

# Theory of mind in deaf and deafblind children (Usher syndrome) with cochlear implants

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Theory of mind (ToM) is the ability to understand other people's mental states and it is related to language and cognitive skills both in typically developing (TD) children and children with atypical development, such as deaf children with cochlear implants (CIs) who show delay in the ToM development. Deaf and deafblind children (Usher syndrome) with CIs also achieve lower results on some language tasks and have poorer cognitive skills that are central for information processing in most language-related activities. One way of enhancing those skills could be auditory verbal therapy (AVT) that focuses on teaching auditory, speech, language, and cognitive skills. However, this method hasn't been investigated enough to be said that it is evidence-based. Additionally, providing early access to listening and language through early implantation can be beneficial for improving language and cognition. That is why the aim of this research is to compare ToM, cognitive and language skills in deaf and deafblind children (Usher syndrome) with CIs with hearing parents to TD children to determine the relationship between those variables and to examine the effect of implantation age and AVT on the said variables. Participants will be deaf and deafblind children with Usher syndrome (age 6-9) with CIs born to hearing parents and age-matched TD hearing children. Deaf children with CIs will form subgroups according to their implantation age (relatively early – up to 3 years and late – above 3 years) and whether or not they have been included in AVT. The data collection will consist of individual assessments (up to 45 minutes) during which ToM, language and cognitive tests will be administered. Testing of cognitive skills will be computer based and it will assess working memory, phonological skills and lexical access. Language will be assessed using standardized test for receptive and expressive vocabulary and ToM will be examined using widely-adopted ToM scale.