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**THE ROLE OF SONG IN SUPPORTING LANGUAGE DEVELOPMENT OF
PRE-SCHOOL CHILDREN WITH LANGUAGE DELAYS: A SYSTEMATIC
REVIEW**

Zuhriatul Aini¹

zuhriatulaini09@students.unnes.ac.id

Andita Sayla Purnawati²

saylaandita@students.unnes.ac.id

Abstract

This systematic review addresses the role of songs in supporting language development in preschool-aged children (3-6 years) with language delays. Based on six selected studies published between 2015 and 2025, this review analyzes the impact of song-based interventions on children's vocabulary acquisition, sentence structure, language comprehension and predictive language processing abilities. The studies used a variety of research approaches, including experimental, quasi-experimental and qualitative, and were conducted in different countries. The results show that songs, through rhythm, repetition and a multisensory approach, can significantly improve children's word learning, speech fluency and engagement in communication. In addition, songs also help children predict language in real-time, by activating cognitive and auditory pathways that are important in language comprehension. This study confirms the potential use of music and rhythm in early intervention programs for children with language delays and provides practical implications for teachers, therapists and parents. Although the results are promising, further research with larger sample sizes and longer intervention durations is needed to ascertain the effectiveness of song-based learning strategies in broader educational and clinical contexts.

Keywords: *Language development, language delay, preschool children, song-based intervention*

¹ Undergraduate Student, State University of Semarang

² Undergraduate Student, State University of Semarang



A. INTRODUCTION

Language development is an important part of childhood, especially for preschoolers as they begin to learn complex communication skills. Language is essential for thinking, interacting with others, and feeling emotions (Richards, J. C. 2022). Language helps children understand the world around them. However, some children experience delays in language development (Language Development Delay/LDD). These delays can affect their social, academic, and emotional abilities in the future (T Sappok et al., 2022). Research shows that children with LDD often have difficulty understanding, processing, and expressing language verbally (WA Febriantini et al., 2021). This can continue into elementary school and affect their academic achievement (R Riad et al., 2023). These delays can be caused by many things (DVM Bishop, 2017), such as not being exposed to enough new things, neurological disorders, or sensorimotor disorders that make it difficult for them to learn language (Krishnan, S et al., 2016). Therefore, children with language delays need specific and effective interventions so that they can develop optimal communication skills according to their age (Vermeij, B. A et al., 2023).

Music, especially songs, has been widely studied as an effective tool to help children with LDD develop their language skills (Karolina, G. 2024). Songs have rhythm, melody, and repetition, which can help children recognize patterns in language and improve their communication skills (OA Rorintulus, 2023). Songs provide a structured, repetitive medium that can help reinforce comprehension, improve phonological awareness, and build sentence construction skills (S Roland, 2024). A study by Linnavalli et al. (2018) found that a program that used songs to teach music improved preschoolers' phonemic and vocabulary skills. Another study by Renata Eccles et al. (2021) showed that music therapy helped children with language difficulties improve their phonological awareness and early literacy skills. In addition to helping with language, songs can also help children interact with others and become more interested in learning. Using music in language intervention can improve children's attention and motivation, which are essential for effective language learning.

Songs help children with language delays better understand new concepts. Songs are often combined with movement and visual expressions that clarify the meaning of the



words (RW Rahmadhanti et al., 2022). This helps children better understand the structure of language. Another study found that when songs are combined with movement, it can help children with language disorders better understand sentence structure (N Bedoine et al., 2016). Research shows that music-based interventions stimulate different areas of the brain that play a role in language processing. Using songs in language lessons makes learning more fun, reduces stress for children with LDD, and helps them learn language more easily.

Studies have shown that songs can help children with language development (RL Gordon et al., 2015). However, the results of these studies are not all the same. Most of the studies that have been conducted have used an experimental quantitative approach, while studies that incorporate qualitative research findings are still limited. Some studies show significant positive results, while others highlight methodological limitations such as small sample sizes and lack of adequate control groups. This study aims to review the research that addresses the effectiveness of songs in supporting the language development of children with LDD. By combining the findings from this research, it will identify what works well with song-based interventions, the key benefits gained, and the challenges that may be encountered in their use. The results of this study are expected to provide clear and well-supported advice to educators, parents, and therapists about the use of songs as an effective tool for children with language delays.

B. RESEARCH METHOD

This study used a systematic review method to analyze the role of songs in the language development of children with language delay. Referring to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, relevant studies were collected, screened based on eligibility criteria, and analyzed qualitatively to identify patterns and effectiveness of song-based interventions.

