

ARTICLE REFERENCE: Roberts, MY & Hampton, LH. (2017). Exploring cascading effects of multimodal communication skills in infants with hearing loss. *Journal of Deaf Studies and Deaf Education*. 1-17. Doi:10.1093/deafed.enx041.

KEYWORDS: Mother-Child Interactions, Gestures, Communication

WHAT WAS STUDIED, HOW WAS IT STUDIED AND RESULTS:

What: The article addresses (1) whether gestures and vocalizations are associated with spoken words in children with hearing loss, (2) whether early communication skills are related to maternal sensitivity and stimulation, and (3) whether mothers' responses to child communication varies by the way a child communicates (and between children with hearing loss versus not) .

How: Mother-child interactions were measured at four time points, six months apart, with a measure of gestures use, the Language ENVIRONMENT Analysis system, a parent-report measure of vocabulary, and a 20 minute play sample.

Results: (1) In children with hearing loss, early prelinguistic gesture use is correlated with vocalization and vocabulary at later time points and vocalizations were related to vocabulary use, (2) maternal sensitivity is related to later child communication, and child communication level appears to affect later maternal sensitivity, and (3) mothers of children with hearing loss are more likely to respond to a gesture plus vocalization/ word than a single gesture or vocalization/word. Mothers of children without hearing loss are equally likely to respond to either act.

HOW THIS INFORMATION MAY BE USEFUL TO YOU AND YOUR CHILD:

- Gesture use and responsive communication between a mother and a child, particularly for a child with hearing loss, relates to later language development.
- Maternal responses to children are likely affected by a child's communications. It is important to focus on helping mothers and children communication (in other words, focusing on only a parent or only a child isn't enough).

WHO WAS STUDIED:

Number of children: N = 16 children with hearing loss and N = 16 children with hearing in the normal range. Mothers also participate in the study (and all had normal hearing)

Age of children: Children entered the study at an average of 10 months old and were assessed four times at 6-month intervals.

- Most children at each time point wore bilateral hearing aids, one participant had a cochlear implant and a hearing aid, and up to four participants at any time point had bilateral cochlear implants. Degree of hearing loss ranged from mild (3 participants) to profound (4 participants) and children received an average of 7 hours of early intervention per month at 6 months of age and 11.6 hours at 24 months of age.

WHAT STILL REMAINS TO BE ANSWERED:



- Larger-scale replications of these results, particularly across etiologies of hearing loss, would better support these findings.
- The best interventions for improving maternal sensitivity and teaching gesture/ vocalization are still unknown.

WHERE CAN I FIND MORE INFORMATION:

A resource for prelinguistic communication: <http://vkc.mc.vanderbilt.edu/kidtalk/>