



Critically Appraised Topic (CAT)



CLINICAL BOTTOM LINE:

- Milieu teaching (MT) and recasting are both effective therapy techniques for children with Specific Language Impairment and Mean Length of Utterance (MLU<2)

However...

- Lower level children may benefit more from MT
 - MLU <1.84 and/or
 - Language ability lower than 22-26 months
- Higher level children may benefit more from recasting
 - MLU >1.84 and/or
 - Language ability above 33-45 months

2. Clinical [PICO] Question

In children with Specific Language Impairment with an MLU <2 what therapy approaches are effective?

3. Search Terms/Systems:

Search Terms: Language delay, language impairment, recasting, milieu, intervention, therapy, responsive interaction

Search Systems: CIAP databases, Speech Bite, manual searching of reference lists

Criteria for including an article:

- Articles written in the last 20 years

4. Quantity of the evidence based:

Number of papers identified: 8

Number of suitable papers actually capped: 6

5. Overall level of the evidence base: (number of studies according to each NHMRC level)

I _ II 1 III-1 _ III-2 1 III-3 1 IV 3

6. Nature the evidence base: (number of feasibility, efficacy and effectiveness studies)

Feasibility 0 Efficacy 0 Effectiveness 0

7. Overall findings from the evidence-base are:

☐ compelling

☒ suggestive

☐ equivocal

Comments:

8. Results:

The 6 capped papers investigated either milieu treatment (responsive interaction) or recasting techniques. The three most compelling articles were as follows:

Yoder P, Kaiser A, Goldstein H, Alpert C, Mousetis L & Fisher R (1995). An Exploratory Comparison of Milieu Teaching and Responsive Interaction in Classroom Applications. Journal of Early Intervention, 19(3), 218-242.)

- Both milieu and responsive interaction effective at increasing child's outcomes
- For children with low expressive or receptive (age equivalent under 22-26 months) milieu teaching was more effective than responsive interaction. It was thought that elicited teaching is more effective at teaching early targets (vocabulary learning and semantic relationships)
- For children with higher language skills (age equivalent above 33-45 months) responsive interaction was more effective

Nelson & Camarata (1996) Effects of imitative and conversational recasting treatment on the acquisition of grammar in children with specific language impairment and younger language-normal children. Journal of Speech & Hearing Research, 39, 4, 850-860.

- Found that children with specific language impairment (SLI) and normal language acquire language targets faster when conversational recasting treatment is used compared with imitative or no treatment.
- Found that SLI children and their matched 'normal language' children were similar in the grammatical progress
- Suggested that SLI children can sometimes learn grammatical structures as efficiently as WNL language children if language is tailored to specific language levels. Discussed that this may be a frequency issue.

Yoder, Molfese, Gardner (2011). Initial Mean Length of Utterance (MLU) Predicts the Relative Efficacy of Two Grammatical Treatments in Preschoolers with Specific Language Impairment. Journal of Speech, Language, and Hearing Research, 54, 1170-1181.

- Children with pre-treatment MLU <1.84
- Milieu Teaching facilitated a growth in grammar faster than Broad Target Recasts (BTR)
- Children with a pre-treatment MLU > 1.84:
- No significant difference between Milieu Teaching and Broad Target Recasts
- Treatment effects were maintained 5 months post-treatment

9. Recommendations:

Is *evidence* from current clinical practice the same as clinical bottom line?

☐ Yes (the CAT is now complete)

☐ No

☒ Undecided

Undecided because:

☐ more research evidence needed.

☒ more evidence on clinical practice is needed

If clinical practice is not the same as the bottom line, and the research evidence is **compelling** (or suggestive, if the issue is important and/or addressing an issue with limited if any research)

☐ change is not needed to current clinical practice, because *evidence* from clinical practice shows that current practice is more effective /efficient than evidence-based recommendations. (CAT now complete)

☒ Change is needed to current clinical practice (then, complete box # 10).

10. Application to practice (when change has been indicated):

In light of the summary comments from individual CAPS about relevance of the research to practice:

☒ **Change is needed, and it is possible** –Clinicians need to consider the child's mean length of utterance before selecting the intervention approach. If recasting is chosen specific targets should be selected rather than broad recasting. Clinicians should avoid recasting too much information or recasting on utterances where the intended message is not clear. Clinicians need to be aware that they are using an adequate rate/intensity of recasts or milieu teaching episodes

NOTE: This final box could be completed by clinical group, or, individual member within group depending on differences in workplace settings /procedures / policies. (If being completed by individuals, the uploaded version can remain blank when the CAT is uploaded to the website.)

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Date: 15/4/2014

NSW Speech Pathology EBP Network CAT by Baker, E. (2012). Based on Worrall & Bennett (2001), Dollaghan (2007) and NHMRC (2009).

**PLEASE NOTE THE DATE WHEN THIS CAT WAS COMPLETED,
BECAUSE THE CLINICAL BOTTOMLINE MAY HAVE CHANGED IN LIGHT OF MORE RECENT RESEARCH.**