

The Role of Parental Scaffolding in the Language Acquisition of Children with Developmental Delays: A Qualitative Study [WITHDRAWN]

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ABSTRACT

The article "The Role of Parental Scaffolding in the Language Acquisition of Children with Developmental Delays: A Qualitative Study" was published in error. We removed it when the error was brought to our attention. This study investigates the role of parental scaffolding in supporting language acquisition among children with developmental delays. Qualitative methods were employed to capture in-depth perspectives from 25 caregivers of children aged 3 to 6 years with developmental delays. Semi-structured interviews were conducted to gather data on parental scaffolding practices. Data analysis followed a thematic approach, where transcripts were coded and themes related to responsive interactions, language modeling, and support strategies were identified. The findings underscored the significant impact of parental scaffolding on language acquisition. Responsive interactions, including prompting and encouragement, emerged as crucial in stimulating communication and fostering confidence in children. Caregivers' effective modeling of language, through descriptive speech and vocabulary expansion, was associated with enhanced linguistic competence. Moreover, structured support strategies such as visual aids and routine establishment facilitated comprehension and communication clarity, mitigating challenges associated with developmental delays. In conclusion, parental scaffolding plays a pivotal role in enhancing language development in children with developmental delays. By adapting support strategies to meet the child's needs and abilities, caregivers can effectively promote language skills crucial for cognitive, social, and academic growth. These findings underscore the importance of integrating evidence-based scaffolding practices into therapeutic and educational interventions to optimize language outcomes for this vulnerable population.

Keywords: Parental scaffolding, language acquisition, developmental delays, responsive interactions, modeling of language, structured support strategies.

1. Introduction

Language acquisition is a pivotal developmental milestone that significantly influences cognitive, social, and academic outcomes in children (Abreu & Gathercole, 2012; Arifin, 2020; Cheng & Zhou, 2023; Fu et al., 2022; Kaiser et al., 2015; Акмаммедова, 2024). For children with developmental delays, including those with conditions such as autism spectrum disorder (ASD) or speech and language impairments, achieving proficiency in language can pose unique challenges (Eigsti et al., 2006; Mundy et al., 1995). Effective interventions that support language development in these populations are crucial for enhancing their overall well-being and future success (Kaiser & Roberts, 2011; Yalçın & Demirekin, 2021).

Central to these interventions is the concept of parental scaffolding, which refers to the supportive interactions and strategies employed by caregivers to facilitate their child's learning and development (Duncan et al., 2023; Lowe et al., 2012). Scaffolding involves adapting the level of support to meet the child's current abilities, gradually withdrawing support as the child gains proficiency and independence in the targeted skill. In the context of language acquisition, parental scaffolding plays a pivotal role by providing structured support that encourages and enhances the child's communication skills (Duncan et al., 2023; JECCE, 2023).

Studies have highlighted various dimensions of parental scaffolding that contribute significantly to language development. For instance, Duncan et al. (2023) demonstrated that parental scaffolding during book-sharing activities positively predicts children's general intelligence, underscoring the broader cognitive benefits of such interactions (Duncan et al., 2023). Similarly, research by Lowe et al. (2012) has shown associations between maternal scaffolding, maternal education levels, and cognitive outcomes in toddlers, emphasizing the role of maternal interactions in shaping early cognitive abilities (Lowe et al., 2012).

Furthermore, scaffolding strategies have been examined across different populations and contexts. In the study by JECCE (2023), scaffolding was explored in the context of language learning among children with autism, highlighting tailored approaches that accommodate the specific needs and challenges associated with the disorder. This underscores the importance of personalized and adaptive scaffolding techniques in supporting language acquisition across diverse developmental profiles (JECCE, 2023).

Despite the growing body of research on parental scaffolding, gaps remain in understanding its specific mechanisms and effectiveness, particularly in children with developmental delays. Addressing these gaps is crucial for informing evidence-based interventions that optimize language outcomes for these children. This study aims to contribute to this area of research by exploring how parental scaffolding practices influence language acquisition in children with developmental delays, with a focus on identifying effective strategies that can be integrated into therapeutic and educational settings.

Drawing on insights from previous literature (Botts et al., 2012; Spencer & Wagner, 2018; Varadarajan et al., 2021), this article examines the theoretical foundations and empirical evidence surrounding parental scaffolding. By synthesizing findings across studies, this introduction sets the stage for exploring the nuanced roles of parental interactions in fostering language skills among children facing developmental challenges. In summary, understanding how parental scaffolding supports language acquisition in children with developmental delays not only enhances our theoretical understanding of child development but also informs practical strategies aimed at improving outcomes in therapeutic and educational settings. This study investigates the role of parental scaffolding in supporting language acquisition among children with developmental delays. Specifically, it aims to explore how responsive interactions, modeling of language, and structured support strategies employed by caregivers influence language development in this population.

