



# Phonological Interventions for Children with Speech Sound Disorders

*Armstead, Kylie; Mentor: Dr. April Yorke*

Speech and Hearing, Cleveland State University, Cleveland, OH

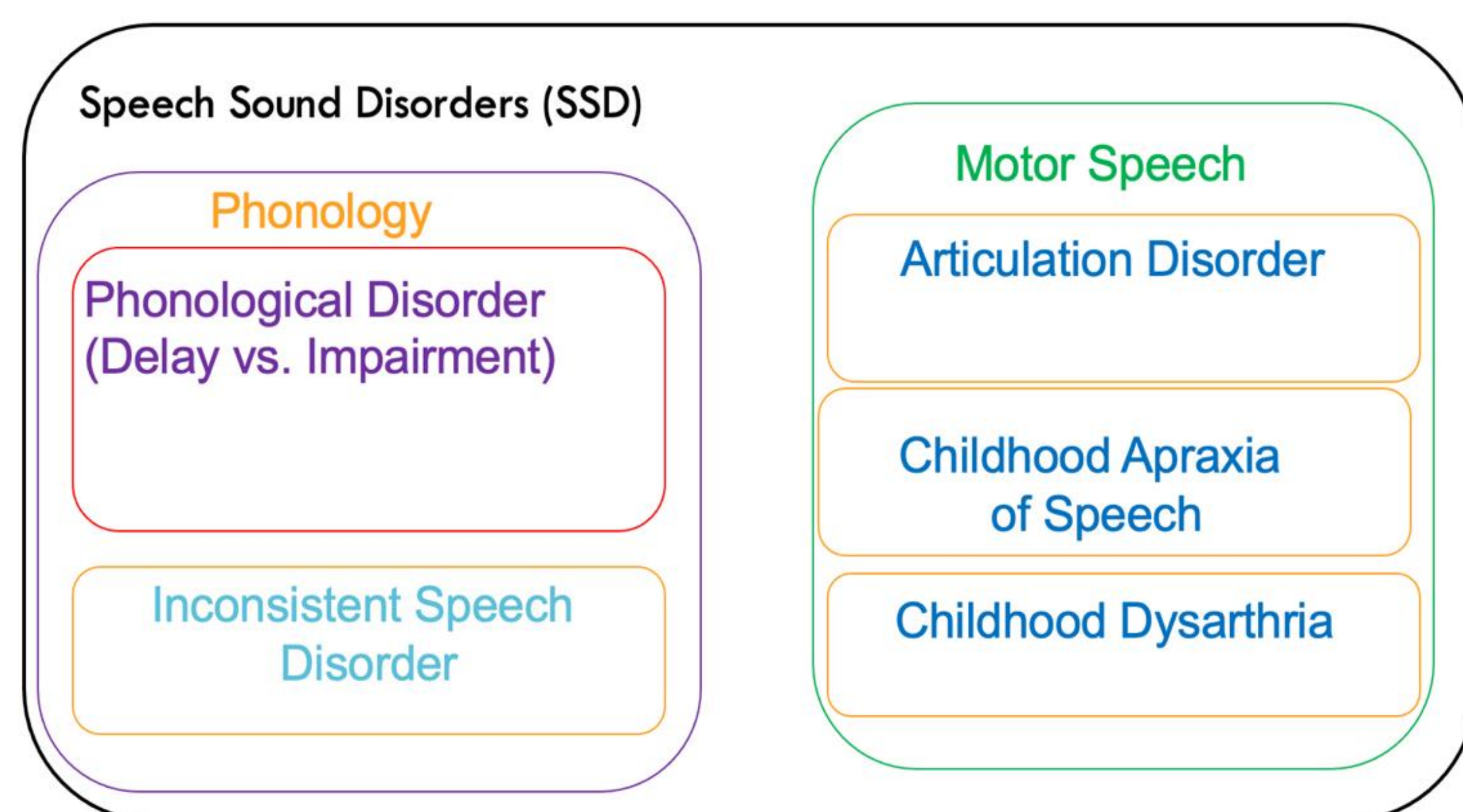


## Abstract

Speech sound disorders refer to the different types of difficulties which affect the intelligibility of a child's speech. There are five types of speech sound disorders which include: phonological disorder, inconsistent speech disorder, articulation disorder, childhood apraxia of speech, and childhood dysarthria. Phonological treatments which focus intervention on hearing the distinction between speech sounds and creating phonological representations for speech sounds have been proven effective for children speech sound disorders. The purpose of the current paper is to summarize evidence-based interventions that are beneficial to children with speech sound disorders. The results provide a wide range of effective interventions to meet the needs of children with speech sound disorders.

## Introduction

Speech sound disorder (SSD) is an umbrella term referring to speech difficulties which affect intelligibility. Children with speech sound disorders have difficulty with perceiving sounds, phonologically representing sounds, and/or articulating or producing the sounds. Children with difficulty perceiving and/or phonologically representing sounds could benefit from phonological-based interventions either as their primary therapy or as a supplement to motor-speech based interventions. Evidence-based phonological interventions to treat speech sound disorders in children include: minimal pair therapy, multiple oppositions therapy, maximal oppositions therapy, phonotactic therapy, and core vocabulary therapy



**Figure 1. Summary of speech sound disorders and their classifications.**

## Research Questions

1. What interventions are most effective for children with speech sound disorders?
2. Who is each intervention best suited for?
3. What are the steps in each intervention?

