NSW Speech Pathology
Evidence Based Practice Interest Group

Critically Appraised Paper (CAP)

CLINICAL BOTTOM LINE:
Children with word finding difficulties make more errors on naming target words from sparse lexical neighbourhoods and which are lower frequency words. Blocked errors and phonologic errors are influenced by word frequency, age of acquisition and lexical neighbourhood. The substitutions they make are usually higher frequency words, learned earlier than the target word and have more neighbours. The authors suggest using phonological associative cues to teach words from sparse neighbourhoods when blocked errors are likely and when phonological errors are likely, teach words from sparse neighbourhoods by linking syllables to phonological mnemonic cues.

Clinical Question [patient/problem, intervention, (comparison), outcome]:
What techniques are effective for improving word-finding difficulties in children aged 2 – 12 years old?

Citation:
German D. and Newman R. (June 2004).The Impact of Lexical Factors on Children's Word Finding Errors. Journal of Speech, Language and Hearing Research. Vol 47. 624-636.

Design/Method:
Multiple single case studies. Analysis based on results of naming pictures – 106 items on a standard version of Test of Word Finding-2 (TWF-2).
Students were enrolled in a Sp/Lang therapy program and were identified by SLP as having word finding difficulties. SP Path conducted an observation assessment – Word Finding Classroom Observation Survey (German and German, 1992). There was no treatment following the study or experimental study.
Results from word finding test were analysed to determine the type of errors. To examine the impact of lexical factors on students' word-finding skills, three questions were considered.

1. For children with WFD, would such lexical factors as a word's frequency of occurrence, familiarity, and lexical neighbourhood predict a word's ease of retrieval during confrontation naming tasks?
2. For children with WFD, do lexical factors of target words predict error patterns?
3. For children with WFD, do the lexical factors of the target word have an impact on the substitutions produced during the word-finding disruption?

Participants:
30 Euro-American children, 18 male, 12 female with language and learning disabilities (LD) and WFD identified and referred by SLP.
3 ethnic groups identified in the sample: Caucasian (93.3%), African-America (3.3%) and Hispanic (3.3%).
Age: - 8:0-12.9 years. (Grade 3 – 6) enrolled in a LD school who have specific WFD.

Experimental Group:
Diagnosed with learning difficulty rather than language disordered by SLP. No intellectual disability. Student's showed average receptive language and receptive vocabulary based on CELF-3 and PPVT-R.

Control Group:
No control group

Results:
Children with WFD are more accurate on naming words from dense lexical neighbourhoods. Words from sparse neighbourhoods resulted in more blocked errors ie delayed or no response. Semantic errors seem to occur for reasons other than the lexical factors of the word form. Phonological errors were predicted by a combination of target word frequency and the frequency of its lexical neighbours. Phonological errors may be the result of trying to produce a word with relatively uncommon sound patterns. Substitutions were more likely to be higher in frequency of occurrence than the target word; learned earlier than the target word and; have more neighbours**.**

Comments:

- Strengths
  - Answered their study questions thoroughly

- Weaknesses
  - Not a treatment or experimental study.
  - Experimental group is unusual in that learning difficulty with normal language and mild WFD (Word finding quotient =80.92, SD=7.47)
  - Above results were based on 27 students however sample size indicated 30. Nil indication of who did not participate and why.
  - Paper is vague and unclear about language and learning disorders based from their language assessment results.
  - Study didn't clarify circumlocution errors (earlier level). Study based in phonology model (assumes student already has semantic level.)

Level of Evidence (NH&MRC): Level IV

Appraised By: Paediatric Language Group
Clinical Group:

Date: May 2007