “playing guitar since I was probably ten”	1 initial family-based MT session prior to interview
“Bruce” and “Mary”	First time father	Listens to music to “chill out” and while driving	6 weeks of family-based MT prior to interview
“Bonnie” and “Mary”	First time mother	Listens to music to accompany her creative process as a designer and “get in the mode with work”	6 weeks of family-based MT prior to interview
“Mandy” and “Ryder”	First time mother	Listening to music as a big part of her life and “just something that is there”	14 weeks of family-based MT prior to interview
“Lee” and “Imogen”	First time mother	Everyday listener of the radio and the “occasional singing in the shower”	1 initial family-based MT session prior to interview

author's engagement with the theoretical ideas that were emerging. Fig. 1 offers a representation of the key data collection and analysis steps for this study.

3. Results and discussion

The main findings of this research revolved around a central category that highlighted the influence of the baby in shaping parental identity and will be shared and discussed below. Central theoretical categories and conditions are represented through the use of inverted commas throughout.

3.1. Central category: ‘their baby's response’ and parents' musical engagement

Across these nine parents' experiences of musical engagement, ‘their baby's response’ emerged as the central theoretical category. Despite the many contextual conditions navigated by these parents, it was the quality of their baby's responsiveness during musical interactions that significantly shaped their own responses and commitment to fostering musical interactions. The babies responses varied in level or type according to their medical condition, neuro-behavioural functioning and developmental age at the time. All nine parents described how ‘identifying’ responses from their baby were a crucial factor in their experience of the quality of their interaction. When parents offered some form of musical interaction to their baby, they were more likely to continue the interaction if they perceived their baby recognised them through an observable behaviour, such as a turn of the head, or eye contact. Their baby's orientating response provided validation to each parent, and a sense that their baby recognised them as their parent during the musical interaction.

“I think in those early stages it almost felt a bit funny singing to something so small?. Whereas now you look at her and she is a full size, growing strong bubba, whereas before it was less, it was less interaction with her” (Rachel).

There were also times when some parents could not discern a

response from their baby, and at other times, parents described a 'deteriorating response' where their baby showed signs of increasing stress or instability, leading to feelings of hesitation and anxiety for these parents around continuing to pursue a musical relationship with their baby. These findings align with literature documenting synchronous interactions between a parent and their baby as often compromised in the acute neonatal setting, particularly when an infant is born prematurely and battling major physical, social and emotional barriers (Brisch et al., 2003; Newnham et al., 2009). Premature infants often present with hypervigilant responses to stimulation from their environment due to self-regulation challenges, creating difficulty for parents in attempting to read their baby's complex and subtle responses, which differ greatly from a full term, healthy infant's responses (Schmücker et al., 2005; Udry-Jørgensen et al., 2011). Furthermore, we understand that a parent's intense experience of their baby's hospitalisation can also have an impact on their availability for sensitive and attuned interaction with their baby (Keren et al., 2003; Korja et al., 2010). Fig. 2 represents the varying levels of responsiveness parents perceived from their baby, ranging from ‘no response’, a ‘deteriorating response’ and an ‘identifying response’ across time to their musical offerings.

These findings support previous research that highlights the natural sociability of infants to intrinsically motivate social companionship with their caregiver through learning to recognise signals and engage in multimodal exchanges and imitations of vocal, facial and gestural expression (Beebe and Lachmann, 1998; Lewkowicz, 1998; Trevarthen, 2001; Zeedyk, 2006). These results offer new insights into the responsiveness element of mutuality and how a parent's experience of their baby's degree of responsiveness can powerfully alter their experience of and continuing engagement in musical interactions with their baby. Paired with the music therapist's role in supporting parents to process and navigate the multiple barriers to their musicality and parenting role through music therapy, these parents perceived this communicative and interactive response from their baby as a form of personal validation and identification from their baby.

The central category of ‘their baby's response’ during musical interactions, and its significance in fostering parent's emerging sense of role and identity, offers a novel discovery within the neonatal music

Table 2
Example of emerging interview questions.