## Methods

The current poster provides a summary of evidence-based phonological interventions for speech-sound disorders in children. Phonological treatments may be the core of a treatment for phonological disorder or just one part of a treatment plan for a variety of other disorders.

## Minimal Pair Therapy

Age: 3;0 and older; a mild to mild-to-moderate phonological disorder

- Minimal pair therapy utilizes word pairs that differ by only one phoneme, a minimal pair, to target discrimination skills.
- Minimal pairs are used when a child has difficulty contrasting some sounds, ultimately addressing specific sounds with generalization

Therapy

1. Introduce words, explain each term and ensure the child understands.
2. listening discrimination activities with a clear example of the correct pronunciation.
3. In production phase, the child produces the word pairs and are provides feedback.
4. After the child is successful, test for generalization.

Does this work in group therapy: Yes

## Multiple Opposition Intervention

Age: 3;0 to 6;6; moderate-to-severe or severe phonological impairments and children presenting with phonological collapse

- It utilizes a set of words that the child pronounces the same or similarly, targeting phonological collapse and highlighting the contrast between sounds.
- Phonological collapse is where many sounds are being replaced with one.

Target selection

Identify the child's patterns of error, including their phonetic collapse, to create rule sets. A child may have multiple rule sets and a distance metric is used to select therapy targets.

Distance metric uses a combination of:

- Maximal classification, targets that are very different from each other in articulatory categories and other complexities.
- Maximal distinction, targets that are distinct from the child's error production rather than proper production.

Does this work in group therapy: Yes

## Maximal opposition therapy

Age: 3;6+ and children demonstrating extensive gaps in their phonological inventory

- It utilizes word pairs that are maximally distinct from each other by differing across multiple features of the sounds.
- Maximal pairs are designed to promote the greatest chance of generalization.

Does this work group therapy: Yes

## Core Vocabulary Approach

Age: 3;0-11;11 and inconsistent speech disorder

- The goal is consistent pronunciation of words, regardless of correctness.
- This therapy focuses on the pronunciation of words with modeling and practicing the child's best pronunciation.
- Words are chosen based on the needs of the child.

Does this work in group therapy: No

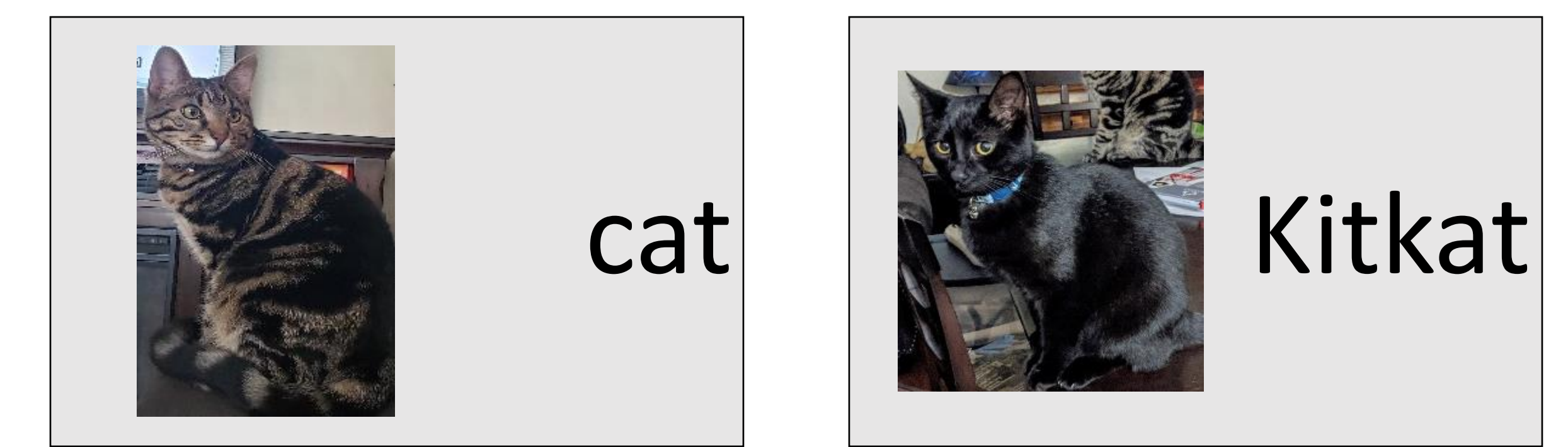
## Phonotactic therapy

Age: 3;0+ and moderate to profound speech sound disorder

- Beneficial for children who reduce syllable structures in error patterns on the word level, including childhood apraxia of speech.
- Phonotactics are the rules that govern the combination of sounds in language.
- For example, what consonants can begin the word and how vowels and consonants go together.

Word selection

- Identifying the combination of known words and known sounds.
- Make a combination of known word shapes with unknown sounds and known sounds with unknown word shapes to work with the child.
- Consider the emergent word shapes, communication needs of the child, and coming developments for the child when choosing words.



**Figure 2. Two Stimulus Cards.** Two example cards that may be used in therapy. Left, card representing 'cat'. Right, card representing a pet cat named 'Kitkat'.

## Conclusions

Not all speech sound disorders are rooted in phonological challenges. However, phonological challenges (learning to hear the difference between sounds and learning to cognitively represent those differences) are common in children with speech sound disorders. Therefore, an understanding of evidence-based phonological treatments is necessary. It is important that speech-language pathologists develop skills in a wide range of treatments for phonological interventions. This will enable SLPs to better fit interventions to the needs of each child.

## Acknowledgements

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