

The Importance of Baby Music and Lullabies in Infant Learning

By Amy Robbins-Wilson, MA

As parents, we want to do all that we can to help our children make the brain connections they need to develop. Many of us sing to our children when we would not think of singing to anyone else. As parents we often hear that music plays an important role in the development of our children. But is it true? In this short paper I would like to review the research and present practical ways for parents to use this information.

Baby Brain Development

First, let's consider this quote by Dr. Manny Brand, a world renowned lecturer and researcher in the area of music education, and the head of music education at Hong Kong Baptist University:

“Today, lullabies are viewed as being more than just a natural soporific. They promote the bonding process, aid in infant development by providing stimulation, establish a foundation for later development in speech, music and movement, and promote a healthy parent-infant attachment.” Brand, Pp. 30

Speaking in a slower, higher-pitched, more exaggerated, (or inflected) mode of speech often called “parentese”, and singing lullabies and other children’s songs are important for language development, as well as laying the foundations for mathematical thinking . While language is centered primarily in one area of the brain, music creates broadly useful networks. Neuroscientist Dr. Aniruddh Patel put it this way, “People sometimes ask where in the brain music is processed and the answer is everywhere above the neck. Music engages huge swathes of the brain- it’s not just lighting up a spot in the auditory cortex.”(Gill)

When should we begin to introduce our children to music?

While studies have suggested that infants can hear clearly in the womb at 20 weeks and that they will remember songs played for them during that time for at least a year after being born, the most exhaustive study I have found is by Dr. Barbara Kisilevsky who has proven that babies can hear and recognize their mother's voices from 30 weeks gestation on. (Kisilevsky, 2003). Her further research suggests that babies are actually learning in the womb. (Kisilevsky, 2010). Whether they begin to hear in the womb at 20 weeks or at 30 weeks or somewhere in between, what we do know is that babies are born with their ears wide open. While they may show a preference for their parent's voices, they have not yet developed the filters that adults have to tune out background noises or sounds that are not used in their culture. While we as adults only easily hear the sounds from our own native language (or languages) babies hear all sounds and only later begin to ignore those that are not useful for their language development. As Dr. Manny Brand says,

“The first year of life is a critical one in the child's development...it is generally recognized as the most important formative year in the development of receptive language (listening)...probably no other age group is as predisposed to music and sound as are infants.” Brand, Pp. 31

Musical Interactions are Important

So when do we introduce music to our children? As soon as possible. A mother singing to her child while in the womb or soon after birth is a wonderful and important gift to any child.

Research proves that time spent interacting musically with your child will help later in reading literacy as well as in musical literacy. Consider these findings:

“There is existing evidence to suggest that the development of this early language development is positively related to the amount of time devoted daily to singing by mothers.” Hewston, abstract from paper 2007

“...music training in children results in improved verbal memory.” Kraus, pp. 106

“...auditory processing in infancy is correlated with language, memory, and cognitive function in later childhood. (Benasich et al., 2006)” Kraus, pp. 108

“...preschool children and their parents may be the populations that can benefit most from music education.” Brand, p. 29

What can Parents do?

So if we as parents understand that incorporating music into our days with our children is crucial to their future development the next question is how do we do this? The home environment makes a huge difference.

“The home musical environment has a strong relationship to the musical development of the young child and this influence begins before the age of two and continues through the third year.” Brand, pp. 30

As previously stated, it seems clear that this influence begins even before birth. Babies in utero are soothed by the sound of their mother’s (and even father’s) voice. They recognize the sound of their parents’ voices once they are born from what they have previously heard in the womb. If they were lucky enough to have been sung to while in the womb, those same songs will be songs of comfort once they are in the world. Even in the womb they are building their ability to listen and this ability is crucial to later language and musical development.

“Edwin E. Gordon believes that the quality and quantity of what is absorbed unconsciously before age three relates directly to language development at a later age; moreover, without unconscious listening a child will not develop good conscious listening ability. This is one reason why child development specialists suggest parents read to infants so that language and words, albeit uncomprehended, set the foundation for future language development...The infant needs to be exposed to music so that he or she can unconsciously absorb it.” Brand, Pp. 29

We do not sing to our children because they will understand everything we sing. We sing to them so that they will build an unconscious library of sound and words that they can draw upon later.

