

Language Intervention for Late Talkers: A Systematic Review

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Purpose & Research Question

- Purpose: Describe language intervention techniques that aim to increase the mean length of utterance (MLU) and grammatical complexity of children with language delays, commonly referred to as "late talkers."
- What specific language intervention techniques are being used with children with language delays that are positively impacting their rate of language acquisition from the two- to three-word stage?
- Children with language delays
 - Age: 2-6 years old
 - MLU: 1.5-3.0

Typical Language Milestones

- Language begins with the appearance of the first word around a child's first birthday
- 18 months:
 - Expressive vocabulary size of 50-100 words
 - Sequences of words, sounds, and gestures
- 24 months:
 - Expressive vocabulary size of 200-300 words
 - Use two-word utterances frequently
- When half of a child's utterances consist of two-word combinations, that child will begin to produce three- and four-word combinations.

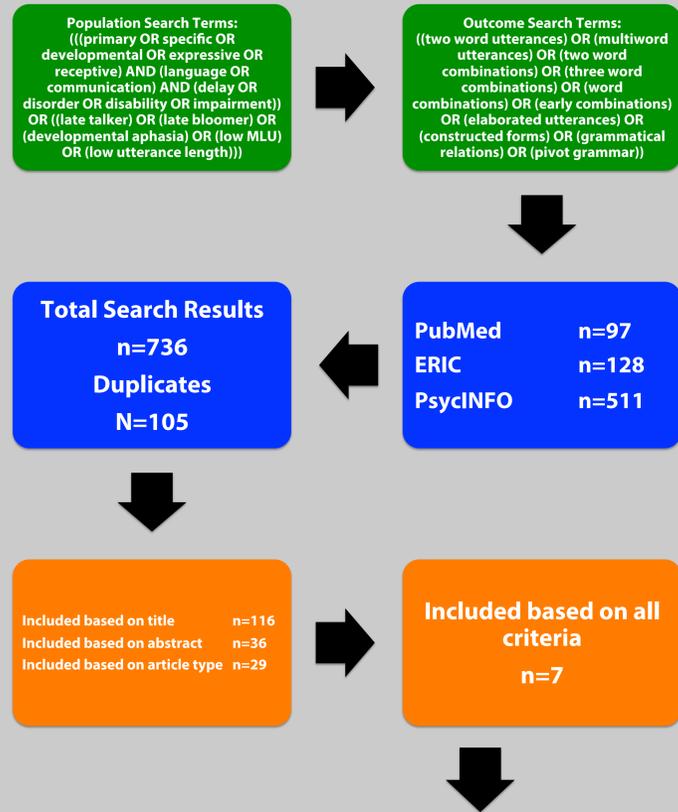


Semantic Relations

- 18-36 months
- Combination of two words resulting in relational meanings that signify more than the meanings of the single words alone
- Concepts of identity, recurrence, non-existence, location, and possession of agents, actions, and objects

Late Talkers

- Not meeting typical language milestones at same time as age-matched peers
- Expressive vocabulary of less than 50 words
- No multiword combinations by the age of 2
- Late emergence of first word productions
- Prolonged learning of vocabulary, sentence structure, and literacy



References

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Percent Agreement Between Raters	
Screening Procedures	Reliability
Included based on age range (2-6)	91%
Included based on MLU (1.5-3.0)	86%
Included based on intervention	83%
Included based on increased MLU	77%
Included based on increased sentence variety	64%

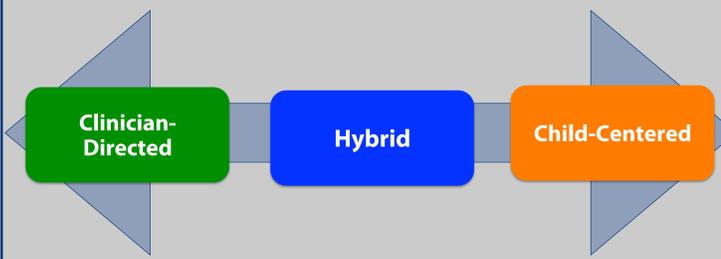
Results

- Play**
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- Multiword child replies were elicited by adult topic continuations more than by adult topic initiations (Yoder & Davies, 1990).
 - Using semantic relations, MLU increased through structured play (MacDonald et. al, 1974).
- Imitation**
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- When targeting semantic relations through the use of imitation and conversation, MLU increased (MacDonald et. al, 1974).
- Story Book Reading**
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- When reinforcing vocabulary through story book reading and language development activities, MLU increased by 50% (Remaly, 1990).
 - Through maternal picture book reading and child-directed speech, MLU increased (Whitehurst et al., 1988).

- Elicitive Prompts**
- Telegraphic: "Say duck walking", "duck walking"
- Grammatical: "Say the duck is walking", "the duck is walking"
- Using milieu teaching and semantic relations, responses to telegraphic elicitive prompts and grammatical elicitive prompts were similar (Bredin-Oja, 2012).
- Naturalistic Joint Action Routines**
- Targeting semantic relations through models, recasts, and elicited imitations, lexicon size had a strong relationship with MLU (Olswang et al., 1997).
 - Vocabulary size and a variety in lexical development may not only predict, but also trigger the production of word combinations.

Conclusions

- No evidence that any of the three treatment approaches (child-centered, hybrid, or clinician-directed) was more effective at increasing the production of semantic relations (Olswang & Coggins, 1984).
- Evidence from our search leads to two potential recommendations:
 - **First**, researchers and clinicians can assume that child-centered and hybrid approaches to language intervention are efficacious for children with language delays.
 - Children with language delays respond well to naturalistic environments and salient targets
 - Children with language delays respond well to the use of semantic relations as target stimuli.
 - However, evidence regarding clinician-directed approaches to language intervention is too limited to determine the effectiveness for children with language delays.
 - **Second**, researchers and clinicians can assume that parent involvement in language intervention is effective for children with language delays.
 - Parents may help children with language delays generalize target stimuli to new environments.
 - However, it is not clear that all parents will respond well to educational language training sessions or utilize language intervention techniques outside of typical teaching contexts.



Questions Remaining

- Which specific language intervention technique yields the best results for late talkers?
- How do we best treat children with language delays that are progressing from the two- to three-word stage in order to increase their MLU as well as their sentence variety?
- Although it appears that child-centered and hybrid approaches are both effective for children with language delays or "late talkers," it is still difficult to discern which specific language intervention technique on the continuum yields the best results.