ELIGIBILITY CRITERIA



Studies included in this review had to meet several inclusion criteria, namely: (1) addressed the use of songs as an intervention to improve the language skills of preschool-aged children (3-6 years) with language delays, (2) used experimental methods, quasi-experiments, or qualitative approaches in evaluating the effectiveness of songs, and (3) were published in indexed journals within the last 10 years. Meanwhile, irrelevant studies, such as those that did not focus on children with language delays or were non-academic articles, such as opinions and editorials, were excluded from the analysis.

Table 1. ELIGIBILITY CRITERIA

Aspects	Inclusion Criteria	Exclusions Criteria
Date	Articles published in the last 10 years (2015–2025).	Articles published before 2015.
Language	English and Indonesian.	Other language articles without accessible translations.
Sample	Preschool children (3–6 years) with language delay, including speech delay or limited language development.	Children 6 years of age and older or children without language delay; adult or adolescent population.
Setting	Use of songs, music, or rhymes as interventions to support language development.	Non-musical interventions (e.g. pure speech therapy, use of technology, story books without musical elements).
Publication	Qualitative studies, mixed studies, experimental studies, quasi-experimental studies, longitudinal, action studies, and other systematic reviews.	Opinion articles, editorials, commentaries, or letters to the editor; articles without empirical data or non-scientific studies
Database	Available in full-text and accessible through academic databases (Scopus, SINTA, Google Scholar, etc.).	Available only in abstract form or inaccessible sources (e.g. predatory journals, personal blogs).

INFORMATION SOURCES AND SEARCH STRATEGY

Data was obtained from various academic databases from Google Scholar, Sinta, and Scopus using keywords such as TITLE (song OR rhyme OR "nursery rhyme" OR



"nursery song") AND ("language development" OR "language delay" OR language OR "linguistic development") AND (preschool OR pre-school OR toddler OR kindergarten OR "very young learner") AND (efl OR english) PUBYEAR > 2015 LANGUAGE (english) AND SUBJAREA (arts OR busi OR deci OR econ OR psyc OR soci). We focused on articles published in the last 10 years (2015–2025) to obtain the most recent research results.

STUDY SELECTION

The study selection process followed the PRISMA guidelines to ensure a systematic and transparent approach. Initially, a comprehensive search was conducted in academic databases such as Google Scholar, Sinta, and Scopus using predetermined keywords. The retrieved studies were then screened based on title and abstract to determine their relevance to the research topic. At this stage, the studies were further evaluated to ensure their suitability based on research methodology, sample characteristics, and focus on song-based interventions for children broadcasting with language delay. Duplicate and irrelevant studies were removed, and any discrepancies in study selection were resolved through discussion among researchers.

EXTRACTING AND ANALYZING DATA

Each article chosen for review was about using songs to help preschool children with language delays learn to speak. The same findings were recorded using a data template made just for this review. The template had these sections:

- **General Information:** This included the author(s), year of publication, title of the study, and the country where the research was conducted.
- **Research Design:** This section included the research methodology, characteristics of the sample (like age range, number of participants, and diagnosis of language delay), and the primary research questions or objectives.
- **Findings and Discussion:** This section summarizes how each study addressed the research questions, focusing on how songs or musical interventions contributed to language development.



After getting all the data, the next step was to put it into an MS Word table to make it easier to analyze.

