

# **The effect of different feeding methods and sucking behaviours on speech sound development in children aged 2-5 years.**

*(Are infant feeding methods and sucking behaviours linked to speech sound development at age 5 years?)*

## **Plain English Summary**

### Background:

In the UK every year around 48,000 children aged 2-5 years are referred to NHS Speech & Language Therapy (SLT) services with difficulties using the right sounds in their talking. This is known as speech sound disorders (SSD). This is the largest population seen by Speech and Language Therapists and costs the NHS about £24 million per year. Children with SSD are more at risk of mental health problems and difficulties making relationships with those around them. They are also more likely to struggle with learning at school and be involved with the criminal justice system at some point in their early lives. When a baby is born parents make different choices about feeding their baby. Some breastfeed, some bottle-feed and some use a mixture of both. Some babies also like to have a dummy, while others suck their hand and some don't suck anything. Some studies have found that breastfeeding is linked to better language and learning in later childhood, while others have found that dummy sucking has the opposite effect. However, the effect that different types of feeding have on speech development has not been looked at in as much detail.

### Aim:

This study will look at whether there is a relationship between how babies are fed, whether they suck a dummy/hand and how they develop speech.

### Objectives:

1. To describe the relationship between feeding, sucking and speech development.
2. To describe the different effects that breast and bottle-feeding have on speech development.
3. To support healthcare professionals to identify young children who might be at risk of SSD.
4. To make recommendations for further research into using different types of assessment and therapy for breast and bottle-fed children.

5. To work with dummy and baby bottle industries to support the development of teats that reduce any impact on speech development.

#### Design & Methods:

This study has three independent but related strands to look at the relationship between feeding, sucking and speech development.

Strand 1 will use data from the Avon Longitudinal Study of Parents and Children (ALSPAC) which was carried out in the 1990s and collected information on over 14000 pregnant mothers, their partners and their babies. This strand will use existing questionnaire and speech assessment data to look at feeding, sucking and speech development in children aged 2 and 5 years.

Strand 2 will use data from a new study (ALSPAC Generation 2), which is collecting information from the children who are now being born to the children from the original ALSPAC study. This strand will involve collecting new data to look at the relationship between feeding, sucking and speech development in children aged 2-4 years.

Strand 3 will look at children aged 2-5 years who are on SLT clinical caseloads and have a diagnosis of SSD. It will use parent questionnaires to gather information on feeding and sucking history as well as information about the parents. A Speech and Language Therapist will carry out a speech assessment to collect information on the types of speech errors the child makes. This information will then be used to look at the relationship between feeding, sucking and SSD.

#### Patient & Public Involvement:

A Parent Group of children under age 5 with SSD has been formed to advise the researchers on how to go about inviting families to participate in the study, as well as carrying out assessments. The group will also help to design the information sheet that will be given to families to explain the study. This Parent Group will continue to guide and influence the research throughout the life of the study to ensure that the research and findings are relevant and applicable to the people it aims to benefit.

#### Dissemination:

The findings of this study will be shared and discussed with the national group of Speech & Language Therapists specialising in working with children with SSD, as well as other health professionals (e.g.

Health Visitors, midwives). This will be done through conferences, meetings and publications. This will be particularly important if there are recommendations to be made regarding changes in practice and providing new advice and information to parents and families. The findings will also be shared with patient/parent representative groups, including national charities and organisations (e.g. The Communication Trust) who support children with SSD. The researchers will also work with dummy and baby bottle companies to develop guidelines for designing teats that minimise any negative effect on speech development.