

The 2017 Stockholm Conference on Ultra-Early Intervention
Parental voice and music in neonatal intensive care

Music therapy for mother-preterm infant empowerment and communicative musicality: a single case study in a Brazilian NICU

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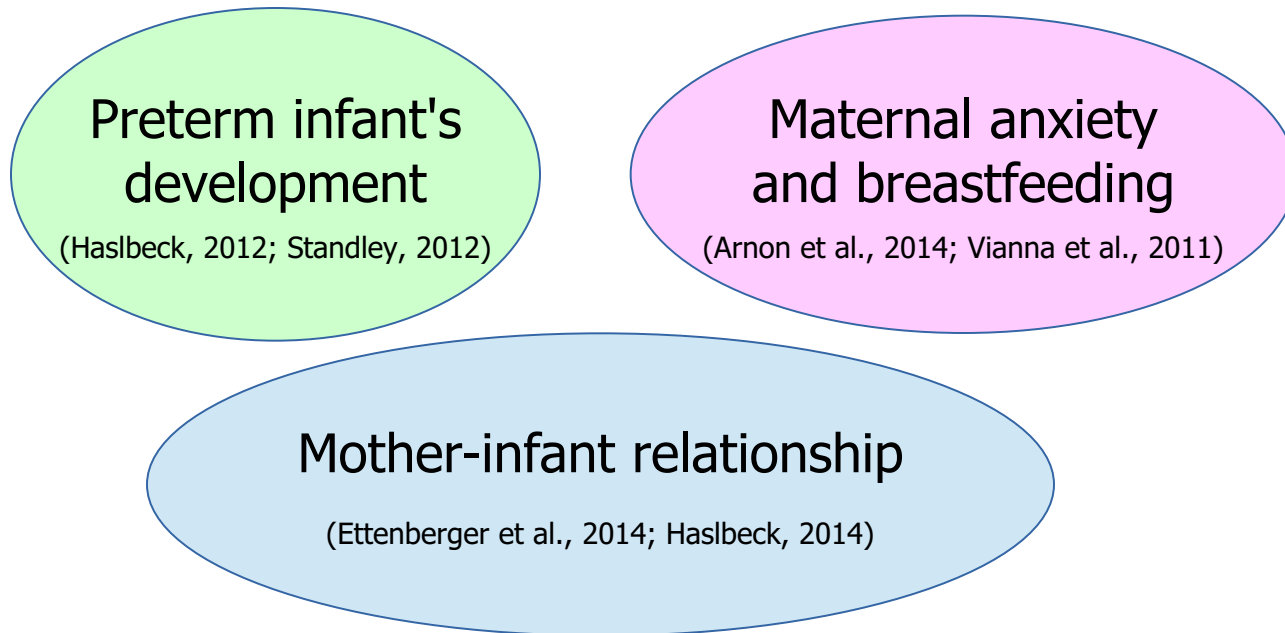
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INTRODUCTION

- Positive effects of music therapy:



- Few studies focused on mother-preterm infant interactions



AIMS

To investigate the contributions of music therapy to the mother-preterm infant empowerment and communicative musicality in a Brazilian NICU

METHODOLOGY

Participants

- Mother: Natalia (24 y)
- Her extremely preterm daughter: Ana (27 gw, 685 g)

Design and Procedures

- Single case study (Stake, 2006)



METHODOLOGY

1. Pre-intervention

2. Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP (Palazzi, Meschini & Piccinini, 2014)

3. Post-intervention

4. Pre-discharge

5. Post-discharge



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

MUSIP Goals

Sensitizing and supporting the mother to sing for the infant

Individual sessions with the mother and sessions with mother-infant dyad



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

“Songs of kin”



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

Refrain of “Fico assim sem você”
by Claudinho and Buchecha

F#m7 C#m7

Eu não existo longe de você

D A C#7

E a solidão e o meu pior castigo

F#m7 C#m7

Eu conto as horas pra poder te ver

D E7

Mas o relógio ta de mal comigo

Traditional Brazilian Lullaby

“Nana nenê”

C

Nana nenê

F G

Que a Cuca vem pegar

F C

Papai foi na roca

F G C

Mamãe foi trabalhar



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

“Songs of kin”

Assess the infant's music



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

“Songs of kin”

Assess the infant’s music

Live infant-contingent humming and singing



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

Maternal improvised singing in S 6



Maternal improvised singing in S 7



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

“Songs of kin”