Early interview question	Additional questions in later interviews	Based on the following emerging theoretical categories
<ul style="list-style-type: none"> ● How do you use music as a parent here in the NU? 	<ul style="list-style-type: none"> ● Some parents have been talking to me about possible barriers to connecting and being musical with their baby here in the NU? What has your experience been? ● Some parents have mentioned how important their baby's response was during musical moments together. What do you think? 	<ul style="list-style-type: none"> ● Musical gatekeepers influencing parents' musical engagement in NU ● Baby's response as critical during musical moments

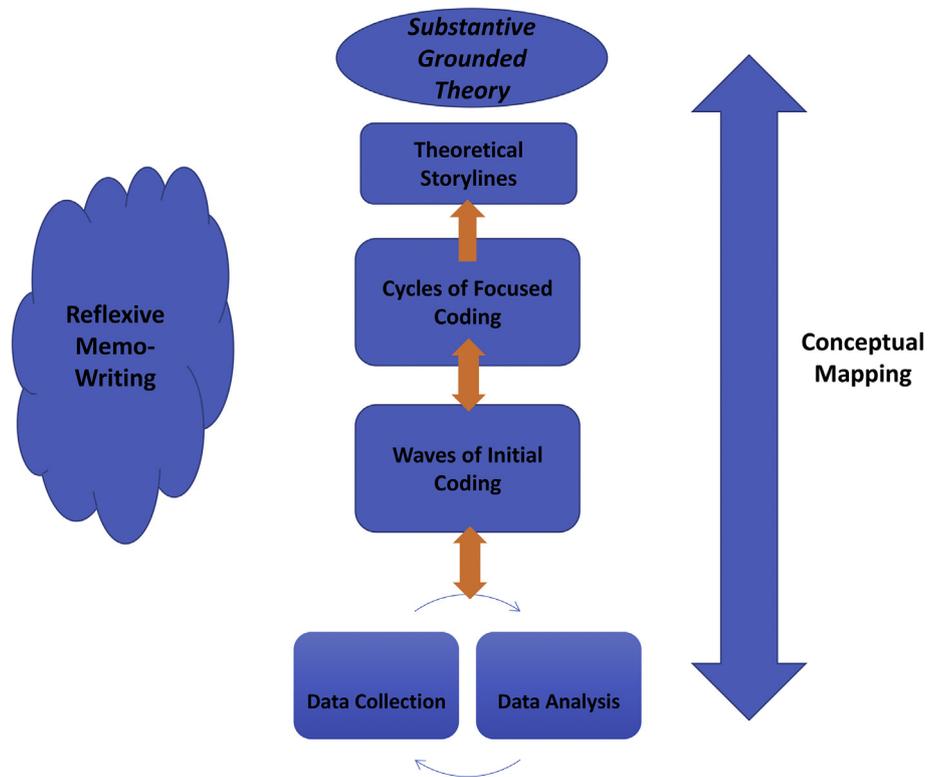


Fig. 1. Key data collection and analysis steps. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

therapy discipline. These parents' perceptions of their baby's responsive behaviour during musical moments scaffolded their own ability to understand and construct their new role as a parent to their baby. These findings sit congruently with Haslbeck (2014a; 2014b) writings and research on the role of creative music therapy in the NU, which illuminates the multiple layers of 'responsiveness' at play within the music therapy process and argues that a parents musically responsive role to their baby can contribute to parental empowerment. More recently, Ettenberger et al. (2017) revealed that parents of a preterm baby in the NICU felt more confident and empowered through music therapy when

they saw or felt their baby react to their own singing. Additionally, Palazzi et al.'s (2017) case study research revealed how the music therapy process empowered the mother of a preterm baby in a NU and acted as a way of strengthening her maternal competencies. While these studies begin to acknowledge and discuss the empowering role of a baby's response on the parent during musical interactions in a NU context, this grounded theory study offers a novel and much more detailed piece to this expanding puzzle through more closely examining parent's perceptions of the level and type of response from their baby. And, how and in what ways this then contributes to what we have

