

Study reveals recurrent middle ear infections can have a major impact on children's development

February 5 2007

Study author, Dr Heather Winskel, from the University's School of Psychology, says middle ear infection or otitis media (OM) is the most common childhood illness.

"At least 70% of children are likely to experience at least one episode of otitis media before they are three-years-old and for many children it is a recurrent problem," says Dr Winskel.

"The peak incidence of OM occurs when children are between 6 and 18 months, which is the most critical period of language development, when the infant is tuning in to the speech sounds that characterise their native language.

This process allows young children to break into the stream of speech and eventually map sound onto meaning.

"Fluctuating hearing loss due to OM during the early years of life presents the child with an intermittent speech signal that is difficult to process."

According to Dr Winskel, while earlier studies have indicated that ongoing middle ear infections in young children appear to be linked with poor language and literacy skills these studies have also produced conflicting results.

"This study attempts to address the shortfalls of earlier research by using a variety of language and reading measures which allow us to ascertain which particular levels or aspects of language and reading are affected by an early occurrence of OM."

The project compared two groups of children aged between 6 and 8 years from schools across western Sydney - 43 children with an early history of repeated episodes of OM before the age of three and a control group of 43 children matched for chronological age, gender and socio-economic status.

Children were tested on three different linguistic levels - phonological awareness, semantic knowledge and narration and reading ability.

Dr Winskel says the findings support the view that if a child experiences OM during the crucial first years of life, it may have long-term effects on subsequent language and literacy development.

"There was a general tendency for children with a history of OM to achieve lower scores on phonological awareness skills of alliteration, rhyme and non-word reading, semantic skills of expressive vocabulary and word definitions and reading compared to non-OM children," she says.

"Extensive research has indicated that phonological awareness is a necessary skill children need to begin reading.

"It appears that although some speech and language deficits may be overcome with age, other effects have the potential to persist beyond the pre-school years."

Source: Research Australia

Citation: Study reveals recurrent middle ear infections can have a major impact on children's development (2007, February 5) retrieved 31 January 2023 from <https://medicalxpress.com/news/2007-02-reveals-recurrent-middle-ear-infections.html>

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