



ADVANCING INTERDISCIPLINARY RESEARCH IN SINGING

# Emotion Regulation by Maternal Speech and Singing

Niusha Ghazban, Ryerson University



Social Sciences and Humanities  
Research Council of Canada

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# Emotion Regulation (ER)

- Caregivers play a critical role in regulating infants' emotions
- They use proximal and distal strategies to alleviate infants' distress
  - Distraction (Harman et al., 1997)
  - Holding and touch (e.g., Stack & Arnold, 1998)
  - Rocking (Ter Vrugt & Pederson, 1973)
  - Vocalization (e.g., Jahromi et al., 2004)





# Parents' ER Behaviours

- Provide infants with a model of emotion regulation and positive social outcomes
- Promote the development of emotional self-regulation
- Focus in the present study was on maternal speech and singing, which are universally observed caregiving behaviours (Fernald & Simon, 1984; Fernald, 1991; Papousek & Papousek., 1987)





# Experiment 1: Singing vs. Speaking

- Infants look longer at AV samples of maternal singing than speech (Nakata & Trehub, 2004).
- Maternal singing modulates infants' cortisol levels (Shenfield et al., 2003)
- Infants in those studies were contented. What are the consequences of maternal speech and singing for distressed infants?





# Experiment 1: Singing vs. Speaking

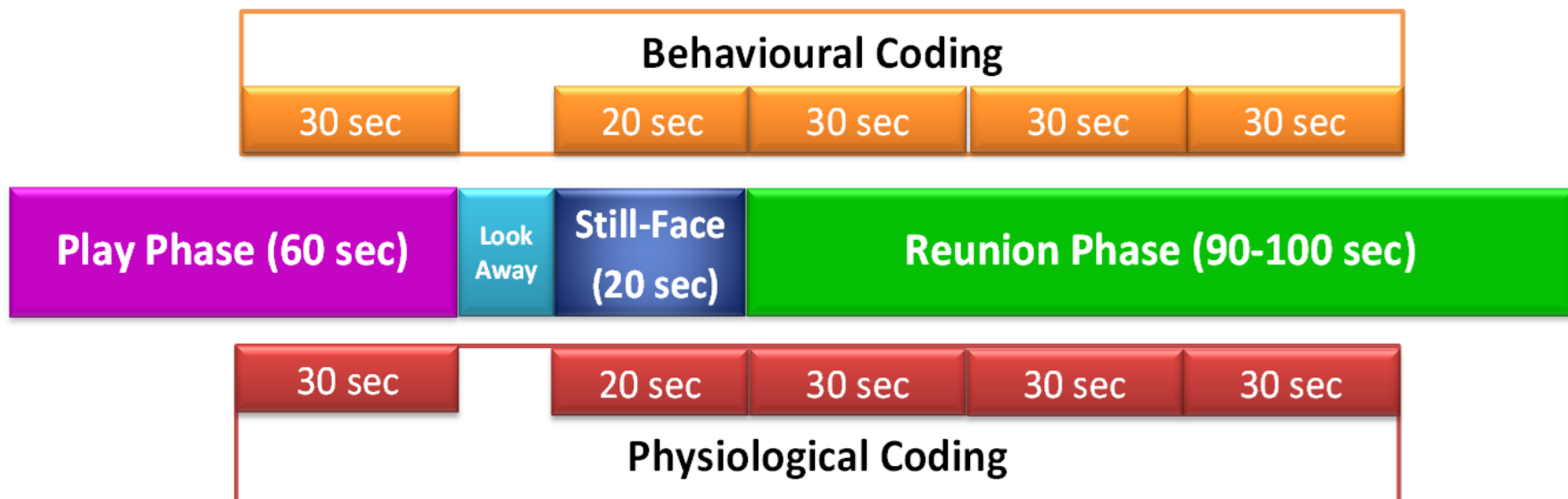
- The present study examined 10-month olds' behavioural and physiological responses to maternal speech and singing after an acute stressor.
- Provided an opportunity to examine the efficacy of maternal speech and singing in regulating infants' negative emotions.





