NSW Speech Pathology
Evidence Based Practice Interest Group

Critically Appraised Paper (CAP)

CLINICAL BOTTOM LINE: A Metaphon approach was successful in improving the speech intelligibility of a child with moderate phonological disorder over a year, however as there were no controls or comparative treatment types or regimes, limited comment about the effectiveness and efficiency can be made.

Clinical Question [patient/problem, intervention, (comparison), outcome]: In a child with phonological impairment of unknown origin, is a Metaphon approach effective in improving speech accuracy (e.g., as measured by PCC, error analysis, or consonant probe) over time?

Search Terms: Metaphon, phonological development,

Search Systems: Recommended by Dr Elise Baker, University of Sydney

Citation: Jarvis, J. (1989). Taking a Metaphon approach to phonological development: a case study. *Child Language Teaching and Therapy, 5*(1), 16-32. doi: 10.1177/026565908900500102

Design: Single subject case study

Participants: 4;9 year old boy with phonological impairment of unknown origin. Hearing, IQ, comprehension age appropriate. Stimulable for all phonemes in isolation except /ʃ, ʒ, tʃ, dʒ, θ, ð/. The participant could perceive minimal-pair differences. PACS Ax single word/connected speech. Little contrastive use of phonemes in WI position particularly.

Experimental Group: Year long Rx administered by teacher of the deaf also working at school. Term 1 & 2 = 3x20min sessions per week, Term 3 = 2x20min sessions per week, and 1x20min session in last month. Target selection based on following a developmental route, processes most affecting intelligibility, and achieving early success to keep motivation. Targeted groups of phonemes rather than individual pairs of phonemes. Worked until the participant achieved success with a few single words, then changed goal. 2 phase Metaphon approach used (Dean & Howell, 1986). The participant was stimulable at sound level for all the phonemes targeted. Sequence of processes targeted was as follows; gliding of /l/, context sensitive voicing, stopping, fronting, gliding of /ð/.
Control Group: No control group or within subject control measures.

Results: At mid-year assessment (6 months of Rx) there were changes at single word level but minimal change in connected speech. Final assessment revealed identical single word and spontaneous samples – the participant had not acquired any new phonemes but had generalised from single word to conversational level. Spontaneous use of clusters emerged. Rate of change increased towards end of program. Increased self monitoring and repair skills noted.

Comments on Design: Difficult to evaluate effectiveness given lack of control data. One subject only, no comparison to untreated subjects, or subjects treated with other approaches or different schedule of treatment (timing). No within subject controls.

Level of Evidence (NH&MRC): ?level IV or lower

Appraised By: Members of the EBP paediatric speech group
Clinical Group: Paediatric Speech Group

Date: 9th December 2004

Nov 2002