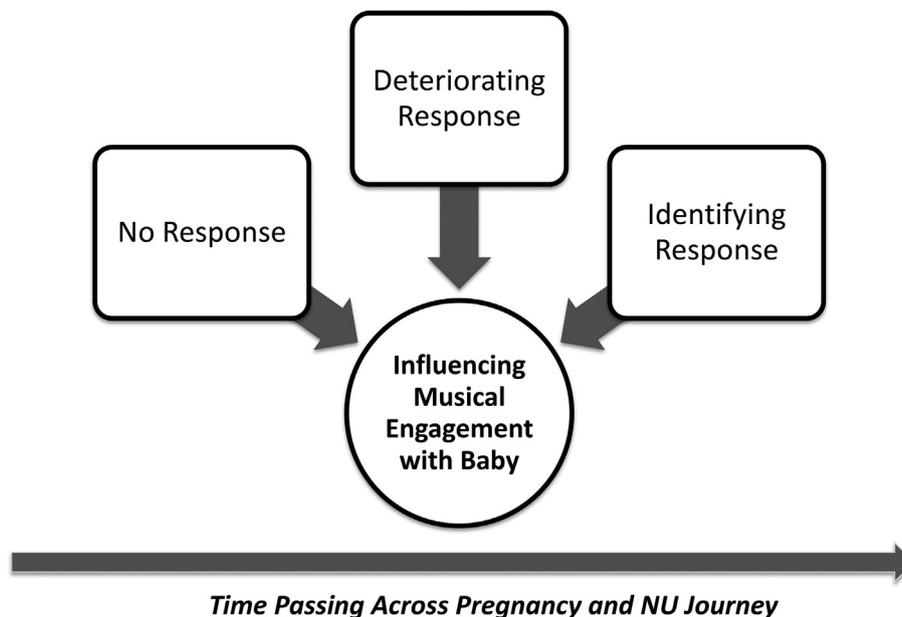


Fig. 2. Baby's levels of responsiveness influencing parents' musical engagement.

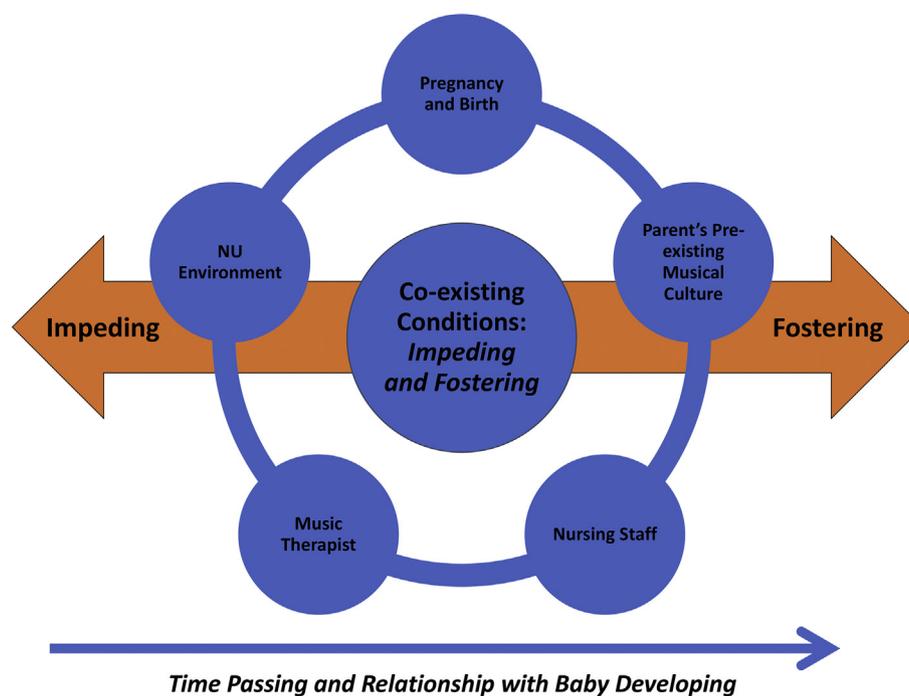


Fig. 3. Impeding and fostering conditions of parents' musical engagement. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

interpreted as their sense of parental identity.

This research highlights the value of sharing supportive and empowering information with parents about their baby's varied and unique levels of responsiveness to their environment and people around them during an NU admission. It is clear that music therapists could play a valuable role in helping parents to understand their baby's responses or lack of obvious or observable responses, nestled within the musical context of their interactions together in the NU.

