Resources for Sign Language in Pediatric Therapy

1. Rowe JA, Rapp DL. Tantrums: remediation through communication. *Child Care Health Dev* 1980;6(4):197-208.

 Research study investigating the usefulness of sign language for an athetoid child. Results demonstrated significant improvement in emotion and behavior, resulting in higher ability to follow instructions and complete activities.

2. Barrera RD, Lobato-Barrera D, Sulzer-Azaroff B. A simultaneous treatment comparison of three expressive language training programs with a mute autistic child. *J Autism Dev Disord* 1980;10(1):21-37.

 Research study comparing language training models of total communication with sign training, nonverbal sign-alone training, and vocal training on a 4 ½ year old nonverbal child with autism using alternating treatment. Total communication was seen to be more effective in integrating expressive word acquisition. Furthermore, adding physical demonstration with multisensory input increased success.

3. Teaching Your Child Sign Language. Available at: https://www.speechbuddy.com/blog/speech-therapy-techniques/teaching-your-child-sign-language/. Accessed June 21, 2018.

 Using sign language with children is a good way to communicate a child's wants and needs, allowing them to express themselves and reduce frustration. You can begin using sign language around 6 months when the child is able to hold eye contact for 5 seconds, even if the child is not developed with motor skills as they will still associate the signs with objects and words. Repeatedly demonstrate as well as consistently use the sign.

4. Using Sign Language With Children Who Have Apraxia of Speech - Apraxia Kids. Available at: https://www.apraxia-kids.org/library/using-sign-language-with-children-who-have-apraxia-of-speech/. Accessed June 21, 2018.

 Even if a child has motor planning difficulties, using sign language is useful as a form of visual cueing dispite their inability to consistently sign a word themselves. Reasons to use signs for children: reduce frustration, symbolic communication, expansion of expressive speech, successful communication, controls rate of speech, serves as visual cues, kinesthetic reinforcement.

5. Benefits of Sign Language - Children’s Therapy Place. Available at: http://childrenstherapyplace.com/benefits-of-sign-language/. Accessed June 21, 2018.

 Using sign language can help improve motor development in addition to speech and language. It enhances parent and child bonds and can smooth transitions. It can help improve a child’s interaction with the environment through decreased frustration. In addition, it has been shown to improve I.Q.

6. Mueller V, Sepulveda A, Rodriguez S. The effects of baby sign training on child development. *Early Child Dev Care* 2014;184(8):1178-1191. doi:10.1080/03004430.2013.854780.

Research study assessing the effects of baby sign training on communicative, cognitive, social, adaptive behavior, and physical development. The results show a significant overall improvement in the development of children.

7. Fitzpatrick EM, Thibert J, Grandpierre V, Johnston JC. How HANDy are baby signs? A systematic review of the impact of gestural communication on typically developing, hearing infants under the age of 36 months. *First Lang* 2014;34(6):486-509. doi:10.1177/0142723714562864.

 This is a systematic review of the research related to effectiveness of symbolic gestures for typically developing infants. There is evidence to show that baby sign language helps improve communication development, although the extent is still unknown. There is no evidence to indicate baby sign language interferes with typical child development.