


**Mother-infant musical interaction and emotional communication: a literature review.**

**A commentary on Creighton’s article.**

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Author Alison Creighton offers a comprehensive review of research literature related to the role of music in mother-infant interactions. Her comments further underscore the adaptive significance of certain musical behaviors, such as infant-directed (ID) singing. Additionally, Creighton’s discussion reflects a heightened interest in the topic that has emerged in recent years, largely fueled by an increased understanding of infants’ perceptual capacities and the effects of early experience on development. Finally, while Creighton establishes critical connections from previous research, her observations stimulate further thought regarding the practical implications for music with mothers and infants.
Adaptive significance of singing to infants

By connecting mother-infant interactions with infants' neural plasticity as well as to emotional regulation and attachment, Creighton underscores the importance of singing to infants. Her insights reveal what many researchers and theorists have long-suspected: ID singing has adaptive significance; that is, this unique musical interaction appears to benefit infants in an important way. Previous researchers have observed that singing to infants is a universal caregiving behavior; present in every known human culture and documented throughout history (Lewkowicz, 1998; Trehub, 2001; Trehub, Schellenberg, & Hill, 1997). Some theorists have suggested that music itself evolved from the practice of singing to infants as a way of maintaining proximity with caregivers (Gaston, 1968; Huron, 2003; Mithen, 2006). With Creighton’s perspective, one can see that infants who receive timely and appropriate forms of musical stimulation may acquire the self-regulation skills needed to manage a variety of emotional demands across the lifespan. Additionally, such infants are more likely to experience secure attachment with a primary caregiver, thereby establishing a constructive template for subsequent relationships.

Connecting basic and applied science

In addition to clarifying the adaptive significance of singing to infants, Creighton’s writing helps to explain why a growing number of researchers have focused on this topic in recent years, and why clinicians are now proposing ideas for clinical applications. Essentially, owing to the efforts of such veteran researchers as Sandra Trehub or Laurel Trainor, we now understand how infants make sense of musical information, and specifically what attracts them to their mothers’ singing. Thus the basic science exists to explain how infants perceive music. This knowledge plays a critical role in designing effective interventions, and understanding how they work. With this basic evidence, researchers can move forward with applied studies that utilize ID singing as a therapeutic intervention with functional outcomes; that is, to promote the neural connectivity needed for self-regulation and synchronized social interactions. Ultimately, Creighton’s comments help to establish a much-needed connection between basic and applied science in regard to ID singing, which will help to answer the critical questions of “did the intervention work?” and more importantly, “how did the intervention work?” Only by answering both questions can researchers achieve the internal and external validity that is the hallmark of rigorous scientific investigation.

Practical implications: Typical and clinical populations

Much of Creighton’s writing appears to focus on typical mothers and infants. She seems to suggest that by encouraging ID singing in this typical
population, secure attachment can be supported. Meanwhile, musical interactions can be extended across time and musical forms can be conveyed from one generation to the next. Such comments are valuable and certainly worthy of exploration. Considering the connections now established between ID singing, self-regulation and attachment, researchers may want to expand upon Creighton’s ideas by exploring ID singing with clinical populations. By definition, a clinical population in this case may be any mother-infant pair considered to be at-risk for poor self-regulation and thus, insecure attachment. Populations that come to mind include infants at risk for autism spectrum disorder, and infants born with Down syndrome. Both infant populations may display difficulty with emotion regulation that reflects deviations in central nervous system development and thus can negatively impact interactions with caregivers. Additionally, mothers with depression or other mental health issues may struggle with their own self-regulation, such that they have difficulty attending to their infants’ needs and signals (de l’Etoile & Leider, 2011). For these at-risk populations, ID singing may play a critical role in helping mothers to promote their infants’ neural development, as needed for effective self-regulation and secure attachment.

References


