NSW Speech Pathology Evidence Based Practice Network

Critically Appraised Paper: TREATMENT (CAP-T)

CLINICAL BOTTOM LINE: In children with SLI who have limited use of the 3rd person singular form, a treatment approach containing recasting techniques may be effective in increasing accuracy of the target. Non-corrective recasts may be beneficial and the benefits of recasts are likely to be greater if the child's utterances contain subjects.

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

Citation: Hassink, J., Leonard, L. (2010) Within-Treatment Factors as Predictors of Outcomes Following Conversational Recasting. *American Journal of Speech-Language Pathology, 19, (213-224)*

Method: Design and Procedure (e.g., note type of research design, comment on randomization, summarize treatment intensity as appropriate, such as dose (trials) per session, session length, frequency, total treatment duration, summarize general procedure, resources / materials required)

The current study examined transcripts of treatment sessions from a previous study conducted by Leonard in 2004. Leonard's original study used recasting to target the 3rd person singular form in preschoolers with SLI.

Background of original study: 17 children aged 3-4;4 years with SLI who demonstrated limited use of 3rd person singular. They received 4 individual treatment sessions per week, over 6 months for a total of 96 sessions each. 48 different stories were developed containing multiple examples of the 3rd person singular. During the first half of the session the clinician read and acted out a story with toy figures and props whilst the child listened and watched. The child was then given the toys and props to play with and during this time the clinician provided 12 recasts of the participants utterances, each containing the target form. Dose frequency was controlled- exactly 12 recasts were provided per session.

A third person singular probe was conducted on each child at different stages (pre-treatment in order to meet criteria for the study), mid treatment (after 48 sessions) and post treatment (after 96 sessions). The probe measured each child's % accuracy in a play-based sentence completion task on 12x 3rd person singular items. The results from this study indicated significant improvement in the children's use of 3rd person singular vs the control (past tense –ed), however there was wide variation in the degree of improvement for each child.

Current Study: The current study aimed to determine whether characteristics of the child utterance-clinician utterance relationship during the recasting treatment sessions, influenced the learning process and the degree of improvement.

Audio recordings from 6 sessions for each child were coded and analysed by the author (data from 30-32 was combined to indicate 'near-term' predictors of the target & 50-52 to indicate long-term predictors of the target). 3 measures were taken: 1) Frequency of platform utterances** that were prompted by the clinician (eg. Questions, direct or indirect requests) 2)Frequency of 'subjectless' sentences that were recasted (eg. The platform utterance does not contain a subject and the recast includes both a subject and the target) 3)Frequency of non-corrective recasts (non-corrective recasts occur when the child does not make an error on the target form, however the recasted utterance contains the target eg. Child: That guy drinking again. Clinician: He drinks his milk every day.

It was predicted that the platform utterances prompted by the clinician would be less beneficial to recast as they may not be as relevant to the child as a child initiated utterance. It was also predicted that recasting of subjectless sentences would place additional processing load on the child and also be less effective. Non-corrective recasts were predicted as having a positive effect on learning of the target. Lastly, it was predicted that the influence of these factors would decrease over time with improvement in the children's acquisition of the target.

Method: Participants (where relevant note number of participants, inclusion/exclusionary criteria, characteristics of participants in experimental group and control group/s): 17 children studied by Leonard et al. (2004,2006). Participants were aged between 3:0 and 4:4. All monolingual English speakers. Hearing WNL. Scored 85 or above on Leiter International Performance Scale – R (Roid and Miller 1997) and between 16.0 and 25.5 on Childhood Autism Rating Scale. Parents all contacted SP independently with expressive lang concerns. Scored 80% or higher for /s/ and /z/ production in final word position. Impaired expressive language on the Structured Photographic Expressive Language Test – Preschool and Developmental sentence score. No or limited third person singular –s in spontaneous speech sample and on pre-treatment probe

Results: (briefly summarize the results, note whether the outcome was evaluated with/without blinding, note how many (if any) of the participants 'dropped out' of the study, note if **effect size** was reported)
No significant relationship between frequency of prompted platform utterances and their use of the target form at either after 48 treatment sessions or 96 treatment sessions (ie recasting on prompted platform utterances was not detrimental to learning the target)
As predicted, the frequency of recasts of subjectless sentences was associated with more negative outcomes (approaching significance)
Non-corrective recasts were found to have a significant positive effect on outcomes. ie successful acquisition of the target did not depend on the recast serving as a grammatical correction of the child's utterance
The strength of these associations weakened as the treatment progressed

Level of Evidence (NHMRC, 2009) *Circle one*   I   II   III-1   III-2   III-3   **IV**

Quality of Evidence: ☐ Rated   ☐ Not Rated
    (i) rating system (e.g., PEDRo, SCED Scale from SpeechBITE) _____
    (ii) score _____

Nature of Evidence: ☐ feasibility   ☐ efficacy study   ☐ effectiveness study

Relevance to practice (e.g., were the participants and/or treatment context similar/different to everyday clinical practice? Is replication possible in clinical practice? What barriers might prevent the results from be applied to everyday clinical practice? What could be done to address barriers? If barriers can't be modified, how could the procedure be modified to accommodation limitations in clinical practice?)
The participants and the target form chosen were highly relevant to most paediatric SP caseloads. The frequency of sessions and overall number of sessions is not replicable in most settings, although could be modified so that extra sessions are done as home follow-up
Clinician's may consider using 'non-corrective' recasts and avoiding recasting of subjectless sentences when targeting grammatical forms

Additional comments (e.g., limitations of the study, need for further research addressing a specific issue)
The number of children seen by each clinician varied (There were 16 different clinicians and 8 of these provided treatment to more than 1 child). Some children needed to change clinicians during the program.
Did not control for amount SP therapy received outside the study

Attempted to control for dose and keep treatment procedures/materials the same

Appraised By: Paediatric Language

Date: October 2012