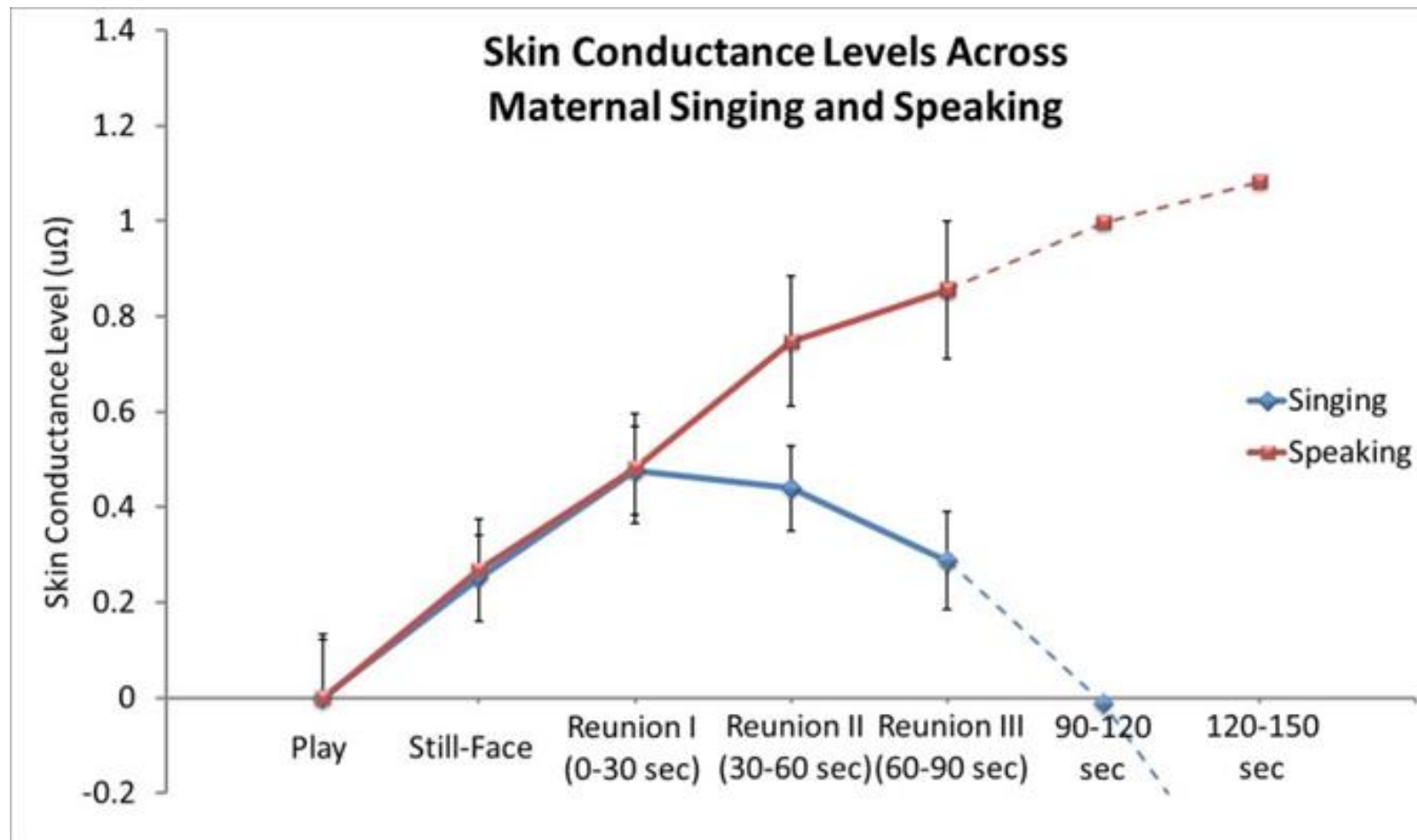
# Experiment 1: Singing vs. Speaking

- Used modified version of the Face-to-Face-Still-Face Paradigm



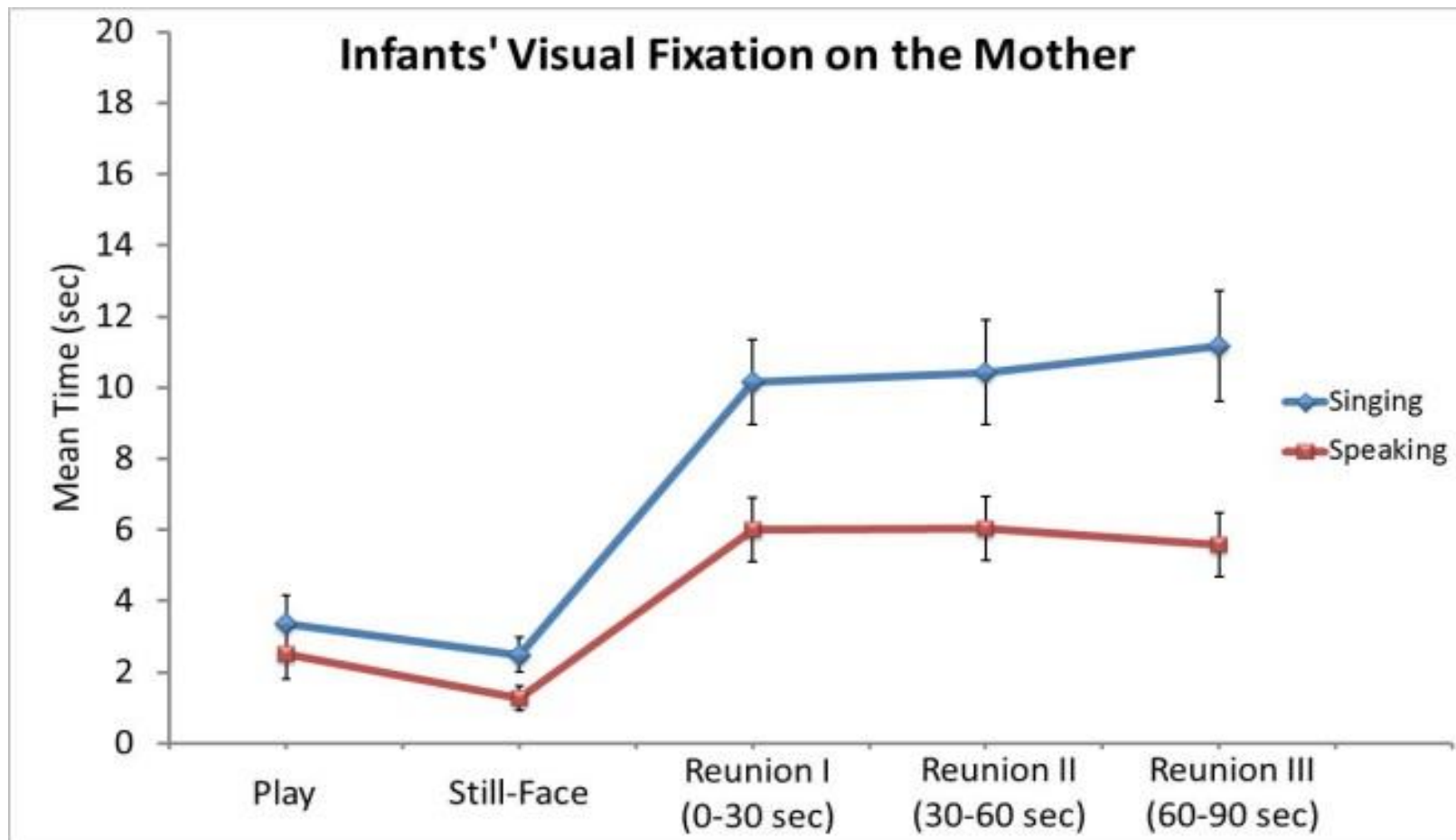


# Experiment 1: Singing vs. Speaking





# Experiment 1: Singing vs. Speaking







# Experiment 1: Summary

- Maternal singing was more effective than speech in regulating the emotions of distressed 10-month olds

But...