Assess the infant’s music

Live infant-contingent humming and singing

Mother oriented to sing autonomously to her infant in the NICU



Music Therapy Intervention for the Mother and her Preterm Infant – MUSIP

(Palazzi, Meschini & Piccinini, 2014)

“Songs of kin”

Assess the infant’s music

Live infant-contingent humming and singing

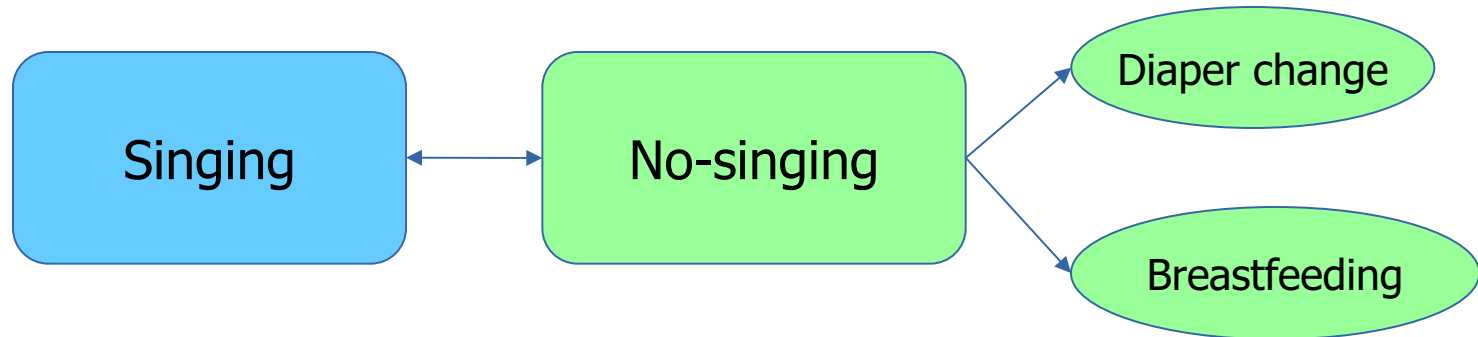
Mother oriented to sing autonomously to her infant in the NICU

