

Deafness impact on child development

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Deafness can affect multiple aspects of a child's development. This article explores these impacts and underscores the vital role audiologists play in early intervention.

As an audiologist, learning and understanding the impact of deafness on a child's development was an enlightening experience and was a crucial learning aspect to provide effective intervention and support for deaf children. Therefore, this article will reflect my learning in the development in deaf children and advocate for heightened awareness among audiologists working with children.

Factors influencing a deaf child's healthy development

Deafness is not the distinct cause of developmental delays per se. Rather, language is the underpinning drive for impacted childhood development. Language acquisition is influenced by early provision of hearing aids and the availability of language-rich environment perceived in language symmetry between the child and their parents.

Parent-infant engagement and interaction in the early years of the child's life promotes language skills, cognitive and behavioural growth and sense of belonging [1]. However, more than 90% of deaf children are born into hearing families, who may have little or no experience with deafness [2]. Those deaf children may receive reduced language inputs and are faced with communication barriers with their parents. Therefore, the lack of language input and meaningful interaction raises the risk of the child's impaired development in different domains [1]. Contrarily, deaf children with deaf parents have a common language and shared identity, therefore, those deaf children are at a lower risk of impacted development.



Overall, the rich language environment and social interaction facilitated by early amplification and language symmetry supported the positive development of interpersonal and social skills in deaf children. The early input of language has a significant contribution to the child's development, with no one modality (speech or sign) superior to the other [3].

The impact of deafness in different domains

Cognitive skills (theory of mind and executive function)

Deaf children are not necessarily born with cognitive deficits. Rather, deaf children may be disadvantaged by restricted access to language, which impacts their social interactions and, therefore,

influences cognitive skills development [4]. Theory of mind (ToM) is a form of social cognition skill that encompasses an individual's understanding that their feelings and beliefs are separate from others [5]. A deaf child may struggle to understand emotions and social norms, and adjust their own behaviour with respect to others; these characteristics are signs of impacted ToM skills. The impacted skills could be exhibited at home with siblings, during play or at school. Therefore, deficits in ToM negatively affect a child's social interactions with others and their academic performance [6].

Furthermore, deafness may negatively impact executive function (EF) skills in children [3]. EF is a set of skills that enable individuals to maintain attention, control impulses and arrange plans [7]. Deficits in EF skills mean a child may demonstrate impulsive, uncontrolled behaviour, cannot maintain attention on a given task and can have difficulty organising thoughts [8]. Therefore, a deaf child may struggle with social interaction, play and learning.

Self-esteem and identity

It was hypothesised that a child's deafness would lead to lower self-esteem due to child's lower language and communication

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skills, physical appearance of HA or CI, and impacted social skills [9]. However, there are many factors that influence deaf children's self-esteem. It is not deafness, but rather, it is the environmental and identity experiences around deaf children that influence self-esteem [10] and higher levels of self-esteem are associated with well-developed language.

Mental health

The impact of deafness on mental health in children can manifest in different aspects of their development, including behavioural, cognitive and emotional skills [11]. Overall, mental health in deaf children is influenced by their communication skills, identity and self-esteem, social skills, and relationships with others. Dammeyer found that delayed language (sign or spoken) and communication abilities and the presence of additional disabilities were the prominent factors associated with increased psycho-social difficulties in deaf children [12]. This means that deaf children can have difficulty with regulating emotions, understanding of self and maintaining healthy relationships with others, which affects their social-emotional development and wellbeing [6]. The research, therefore, suggests that deafness does not directly affect mental health; rather, the factors related to deafness and the surrounding environment may all contribute to a deaf child's mental health. Enhanced early language acquisition and social and cognitive skills all contribute to high levels of emotional wellbeing [13].

The audiologist's role

The audiologist plays an essential role in supporting a positive development in deaf children. All these aspects related to a

deaf child's development are interrelated, and supporting one aspect may influence the other and contribute to the child's overall mental health and social-emotional wellbeing.

As audiologists, our role is vital in early intervention and provision of hearing aids to support the deaf child's language-development and minimising the risk associated with delayed language acquisition. Moreover, it is our responsibility to address the deaf child's social needs and facilitate access to other health services based on these. Additionally, it is important for audiologists to empower parents' involvement in child's development and collaborate with the school and the Teacher of the Deaf to provide appropriate support to the child.

Conclusion

The consequences of deafness and delayed language development in deaf children can manifest in various ways. Language differences can impact infant-parent interactions, the child may struggle with social relationships due to difficulties in behavioural and emotional control, and learning challenges may arise from delayed cognitive skills. All these factors may lead to lower self-esteem and reduced emotional wellbeing in deaf children. This indicates that all aspects of child development are interlinked and are influenced by the deaf child's language skills, parent's involvement, surrounding environment and educational placement. An audiologist must be aware of the clinical implications of deafness and developmental delays and strive for early detection and intervention to prevent the negative impact of deafness on the child's development.

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