- North American mothers sing more play songs than lullabies
- Play songs to promote infant engagement
- Lullabies to promote sleep

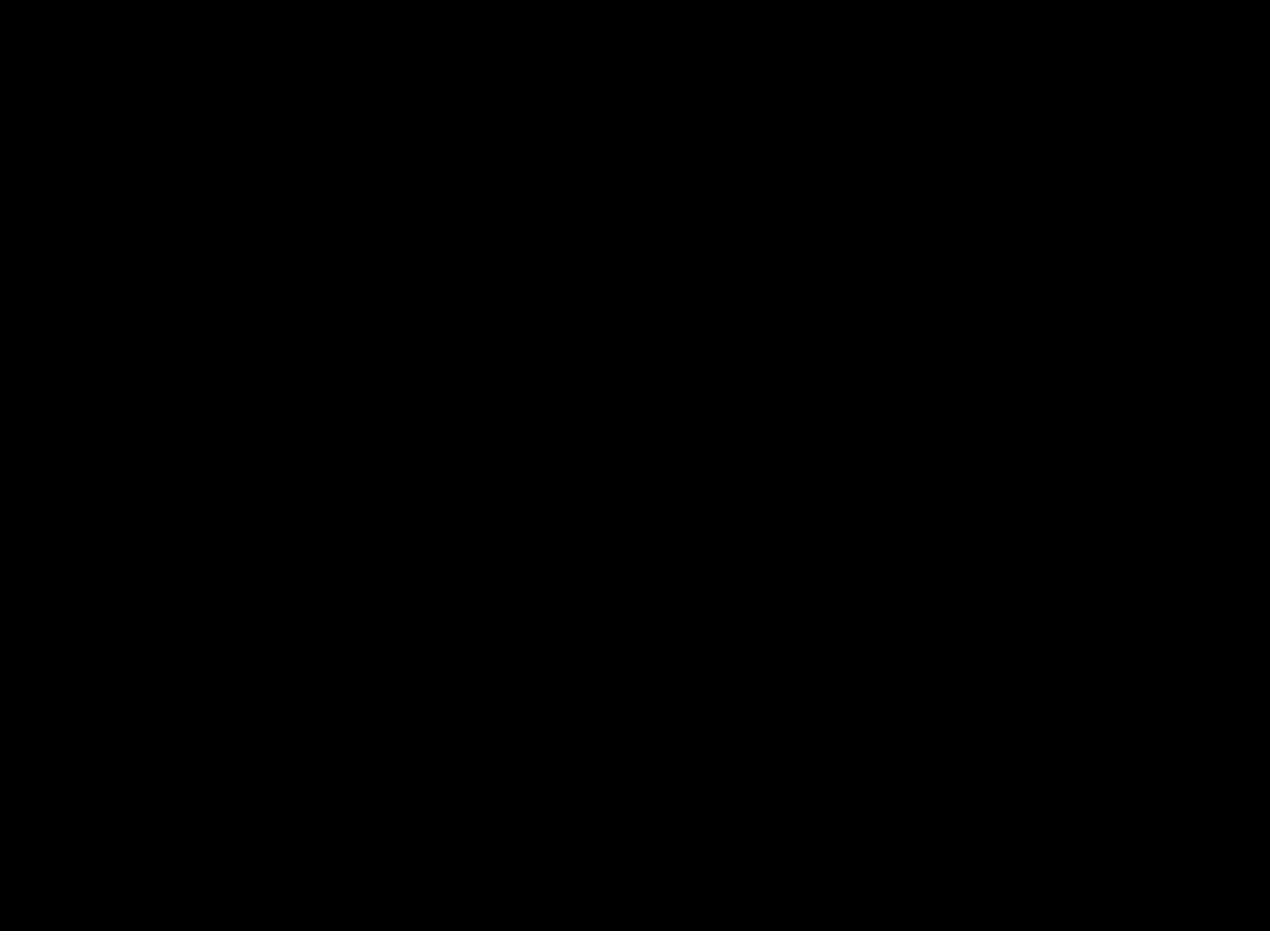




