## Critical Review: Exploring Language Development of Bilingual Children with Cochlear Implants

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This critical review examines the existing literature regarding bilingual language development of children with cochlear implants. Six articles were included in this review. Research designs included four retrospective studies and two prospective studies. Overall, the studies provide suggestive evidence that bilingual children with cochlear implants can acquire age-appropriate language skills and that second language exposure may not impede primary language skills. More comprehensive research for higher quality evidence is needed in this area. Recommendations for clinical practice and future research are discussed.

## Introduction

and would precipitate further delay in oral language

A cochlear implant (CI) is an electronic medical device that can facilitate the provision of a sense of sound to children who have severe-to-profound sensorineural hearing loss bilaterally and they can be implanted in children as young as 12 months. Although the expected primary benefit of receiving CIs is improvement in audition, many secondary benefits such as the ability to acquire speech and language skills are attributed to them (ASHA, 2008). In fact, many profoundly deaf children who have received CIs at a young age have gone on to acquire age-appropriate speech and language skills, commensurate with their normal-hearing (NH) peers (Thomas et al., 2008). Research indicates that achieving these skills often requires some sort of therapeutic intervention, which is often offered by a Speech-Language Pathologists (SLP) and/or Auditory Verbal Therapists (Geers et al., 2011).

Understanding how to teach spoken language to a child with CIs is important and may become more complicated when a child is bilingual (BL). The majority of the existing literature regarding speech and language development of children with CIs and guidelines for clinical practice focus on monolingual (ML) children however, there is an increasing number of bilingual (BL) children with hearing loss (HL) who use a listening device. Clearly, there is a need to further investigate outcomes related to CIs with this population (Bunta et al., 2016).

Currently, the existing literature reports mixed evidence regarding BL language development of children with CIs and guidelines for best practice (Bunta et al., 2016). One prevalent opinion amongst clinicians and educators of the hearing impaired is that exposure to a second oral language might confuse deaf babies (whose auditory and language learning systems were already compromised)

appropriate comparison. Findings of overall language skills were often drawn from primary language skills instead of total language skills (considering first and second language skills). Out of the six studies one lacked use of appropriate statistical analyses