The research goes even further to prove that musical experience can actually shape the way that we listen and the way that we experience the world. Dr. Nina Kraus of the Auditory Neuroscience Laboratory of Northwestern University has led the way with some fascinating research studies. She calls music the “quintessential multimodal activity” and talks with great enthusiasm about the differences in brain development between musicians and non musicians and how these differences affect how we live. Her research suggests that music actually shapes how we hear and that our experience with sound and music can affect our nervous systems. She says:

“The brainstem, an evolutionary ancient part of the brain, is modified by our experience with sound. Now we know that music can fundamentally shape our sub-cortical sensory circuitry in ways that may enhance everyday tasks including reading and listening in noise.”-Dr. Nina Kraus

“The effects of musical experience on sub-cortical auditory processing are pervasive and extend beyond music to the domains of language and emotion.” -Dr. Nina Kraus

Imagine! As a parent you have the ability to help your child to make neural connections that will last a lifetime. One fascinating study led by Gottfried Schlaug, a neurology professor at Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, MA led a trial that showed that stroke patients can rebuild their language centers from their “singing centers.” The lullabies and baby music that your child learns from you could one day help them to recover language. Incredible.

Lullabies are not just for Babies

Lullabies and baby music are not just for children, however. Study after study has supported the use of lullabies in reducing stress, anxiety and depression in new and pregnant mothers as well as helping them to bond with their children and feel like better mothers.

Consider these studies:

“...listening to music for at least 30 minutes daily substantially reduced psychological stress, anxiety and depression. These experimental results indicate that music therapy is an effective treatment option that promotes psychological health during pregnancy.”
Chang, pp. 2586

“...a prescribed two-week regimen of music therapy significantly reduced the intensity of stress, anxiety and depression in pregnant women. Music therapy is a cost-effective, enjoyable, non-invasive therapy and could be useful in creating an environment that is conducive to the well-being of the pregnant women.” Chang, pp. 2586

“This study has shown that in using lullaby singing to put their babies to sleep mothers experienced a decrease in anxiety and stress and an increase in feelings of success, empowerment and control...and worked to validate that they are indeed “good” mothers. Some mothers felt that their use of lullabies gave them a renewed confidence about their ability to be a mother and made them feel proud of themselves as mothers.” Mackinlay, pp. 89

“The results of this study suggest that lullaby singing has the potential to be used as a preventative measure in what could otherwise become a spiraling cycle of negative feelings leading to the potential for post natal depression and mother-infant detachment.” Mackinlay, pp. 89

“Qualitative findings also supported the use of lullaby singing in facilitating maternal bonding, a factor which mothers with post-natal depression found to be particularly helpful.” Hewston, abstract from paper, 2007

Listening to lullabies and singing to our children benefits both the child and the mother. I found that to be true in my own experience. Using music with my son, whether it was a lullaby to help him sleep or a “Mommy Jingle” used to communicate with him was very empowering for me as a mother. There is also evidence that singing to your child will make it more likely that they will sing with their own children one day.

“Results indicated that musically experienced parents were more likely to play and sing music for their infants...The strongest associations were between singing as a parent and being sung to by a parent, especially mothers.” L. Custodero, pp. 107

“The findings from our study indicate that experience matters-parents with specific music educational experiences as well as memories of being parented musically were much more likely to sing and play music with their infants than those without those experiences.” Custodero, pp. 109

By singing to your child you are forming musical links that will last for generations.

So we now know that a musical routine with your child will:

- facilitate the neural connections needed to help them with further education,
- will help reduce stress in parents and therefore in children,
- will make it more likely that music and it’s benefits will be passed on to future generations ,
- and that music activity actually shapes the brain in positive ways.

This may be encouraging to parents who already love to sing, but what if you were not sung to as a child or if you are very uncomfortable singing and now as a parent you want to

develop a musical routine for your child? Is all lost? Not at all! I love the optimism of the following researcher:

“Community centers and health care agencies should present music in parenting classes, addressing the importance of musical interactions in bonding and attachment and in communication skills for parents. A portion of the “well child” health review should include attention to the musical development of the child. Social service and medical models of integrated delivery systems could be applied to ensure musical instruction for each child.” Fox, pp. 26

Although calls to help parents develop musical skills to use with their babies have largely been ignored in the mainstream there are many ways that you can educate yourself to promote your child’s development.