C. RESULT AND DISCUSSIONS

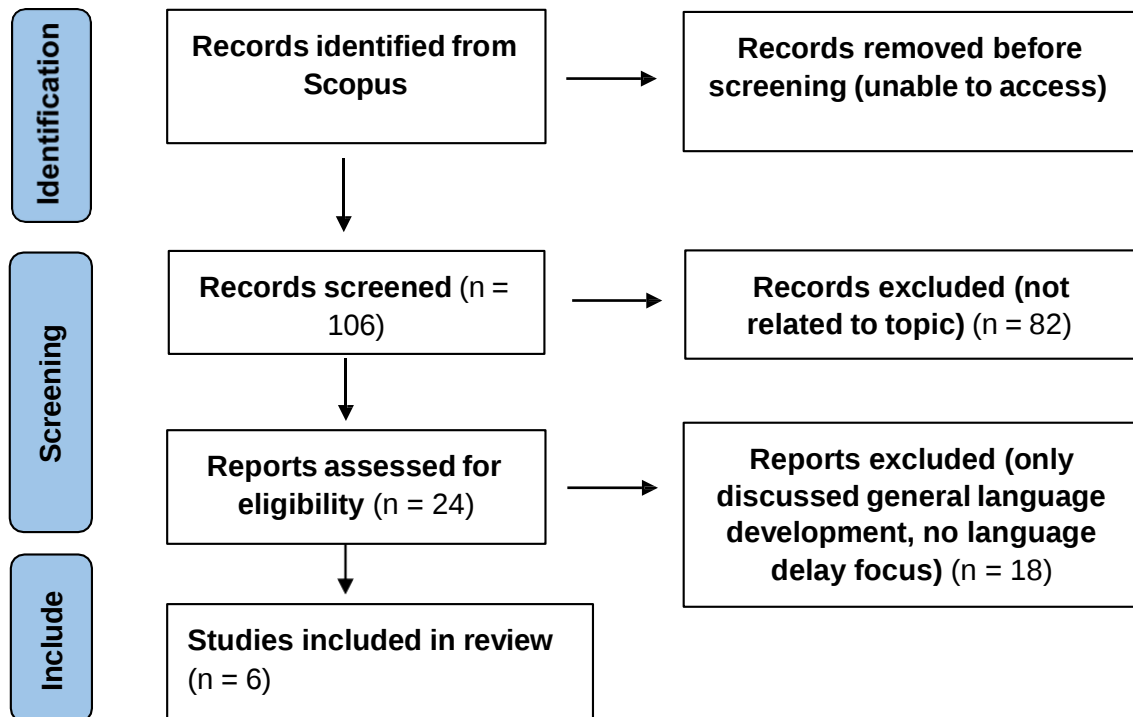
RESULT

The initial search was based on data from Scopus that we did on April 9, 2025, and a total of 147 articles were found. We reprocessed based on access from 147 articles, there were 41 articles that we could not access. While there were 106 articles, we sorted them out again by looking at the abstract and topics related to our topic, it was found that there were 24 articles related to "the role of songs, music or rhymes in supporting the language development of children aged 3-6 years". Of the 24 articles, we carried out a complete text evaluation stage by adjusting to the eligibility criteria, 18 articles were excluded because they only focused on the role of songs in supporting language development, adding new vocabulary in a general context without language delays. After completing the evaluation process, 6 articles met all the criteria and will be analyzed with this systematic review, as shown in the PRISMA Flow Diagram.

Table 2. DIAGRAM PRISMA



Identification of new studies data via ases and registers



STUDY CHARACTERISTIC

This article examines the role of songs in supporting the language development of pre-school children with language delays through a systematic review of recent studies. The study selection process followed PRISMA guidelines with strict inclusion criteria, which focused on the use of songs, music or rhymes as an intervention in children aged 3-6 years with language delays, using experimental, quasi-experimental or qualitative research methods, and published within the last 10 years. From the initial search of 147 articles, only 6 studies met all the criteria and were analyzed in depth.

These six studies came from different countries and used diverse methodological approaches, ranging from learning method development research, triangulated qualitative studies, a quantitative comparative study, to quantitative and qualitative experimental. The samples studied also varied, including children with language delays, children with special needs, as well as children learning



English as an additional language. The main objective of these studies was to explore the effectiveness of using songs and rhymes in improving the language, cognitive and social-emotional aspects of children with special language needs.

FINDINGS

In this review, we examined 147 articles related to the use of songs to help preschool-aged children (3-6 years old) with language delays. After a rigorous selection process based on certain criteria-such as the use of songs as the primary intervention, a focus on children with language impairment, and valid scientific research methods-only 6 articles met all the requirements for further analysis. These six articles came from different countries and used different methodological approaches, ranging from experimental, quasi-experimental, to qualitative and quantitative studies. Despite the different approaches, all of the studies had the same goal, which was to find out to what extent songs, rhymes or music can help improve the language skills of children with speech impediments. The results of these six studies generally show that the use of songs has a positive impact on children's vocabulary, sentence structure, language comprehension and motivation to speak.

Vocabulary Development

Songs have been shown to help preschool-aged children learn new words. Two of the six articles we reviewed suggested that the repetitive, rhythmic, and multimodal features of songs appear to help people process and remember new words better.

A 2022 study by Lawson-Adams, Dickinson, and Donner found that preschoolers who learned with songs correctly answered more vocabulary questions. These preschoolers were compared to a control group of children who did not receive song-based instruction. These results suggest that songs offer a structured, repetitive linguistic context that supports word learning through enriched auditory and rhythmic exposure. These findings emphasize that song-based instruction is more effective than passive exposure to vocabulary through non-musical formats, as it engages memory and reinforces meaning through melody and rhythm.



