Clinical Question [patient/problem, intervention, (comparison), outcome]: In Children with Specific Language Impairment with an MLU <2 what therapy approaches are effective?


Design/Method: Multiple baseline design across three sibling pairs. Significant language delays of younger siblings were measured by scores from PPVT, EVT, PLS-3 and Leiter-R. MLU and diversity of vocab calculated from 20-min language sample. Training and observations of interaction occurred in the siblings’ homes. Sessions lasted 30-60min which included training of responsive interaction intervention and 10 mins of play with sibling. An additional 10 minutes of observation occurred during a snack break to observe generalisation during every fourth baseline and intervention session. Four stages of data collection; baseline (twice a week), nonverbal mirroring training, verbal responsiveness training and follow up (1 month post-intervention). Each treatment condition continued until the older sibling’s data were higher than baseline levels for at least 3 consecutive sessions. Intervention was conducted twice each week (30-60 min per session). Interactions were video-recorded and behaviours were coded and analysed into the following categories: a) responsive interaction strategies used by the older sibling, b) acts of intentional communication by younger siblings, c) verbal prompts provided by the trainer. Social validity and procedural fidelity data collected using blinded raters and questionnaire tools. This data was analysed and reported.

Participants: Three sibling pairs (older, younger age): 10.6 (females), 9.8 (males) and 9.5 (females). Younger siblings had a diagnosis of Down Syndrome and a significant language delay. Older siblings’ language skills were not measured or reported.

Experimental Group: as above

Control Group: Nil

Results: Variable results across sibling pairs. Older siblings demonstrated varied ability to use strategies effectively following training. After introduction of responding training all three older siblings showed an increase in their use of responding and descriptive commenting. The frequencies of commenting were high for younger sibling 1 and 3 throughout baseline and mirroring condition. Follow up data indicated that older siblings were able to maintain use of responsive interaction strategy and mirroring behaviours remained above baseline level. Percentage responsiveness also remained high for older sibling 1 and 3. It decreased for older sibling 2 (possibly explained by low rate of communication attempts younger siblings 2, therefore limited opportunities to respond). Limited generalisation to new setting. Subjective observation of interactions between siblings appeared to demonstrate improved sibling interaction during intervention.

Comments – Strengths: multiple time points of data collection, baseline and generalisation data collected, high procedural fidelity, non-verbal communication also coded as intentional communication, raters of reliability and fidelity were blinded to intervention conditions. Weaknesses: no reporting of older siblings’ language skills, no control group, small sample size, no reporting on home practise, data on prompted and spontaneous use of strategies was combined and analysed together (nil discussion about how this could affect the results).

Level of Evidence (NH&MRC): Level IV – Case series

Appraised By: Language EBP

Date: 18/10/12
Guidelines for completion of the CAP

Clinical Bottom Line
The consensus of the reviewers on implications of the paper on clinical practice. Whilst this may be somewhat subjective, it is hoped that robust discussion, the Level of Evidence and your comments on the design will enable you to produce a practical/realistic 'bottom line'. Many of the papers in Speech Pathology may have limitations, but the Clinical Bottom line should be aimed to help clinicians apply what evidence there is.

Clinical Question
This should ideally include four components:
- the patient or problem
- the intervention (or diagnostic test or prognostic factor)
- the comparison intervention or test (optional)
- the outcome

Design
Refer to pages 12 to 15 of the EBPIG Resource Package for guidance in reviewing the design used.

Comments on Design
Pages 12 to 15 of the Resource Manual should again assist here. You may also find it useful to refer to the forms 'Evaluating case studies/case series' and 'Critical appraisal sheet' adapted from Dr Lil Mikuletic's (see 'Critiquing/Appraising the Evidence').

Level of Evidence
It is recommended that the paper you are reviewing be rated against the NH&MRC Levels of Evidence, as reproduced here. The levels may be updated from time to time by the NH&MRC, but use of the ratings listed here will ensure consistency across CATs and groups. These levels are listed with comments on pages 15 and 16 of the Resource Package.

<table>
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<tr>
<th>LEVEL</th>
<th>Description</th>
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<tbody>
<tr>
<td>I.</td>
<td>Evidence obtained from a systematic review of all relevant controlled trials</td>
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<tr>
<td>II.</td>
<td>Evidence obtained from at least one properly designed randomised controlled trial</td>
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| III.  | Evidence obtained from well-designed pseudo-randomised controlled trials (alternate allocation or some other method)  
  1. Evidence obtained from comparative studies with concurrent controls and allocation not randomised (cohort studies), case-control studies, or interrupted time series with a control group  
  2. Evidence obtained from comparative studies with historical control, two or more single-arm studies or interrupted time series without a parallel control group |
| IV.   | Evidence obtained from case series, either post-test or pre-test and post-test |