Songwriting: lullaby for the infant

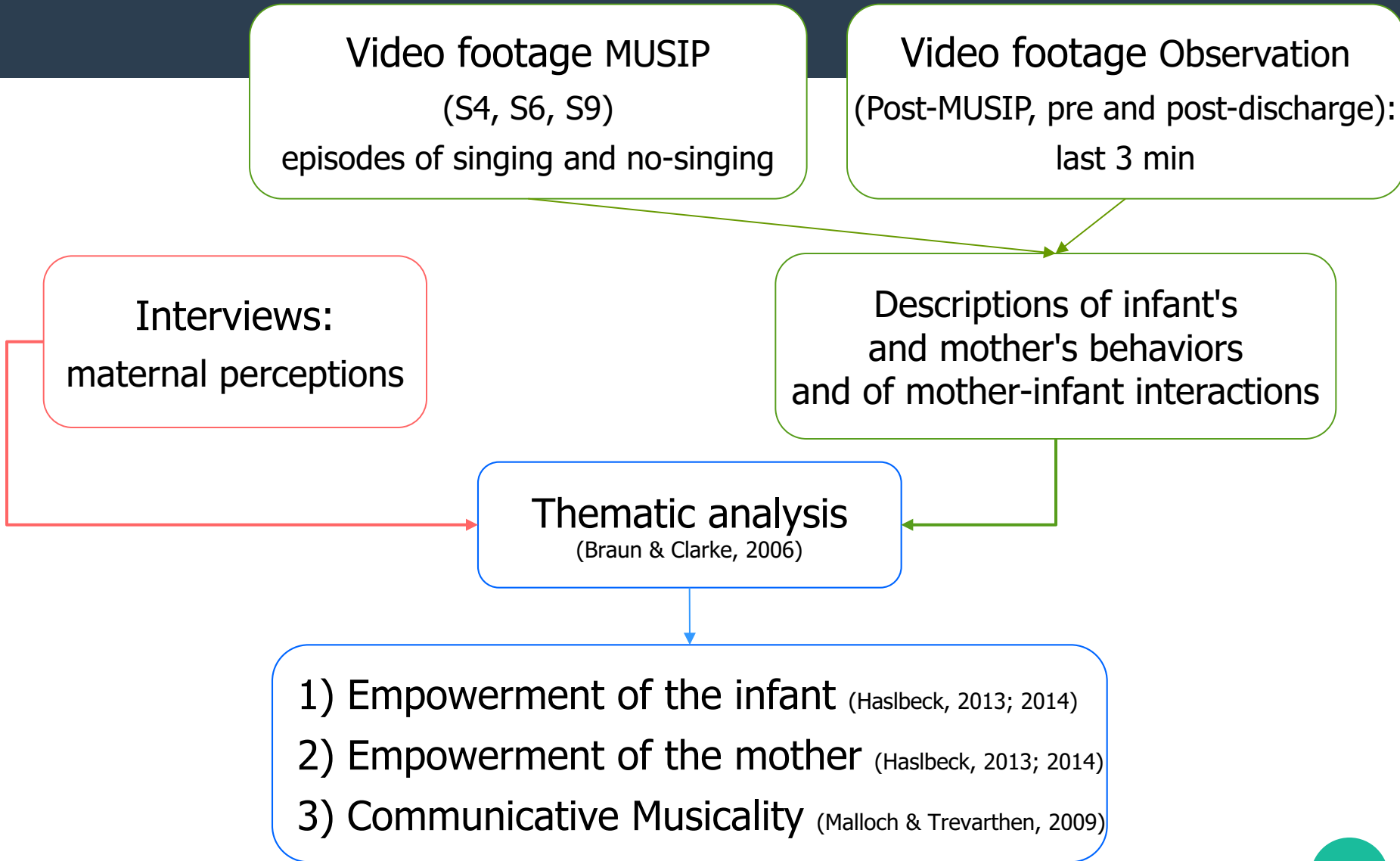


Post-intervention, pre and post-discharge

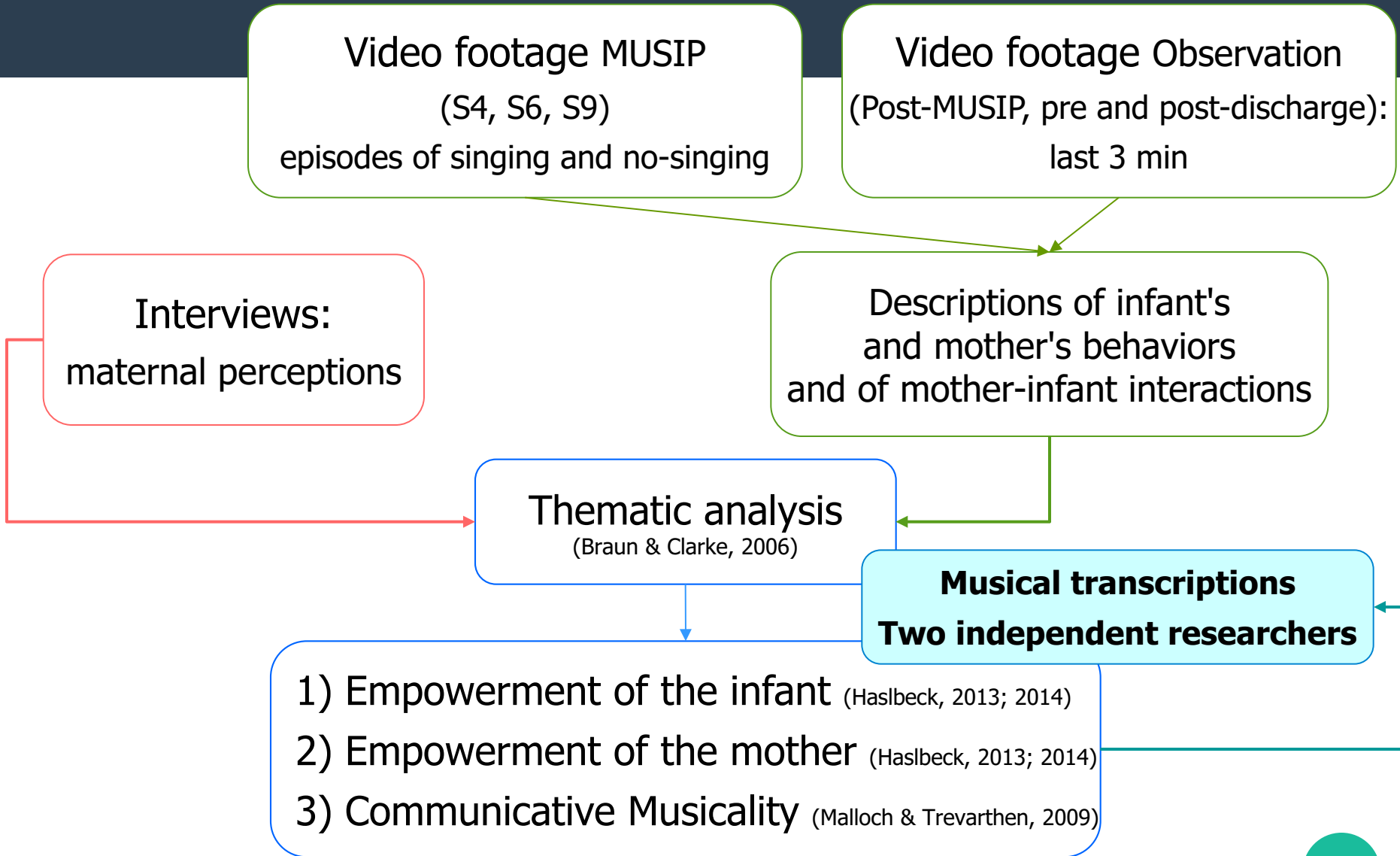
- Maternal interviews
- Observation of mother-infant interactions:



Data Analysis



Data Analysis



RESULTS

1) Empowerment of the infant (Haslbeck, 2013; Haslbeck, 2014)

- Relaxation and stabilization of oxygen saturation:

"When her saturation starts going down, I ask to pick her up, I sing and I rock her, and then she stabilizes." (Post-MUSIP)

- New competences and engagement during singing: vocalizations, gesture and mimic



2) Empowerment of the mother (Haslbeck, 2013; Haslbeck, 2014)

- Relaxation: closing her own eyes
- Overcoming of the fear and the shame of interacting with the infant:

“[The sessions] helped me a lot with Ana (...). Because, at the beginning, I didn't mind a lot (...). But not now, now I want to know, I want to know why, I want to touch her, I want to pick her up, I want to move her, I want to interact with Ana.” (Post-MUSIP)

- Maternal skills: touching, caressing and rocking
- Autonomy in singing: improvised singing



3) Communicative musicality

(Malloch & Trevarthen, 2009)

- **In pulse:** the infant vocalized during the rests of maternal singing
- **In quality:** mother-infant imitation in rhythm and melody
- **In narrative:** reciprocal coordination, same pitch and pulse

$\text{♩} = 56$

06:35 06:39 06:44

Infant's mimic Closed eyes She opens her eyes slowly

Infant's gesture She stretches, moving her own arms gently She moves her arms continuously

Infant's vocalization Ah...

Mother's mimic She looks to her daughter She smiles and stares at the infant's face She looks at the daughter

Mother's gesture She taps the infant's back She moves the daughter to have face-to-face contact with her She starts rocking the daughter

Mother's singing Humming

pp *mp*

3) Communicative musicality

(Malloch & Trevarthen, 2009)

The image displays a musical score with six staves, each representing a different type of interaction between an infant and a mother. The score is divided into three time segments: 07:05, 07:10, and 07:14. The staves are labeled as follows:

- Infant's mimic:** Shows musical notation with notes and rests. Descriptions include "She looks to the mother" and "She opens her own eyes wide and focuses on her mother's face".
- Infant's gesture:** Shows musical notation with notes and rests.
- Infant's vocalization:** Shows musical notation with notes and rests. A specific vocalization is circled in red and labeled "She burps".
- Mother mimic:** Shows musical notation with notes and rests. Descriptions include "She smiles looking to her daughter", "She looks to the infant", and "She opens her own eyes wide, looking to her daughter".
- Mother gesture:** Shows musical notation with notes and rests. Descriptions include "She smells her infant's neck" and "She caresses her daughter's nose with her own nose".
- Mother singing:** Shows musical notation with notes and rests. Dynamics are indicated as *pp* and *mp*. Two sections of the melody are circled in red.

Time markers are placed at the top of the score: 07:05, 07:10, 07:14, and 07:19. The score is written in a key signature of three sharps (F#, C#, G#).



DISCUSSION

- Through live music therapy and maternal singing, MUSIP contributed to relax the infant and to stabilize her oxygen saturation, supporting previous studies (Filippa et al., 2013; Haslbeck, 2014)
- By sensitizing maternal singing, MUSIP empowered the mother, decreased her feelings of impotence and helped her to take part in infant's well-being (Ettenberger et al., 2014)
- During singing, the mother-infant dyad showed more contingent interactions and *communicative musicality* (Ettenberger et al., 2014; Haslbeck, 2014; Malloch & Trevarthen, 2009)



CONCLUSION

- Future study:
 - Extend the use of MUSIP
 - Intervention group vs. control group
 - Mixed-methods design



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Thank you!

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