3.2. Conditions fostering and impeding parents' musical engagement

All nine parents identified a variety of conditions they perceived as either fostering or impeding their musical engagement with their baby. These factors have been grouped into five categories that appear to hold shared characteristics (see Fig. 3). These categories and related conditions co-existed as the parent and baby established and grew in relationship with one another.

Multiple studies document challenges for parents of a preterm baby assuming their parenting role in the NU setting. Both the intensity of the NU environment (Feeley et al., 2013; Johnson, 2008; Lantz & Ottosson, 2013) and parents' relationship with nursing staff have been described as powerful influences on parenting involvement and sense of role (Fenwick et al., 2008; Lupton & Fenwick, 2001). This research aligns with these studies, illustrating how parents' perceptions of staff (including the music therapist) sometimes fostered and sometimes impeded their opportunities to musically engage and parent their baby in the NU (see supplementary material 3 for further detail).

3.3. Musical engagement supporting emerging parental identity in the NU

Parents described how their musical engagement with their baby supported the emergence of their parental identity in two ways. Musical interactions gave some parents a role to play in the NU through 'doing something musical for their baby'. This active musical role provided parents with a sense of purpose and control at times when they described feeling otherwise powerless. Bonnie explains, "The only thing that you can do is sort of sit there and let her listen to your voice so ...

yeah that is the only thing that you can sort of do really to let her know that you are there?" This finding is congruent with an identity theory perspective in which individuals are motivated to behave in ways that "verify" their personal understanding of their unique identity (Cast, 2004, p. 56).

When considered alongside the central category of 'their baby's response', parents who 'received an identifying response from their baby through the musical encounter' were interpreted as likely to experience validation in their role as a mother or father. They felt recognised, heard and acknowledged by their baby and ultimately, validated as a parent to their baby. As Sahil stated:

"I was humming beside her 'You are my Sunshine' or something like that ... and she actually lifted her head up and looked at me and held her gaze there for at least 10–20 seconds ... that was yeah, was a million dollar moment!"

However, musical interactions do not always result in a baby's identifying response for a variety of reasons, such as the baby's developmental maturity and/or their medical condition, or the challenging acoustic environment of a NU (Filippa, 2017). These descriptions provide another explanation of why musical interactions support emerging parental identity, and are congruent with Gibbs et al. (2016) suggestion of a resonance between parents' adoption of parenting occupations or roles and their "developing perception of themselves as parents to their preterm infant" (p. 99). The results from this study therefore point to the significance of a parent's 'musical occupation' with their baby in the NU as being supportive of their emerging parental identity. Table 3 presents the final focused codes for each parent, illustrating how musical engagement with their baby supported their sense of parental identity in one of these ways.

3.4. Theoretical story and conceptual representation of the grounded theory

The final substantive grounded theory is best expressed through a narrative which "constructs, integrates and makes visible the final theory" (Birks et al., 2009, p. 407). The narrative in Table 4 offers a theoretical construction that is reflective of the data and final theory

Table 3
Musical engagement supporting parental identity in NU.

Participant:	Final Focused Codes:
Anna	Feeling validated as a Mum through Connor's responses to her voice in the NU
Lilly	(Singing) "gives me the freedom to now, as her Mum, to tell her 'I am your Mum and I am here'"
Rachel	"Music is one thing that can make me feel like a parent"
Edward	"Being able to do something that the nurses and doctors can't do has taken the edge off things"
Sahil	Experiencing a "million-dollar moment" of connection with Evie when she responded during Sahil's humming
Bruce	Feeling recognised by Mary's responses during reading together in NU
Bonnie	(Reading and singing) "is the only thing that you can sort of do really to let her know that you are there"
Mandy	Ryder's physical reactions to her singing made Mandy feel heard as a Mum
Lee	Reading to Imogen supported Lee in starting to feel like a Mum in the NU

Table 4
Theoretical story.

A parent's musical engagement with their baby provides one unique way of overcoming many environmental, social and personal obstacles to actively reach out as a parent and be able to do something musical for their baby in the NU.