Likewise, Cumming et al. (2015) discovered that early exposure to music, particularly songs intended for infants, strongly predicted how well children's vocabulary would develop. Their study showed that when parents sing with their babies a lot by 6 months of age, the babies will have a bigger vocabulary by 14 months of age. These results support the idea that musical input during early development can help important processes such as word mapping and recognition, which are fundamental to language acquisition.

These findings show that songs can help young children learn new words. Singing in any kind of interaction whether it's in a planned educational setting or just between a care provider and a child is good for helping children develop their language skills. It's an emotional and mentally stimulating experience.

Language Delay

Two of the six articles in this review found that using songs as part of a learning intervention improved children's speech. This improvement was seen in terms of word count, sentence length, and responsiveness in communication.

Ma et al. (2024) describe how children with SLI experience significant impairments in language acquisition and development, even though they don't have sensory or intellectual issues. This supports the idea that language delays in SLI come from specific language processing system problems, not general delays in development. Their research shows that it's very important to identify and address these specific linguistic challenges in early intervention settings.

Pedott et al. (2017) suggest that children have trouble detecting rhythmic and linguistic cues in speech because of difficulties processing acoustic rhythmic patterns (ARTs) and sound durations. These cues are important for understanding the boundaries and meaning of spoken phrases. This study suggests that children with SLI may have trouble with the rhythm and flow of language. This makes it harder for them to understand what is being said.



All of these findings together help us understand language delay better. They show that it's more than just a delay in vocabulary or sentence structure. They point to important processes in the brain that help children understand and process language. These processes include rhythmic processing and sensitivity to sounds in language, like how stressed or spoken-like a word is. Knowing these patterns helps us make good plans for using songs to help children with language delays with their speech and hearing.

Predictive Language Processing

2 of the 6 articles in this review explore how the rhythmic and narrative features of songs and rhymes support children's predictive processing abilities, which are essential for understanding and anticipating language in real time. This reflects how young children use auditory and prosodic cues to predict upcoming linguistic content, thereby facilitating more fluent comprehension.

Read et al. (2022) conducted an experimental study in which preschoolers listened to short rhymed verses while their eye movements were tracked. The findings revealed that children's gaze shifted to the target picture significantly more often than expected by chance, even before the last rhymed word was uttered. This suggests that children are not just passively processing rhyme but are actively using rhythmic and phonological patterns to anticipate what word will come next. These results suggest a role for rhyme in strengthening anticipatory processing, a fundamental component of language comprehension.

Similarly, O'Rourke et al. (2021) observed that children with developmental disabilities were actively engaged during multisensory and rhythmic storytelling sessions, following the narrative flow and responding to cues through movement and interaction. Although the study did not involve eye tracking or direct measurement of linguistic prediction, children's behavioral responsiveness and anticipation to the narrative sequence suggests activation of predictive mechanisms in a multimodal context. The integration of music, rhythm, gesture, and storytelling appears to strengthen children's understanding of and response to language over time.



Collectively, these studies underscore the importance of structured rhythmic input and narrative predictability in supporting preschoolers' language development. Rhymes and songs are not just entertaining—they appear to foster real-time predictive processes that help children separate, anticipate, and make meaning from spoken language.

D. CONCLUSIONS AND SUGGESTION

CONCLUSIONS

This review of research studies shows that songs, music, and rhymes can help preschool children (ages 3–6) who are having trouble learning to speak. After looking at six studies that met the right standards, it became clear that musical input especially when it has rhythm and repetition can effectively help children learn more words, understand sounds, learn to form sentences, and be more interested in talking. These benefits were seen in different types of studies and in different cultures, which shows that music is important for young children to learn languages.

The findings also highlight the deeper cognitive and neurological mechanisms involved in language delay, such as difficulties in auditory timing, prosodic phrasing, and predictive language processing. Songs have rhythmic and melodic qualities that can stimulate these mechanisms in a way that is appropriate for a child's development and engaging for them. Songs improve children's vocabulary and help them understand language. They also help children predict what will happen in a story, break down speech into smaller parts, and connect with language in emotional and social ways.

However, this review has some limitations. Only a few studies focused on children with diagnosed language problems, and the number of participants and length of the studies were very different. Even though there are these limits, the fact that we're getting good results shows that there's a lot of promise in using music in treatments and educational programs.

SUGGESTION



Future research should look at the long-term effects of using music to help people learn language, especially in communities where people speak different languages and have different cultures. This review encourages practitioners to use song-based strategies in early intervention programs. These strategies can be used as engaging tools and as evidence-based methods. These methods are based on how children naturally process and acquire language.



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