

Wired for Love: Research Behind the Power of a Mother's Voice

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Sometimes a simple phone call to your mom can be instantly calming, even as an adult, right? It turns out there's science behind this phenomenon. There is biological power of a mother's voice, which triggers a lowering of stress hormones and boosts feel-good chemicals in her children. If you're wondering if you're getting this parenting thing right, rest assured that even the simplest aspects of who you are and what you do make a profound difference.

I recently came across two very interesting research studies. In the first one, the researchers gathered 61 girls between the ages of 7 and 12 and their mothers. The girls were separated from their mothers and had to complete some simple tasks designed specifically to heighten stress in children. They were then divided randomly into three groups:

In the first group, they were physically reunited with their mothers

In the second group, they were allowed to call their mothers to share about their experience, without seeing them in person

In the third group, the girls were not allowed to speak to or see their mothers; instead they were given time to relax on their own and watch a calming video

The researchers then measured the stress hormone cortisol at several time intervals. For the first two groups who were able to interact with their moms, their cortisol levels decreased more significantly compared to the third group. Even an hour after the stressful tasks, the girls who had no contact with their mothers had higher levels of cortisol compared to the other two groups who did.

They also measured the "love hormone" oxytocin and in the same way the girls who could talk to, touch, and/or see their mothers saw a higher increase in oxytocin after the stressful event. Oxytocin did not change much for those girls in the third group who did not interact with their mothers. Even the phone call was apparently enough to decrease stress and cause a calming effect; there was no marked difference between oxytocin levels between the girls who saw their mothers and those who simply spoke to them

over the phone.

Even more interesting, the researchers did the study again with very similar parameters, except they added a fourth group. Girls in the fourth group were able to text their mothers after the stressful tasks without seeing or hearing from them. Amazingly, they saw similar results. The fourth group did not see a significant decrease in cortisol or increase in oxytocin. It's not simply the interaction with their mothers, but there is something special about being able to hear, see, and touch their mothers which is soothing and comforting.

I can't help but feel that the power of mother's voice is rooted into our very bones and DNA. It is in our mother's womb, in that place of ultimate safety and comfort, where we first hear that voice. In our first moments of awareness, we're surrounded by our mother's voice and presence. Perhaps before we even hear our own voices, we hear our mother's. While the researchers studied a small group of girls in a specific age range, I don't think this is a phenomenon restricted to a select few. Interestingly, the researchers did not coach the mothers on what specifically to say or do for their daughters when interacting with them. They also screened for potentially abusive relationships.

Where there is a safe and loving relationship, one's mother's voice is soothing on a biological level. I know as a mother to three small children myself, I cannot help but second guess or question myself sometimes. I know many of my peers feel the same. Because we love them so much, we want to be the best mothers we can be. We sometimes take any negative behavior in our children as an indication that we're failing as mothers. Sometimes it feels like we can never really know until they are grown and successfully living a happy life decades from now if we did a "good job." And it's a huge relief when we see some little clue or glimpse, "Okay, I must be doing something right."

Reading these two research studies tell me that my presence and my voice makes a difference, even in ways I can't control and can't even see. God created us to respond on this amazing small level. You cannot help it, cortisol just decreases and oxytocin increases in response to interacting with mother. Maybe things will shift slightly as children age, but I think it is still ingrained in us from those very first moments when the mother's presence is your entire world. So if you are a mom trying the best for your kids, please take this as encouragement that you are making a difference. Just your presence, your touch, and your voice can be reassuring, relaxing, and brings peace to your children.

If you'd like to read these two studies, check them out below.

Seltzer, L. J., Ziegler, T. E., and Pollak, S. D. (2010). Social vocalizations can release oxytocin in humans. *Proceedings. Biological sciences*, 277(1694), 2661 - 2666. doi.org/10.1098/rspb.2010.0567

Seltzer, L. J., Prosofski, A. R., Ziegler, T. E., and Pollak, S. D. (2012). Instant messages vs. speech: hormones and why we still need to hear each other. *Evolution and human behavior : official journal of the Human Behavior and Evolution Society*, 33(1), 42 - 45. doi.org/10.1016/j.evolhumbehav.2011.05.004