# Experiment 2: Play Songs vs. Lullabies

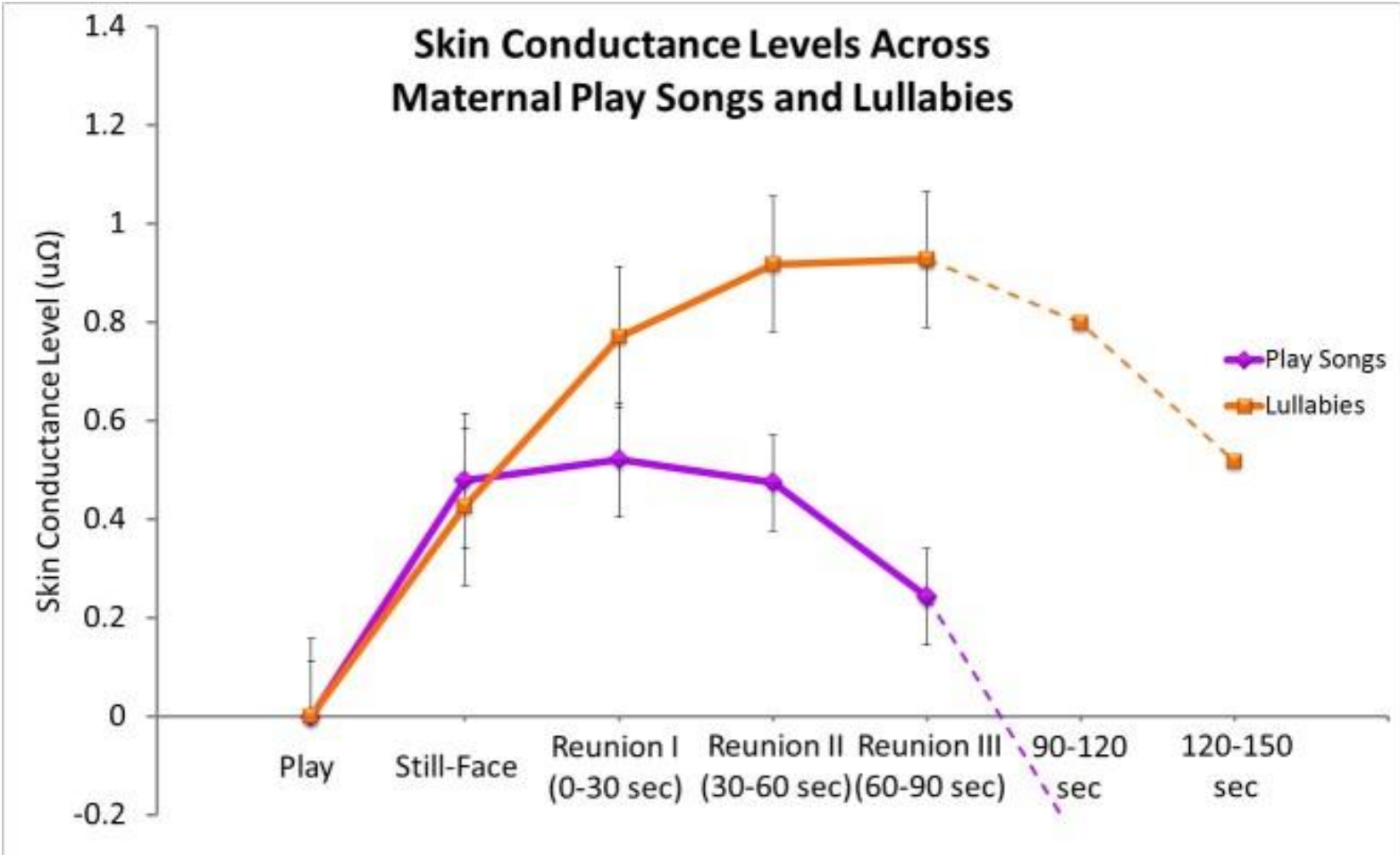
- Here we compared the relative efficacy of maternal play songs and lullabies in alleviating infants' distress
- Method: FFSF paradigm
- Video