My thoughts and practical solutions:

As a musician and a mother I thought that I would be singing to my baby from before he was born all through his childhood. While I did sing to him in the womb (and he attended many concert performances from that warm vantage point) he was born six weeks prematurely and was so sensitive to sound that a full lullaby was too much for him to handle until he was 10 months old. I learned early that we need to be adaptable when it comes to our children and that there is no single way of parenting or of sharing music with our families.

As the “Lullaby Lady” and as a teacher of music I am often asked what people can do to feel more comfortable singing to their children. This is what I tell them:

- 1) Everyone has a right to sing.
- 2) No matter what you sing or how you sing it, your child wants to hear your voice.

You are their voice of comfort. They will not judge you. Do not judge yourself.

- 3) When we raise our imperfect voices in song it gives our children permission to sing in their own way.
- 4) When we give our children the gift of our voices we teach them that music comes from people not just from machines (CD player, radio, tv, computer).
- 5) When children know that music comes from people then they are given permission to be *creators* not just *consumers* of music.

So much of what we call “music” today is the perfected recording of professionals. While this is nice for us to listen to, we often trade authenticity for perfection and our listening experience suffers. I believe that it is crucial that our children hear us singing and when they are old enough, and the setting is not too loud, taking your child to see live music is a fabulous way to expand their musical experience and interest.

This brings me to a question I am often asked. “What do you think of playing CD’s to babies and children?” On the one hand recorded music expands the possibilities of what the child can hear. On the other hand it is a step removed from authentic sound and takes away time that might be spent creating music in the moment. Here are my thoughts:

- 1) Singing, humming, and/or rhythmically speaking to our children is crucial. This does not have to be complex. Learn one lullaby that you can sing consistently at night before bedtime. Hum to your child as you rock them. Play musical games with them like the hokey pokey. Dance with them in store aisles to the musak!
- 2) Recorded music should be selected carefully and presented carefully as an addition to music that the family creates for themselves.

The sonic environment that our children grow in affects them physically just as it does all of us. Who hasn't chosen music to cheer us up or to calm us down? We all know that music is a powerful force in our lives. Before putting on a CD for your small child I recommend asking the following questions:

- 1) What is your sonic environment like and how will adding this recorded music change it?
- 2) How can you interact with the music so that it becomes a multisensory experience that you share? For example, can you dance to the music with your baby? Is the music for playtime and can you sing along? Can you act out some of the songs or illustrate them with baby signs? Is this relaxing music that you can play on a regular basis to relax and snuggle to?
- 3) A few well chosen CD's that your child can listen to over and over, that can become a part of your routine are better than a huge variety of music that can't be taken in. Children thrive on routine and repetition.
- 4) Remember, your baby and young child have no filters. While we can have music on "in the background" and it will not distract us, for babies and young children there is no such thing. Everything they hear they are fully present to and learning from. Having music on constantly around a child can exhaust them so make sure that you are allowing for quiet time. In our world, quiet time is usually harder to come by than stimulation.

Thank you and a Gift

I hope that you have enjoyed this free report and that it has inspired you to seek out ways of incorporating music into your life with your child. If you are looking for a CD of lullabies to use as a stress reliever or as a way to learn lullabies to sing to your child, I hope that you will consider my album *Lullaby and Goodnight -33 Lullabies for Babies*. This CD is a triple album of songs carefully crafted to be used as a nightly cue for bedtime and sleep. It is sung simply a cappella so that it is easy for you and your child to follow and so that it does not needlessly stimulate them when the goal is sleep.

If you are looking for other ways to incorporate music easily into your life with your child I invite you to learn about our online *Mommy Jingles* course. This course provides new parents with over 40 jingles designed to calm, comfort and communicate with your baby, toddler and preschooler in 2 minutes or less. Each jingle you add to your life increases the music in your home! Yay, you! The course is lots of fun and designed with parents of children aged birth to three in mind.

If you decide to buy Mommy Jingles, you will also get a free digital download of my lullaby album and if you enter the code **FR100 you will save \$100 off the cost of the course just for reading this report!**

Thank you for investing in building a “sound foundation” for your family. Keep singing!

Best Wishes,

Amy Robbins-Wilson, “The Lullaby Lady.”

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