Comparison of Hearing Aided Children’s Language Environment with and without the Use of FM Systems

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Background
The national rollout of the Newborn Hearing Screening Programme in England was completed in March 2006 (www.hearing.screening.nhs.uk)
This unique development has been matched by government sponsored initiatives aimed at raising the standard of early intervention services to families (www.dcsf.gov.uk)
Alongside these developments, amplification technology has seen rapid advancements, including hearing aids with integrated FM receivers and digital FM technology
FM amplification has been widely used in educational settings by providing a short microphone distance between speaker and listener (Boothroyd, 1992).
To date the advantages of integrated FM and the potential benefits of FM systems for pre-school hearing aided children have yet to be formally assessed and explored

FM System (Assistive Hearing Device)
FM Transmitter
Speech sent directly over dedicated FM radio frequency
Hearing Aid
Integrated FM Receiver

Studies
Longitudinal: a 6 month longitudinal qualitative study to explore parental use of FM systems with very early identified pre-school children
Sub-study: use of LENA to compare adult word counts (AWC), child vocalisations (CV) and conversational turns (CT) in controlled environments with and without FM use

Aim
To compare the language environment of hearing aided children with and without the use of an FM system

Research Question
Is there a difference in the language environment of a hearing aided child when using an FM system compared to when not using an FM system?

Method
Sample from Longitudinal FM study group (n=7)

Impact of Study
Findings from this study:
• Will provide detailed information on the language environment of pre-school hard of hearing children
• Will provide quantitative comparisons of AWC’s, CV’s and CT’s with and without FM system use for hearing aided children
• Can be used to counsel parents of hearing aided children on the possible advantages of FM system use with their child
• Can influence service providers decision making process on FM system use with pre-school hearing aided children

References

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