

Sound Connections Fact Sheet

About Sound Connections

First Voice conducted a three-year research project (2011-2014), known as *Sound Connections*, across its six centres to investigate the listening, spoken language and social inclusion outcomes of children with hearing loss who receive listening and spoken language early intervention.

The project comprised three phases: a literature review to define and measure social inclusion, in particular in children with disabilities; the creation of a national database to track the longitudinal speech and language outcomes and rate of progress of children aged 6 months to 7 years; and an online parent questionnaire seeking information on social inclusion.

This project was supported by a Telstra Foundation Social Innovation Grant.

Research Approach

The project studied the language outcomes of 532 children enrolled at First Voice member centres and the social inclusion outcomes of 95 of the children. Information collected was benchmarked against existing national datasets of typical hearing children.

The *Sound Connections* project was conducted over four distinct phases, being

1. Literature Review: around the concept of social inclusion and its measurement in children with disabilities
2. Speech and language database: To investigate the speech and language development and rate of progress of young children with hearing loss enrolled in listening and spoken language programs across First Voice member centres
3. Parent Survey: To investigate the social inclusion of young children with hearing loss enrolled in listening and spoken language programs across First Voice member centres
4. Data analysis and reporting: collation and comparison of data collected via Phases 1, 2 & 3

Why Social Inclusion?

Social inclusion is a common focus of paediatric early intervention. It is identified as a desired outcome in key policy documents including the Australian National Disability Agreement and the United Nations Convention on the Rights of Persons with Disabilities. Social inclusion may be influenced by the child's communication mode, as well as speech and language skills, with previous research finding an association between a higher level of social inclusion and clear speech production, good speech understanding and a large vocabulary.

Defining Social Inclusion

Varying indicators of social inclusion are used across diverse fields, such as economics, education and health. To develop a model for defining and evaluating social inclusion, First Voice conducted a comprehensive Literature Review.

Following the Literature Review, five faces of social inclusion were defined:

1. Personal independence and self-determination: choice, wellbeing, independence
2. Health and access to services: health and disability, community resources, housing, social accommodation

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3. Education: education participation, education and skills
4. Interacting with society and fulfilling social roles: social networks, social participation, acceptance, role functioning and acceptance, behaviour, social resources
5. Economic participation of the parent: work participation, material/economic resources

The *Sound Connections* research project focused on education and interacting with society and fulfilling social roles, as they are most closely linked to the goals of listening and spoken language early intervention.

Key Findings

Auditory, speech and language outcomes

The children with hearing loss receiving listening and spoken language early intervention:

- were optimally amplified, providing them with optimal access to speech sounds that is necessary for the attainment of speech and language, educational and social outcomes
- usually showed language, vocabulary and speech skills commensurate with typical hearing peers.

Educational and social outcomes

The children with hearing loss receiving this type of early intervention:

- usually demonstrated comparable, if not better social inclusion to typical hearing peers in relation to educational and social outcomes.

For example, children with hearing loss were more likely to have been involved in recreation and leisure activities at home over the previous week, such as reading a book, or playing with toys or games. This may be due to the guidance parents receive in early intervention and parents encouraging participation in these activities to improve speech and language.

Impact of spoken language outcomes on social inclusion

The vocabulary and speech skills of children with hearing loss receiving this type of early intervention were found to impact on some areas of social inclusion, such as:

- primary caregiver satisfaction with the level of teacher support
- children being invited to social activities
- children using computer or mobile technology devices.

Developing a best practice service delivery model

A best practice service for listening and spoken language early intervention:

1. Combines the essential elements of: early diagnosis of the hearing loss, optimal amplification of the hearing loss; and listening and spoken early intervention.
All First Voice member centres follow the philosophy of combining the essential elements to maximise the outcomes of children with hearing loss.
2. Demonstrates the age-appropriate outcomes of the children with hearing loss by school age specifically related to listening, spoken language and social inclusion.
A recent study by First Voice showed that children with hearing loss who received listening and spoken language early intervention at First Voice member centres usually demonstrated listening, spoken language and social inclusion outcomes in line with their typical hearing peers by school age.
3. Demonstrates age-appropriate outcomes consistently over time.
Using the First Voice dataset on the outcomes of over 500 children with hearing loss in the early intervention services, First Voice tracks the yearly progress of the children. The outcomes consistently show that each year, most children are achieving age-appropriate outcomes.

Next Steps

First Voice will be continuing to add to its database and provide annual updates on the state of listening and spoken language outcomes for children with hearing loss. The research findings have also been used to create a best practice service delivery model for First Voice member centres. This has been put into practice from March 2014 and will continue to evolve based on the evidence-base *Sound Connections* has established.

Now that *Sound Connections* has provided a solid evidence-base for early intervention and listening and spoken language early intervention in addressing early childhood hearing loss, First Voice will be using this research as a platform to ensure additional government support. The long-term economic benefits of providing children with the skills to fully participate in all facets of life as they grow and mature cannot be understated and will more than pay back any initial investment.

Further information:

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