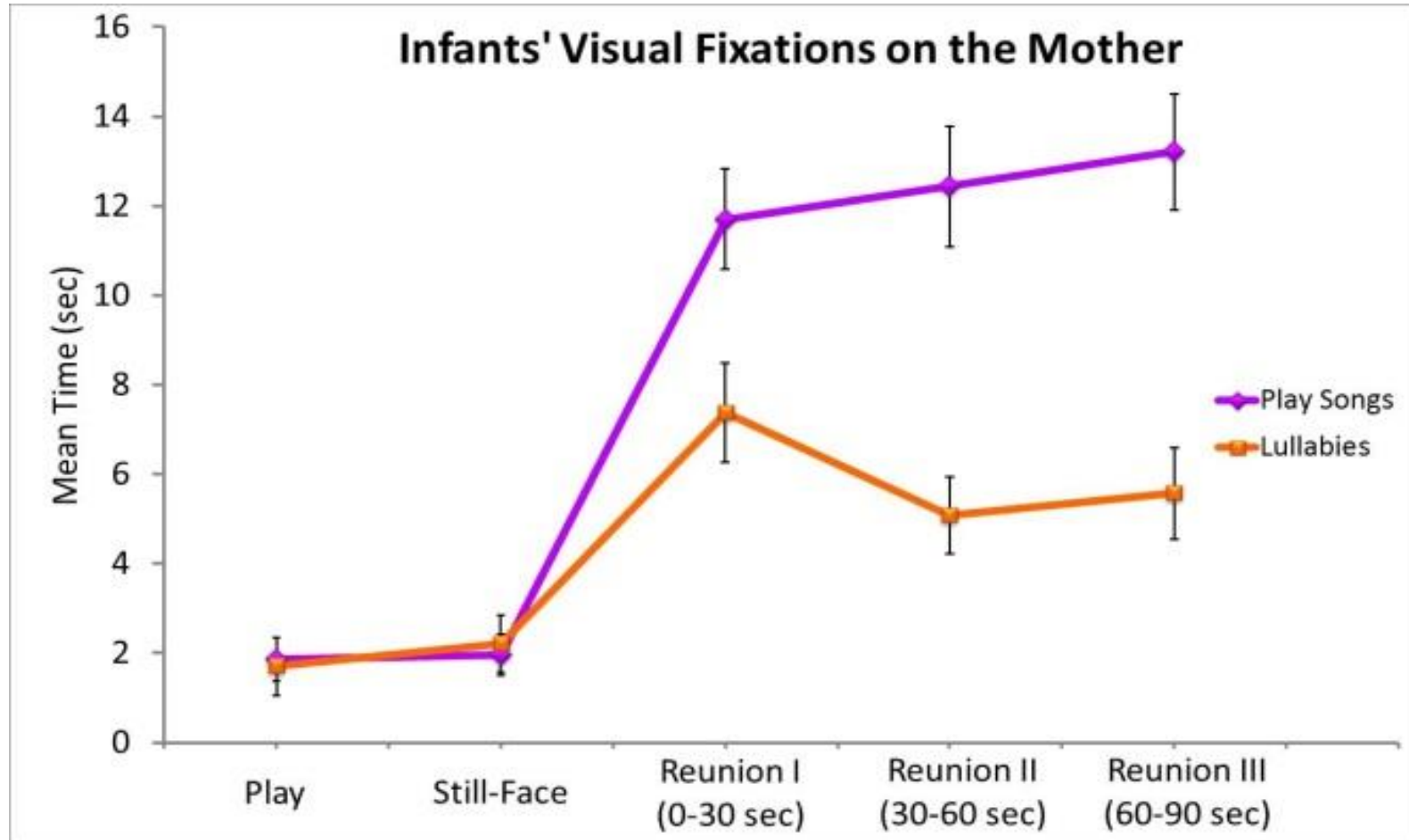


# Experiment 2: Play Songs vs. Lullabies





# Experiment 2: Play Songs vs. Lullabies





# Experiment 2: Summary

- Maternal play songs were more effective than lullabies in regulating the emotions of distressed 10-month olds
- Play songs may work by distracting infants.
- They may be more familiar to these infants. Lullabies may work better in other cultures or at night-time in ours.
- The rhythms of play songs may induce some kind of entrainment in infants.
- Further research is necessary to clarify these issues.





# Thank you

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