A music therapist offers one way of supporting parents to engage in meaningful encounters with their baby, influenced also by their pre-existing musical culture, nursing staff's role, their pregnancy and early birth experience and the NU environment. However, each of these conditions are inter-influencing and occur in the context of time passing and the parent and baby establishing and growing in their relationship together. At times, each of these conditions could also be perceived as impeding parents' musical engagement in the NU.

The baby's response to their parents musical interactions had a significant influence on the degree to which these parents felt confident and comfortable to pursue a musical relationship with their baby. This response from their baby varied in level or type, mostly dependant on the baby's medical condition and developmental age at the time. It was through this musical encounter involving their baby's powerful response that parents' experience of and engagement in musical interactions with their baby was shaped and ultimately, this led to strengthening and validating parents' sense of identity across their NU journey.

that emerged, and is accompanied by the conceptual diagram below (see Fig. 4).

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4. Conclusion

These results illustrate the potential of using music therapy to support parents in a NU, and contributed new and nuanced understandings of the centrality of 'their baby's response' during musical interactions on these parents' emerging sense of parental identity. This research aligns with the current culture of parentally inclusive and empowering neonatal practice, which is focused on collaborating with parents in the care of their baby, to support the critical parent-infant

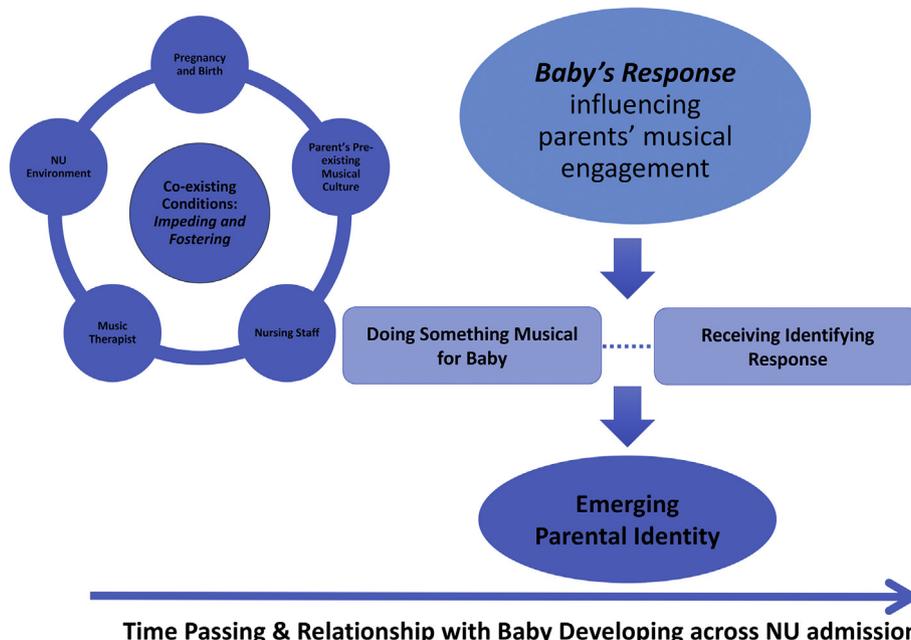


Fig. 4. Final substantive grounded theory(COLOUR REQUIRED). (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

relationship. Moreover, this study offers rich and detailed insights into the conditions surrounding a parent's musical engagement with their premature baby and how such conditions can be perceived as both impeding and fostering parents' musical engagement within the complex system of a NU. In particular, offering insight into the music therapist's role in supporting parents to navigate and negotiate barriers to their musical engagement and their baby's complex responses to musical stimulation; discussing their premature baby's complex and often subtle responses related to their neurodevelopmental, physiological and emotional state. In looking to future research stemming from this study, there is scope to examine the potential of differing music therapy methods and techniques to specifically contribute to parental identity constructs in the NU context. In addition, exploring parents continuing musical engagement with their baby beyond the neonatal setting and examining how these early musical relationships may support a parent's ongoing parenting role is warranted.

Conflicts of interest

The authors have no conflicts of interest to disclose.

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Appendix A. Supplementary data

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