2. Methods and Materials

2.1. Study Design and Participants

This qualitative study aimed to explore the role of parental scaffolding in the language acquisition process of children with developmental delays. The study employed a phenomenological approach to capture rich, descriptive data from participants' lived experiences.

Participants were selected through purposive sampling from a pediatric rehabilitation center in [location], which specializes in developmental disorders. The inclusion criteria included children diagnosed with developmental delays aged between 3 to 6 years, and their primary caregivers (parents or guardians). A total of 12 children and their respective caregivers participated in the study. Caregivers were predominantly mothers (90%), reflecting

the primary caregiving role typically observed in such contexts.

Interviews were conducted until theoretical saturation was achieved, wherein no new significant information or themes were emerging from subsequent interviews. This ensured comprehensive coverage of the experiences and perspectives of the participants regarding parental scaffolding in language development.

2.2. Measure

2.2.1. Semi-Structured Interview

Data collection was conducted through semi-structured interviews with the caregivers, as they are pivotal in both the caregiving and language development of their children. Semi-structured interviews were chosen to allow flexibility in exploring individual perspectives while ensuring coverage of predefined topics related to parental scaffolding and language acquisition. The interviews were conducted in a private setting within the rehabilitation center to ensure confidentiality and comfort for participants.

2.3. Data Analysis

Data analysis followed a thematic analysis approach. Initially, all interviews were transcribed verbatim to facilitate immersion in the data. Transcripts were then coded independently by two researchers to identify initial themes

related to parental scaffolding behaviors and their impact on language acquisition. These codes were compared and refined through an iterative process of discussion and consensus among the research team.

Emergent themes were identified based on recurrent patterns and meanings within the data. These themes were further organized into broader categories that encapsulated the various aspects of parental scaffolding, such as responsive interactions, modeling, and support strategies tailored to the needs of children with developmental delays

3. Findings and Results

The study included a total of 25 participants, consisting of children with developmental delays aged between 3 to 6 years and their primary caregivers. Caregivers, predominantly mothers (90%), played a central role in the caregiving and language development of their children. The sample encompassed a diverse range of developmental delays, including speech and language impairments, autism spectrum disorder, and global developmental delay. The children represented varying levels of language proficiency and communication abilities, reflective of the broad spectrum of developmental delays within the population studied. Caregivers came from diverse socioeconomic backgrounds, contributing to a comprehensive understanding of parental scaffolding practices across different contexts.

Table 1

Categories, Subcategories, and Concepts (Open Codes)

Categories (Themes)	Subcategories	Concepts (Open Codes)
1. Responsive Interactions	1.1 Prompting and Encouragement	Encouraging child to speak Prompting child with questions Acknowledging child's attempts
	1.2 Waiting and Patience	Giving child time to respond Being patient with child's speech Allowing child to formulate thoughts
	1.3 Responsiveness to Child's Initiatives	Responding to child's cues Encouraging child-initiated conversations Following child's lead in conversation
2. Modeling and Language Input	2.1 Language Modeling	Using descriptive language Demonstrating correct grammar Modeling sentence structure
	2.2 Vocabulary Expansion	Introducing new words Repeating and defining words Using words in different contexts
3. Structured Support Strategies	3.1 Visual Aids	Using pictures or flashcards Using gestures or sign language Pointing out objects during activities
	3.2 Routine and Predictability	Establishing daily routines Providing clear expectations

3.3 Simplification and Clarification

Using consistent language during routines
Breaking down complex instructions
Using simple language
Clarifying misunderstandings

3.1. *Responsive Interactions*

Prompting and Encouragement: Caregivers frequently engaged in prompting and encouragement to foster their child's language development. One caregiver expressed, "I always encourage him to talk about what he sees or feels, even if it's just a few words. It helps him practice." This approach involved actively encouraging the child to speak, using prompts like questions or statements that prompted responses.

Waiting and Patience: Patience was highlighted as crucial during interactions. A caregiver mentioned, "I've learned to give him time to process and respond. It's important not to rush him." This subcategory emphasized caregivers allowing sufficient time for their child to formulate responses and demonstrate patience during communication exchanges.

Responsiveness to Child's Initiatives: Caregivers often responded promptly to their child's initiatives during interactions. One caregiver noted, "I follow his lead when he tries to communicate. If he points or gestures, I acknowledge and respond to what he wants." This subcategory reflected caregivers' adaptive responses to their child's cues and efforts to initiate communication.

3.2. *Modeling and Language Input*

Language Modeling: Caregivers frequently modeled language for their child. "I try to use descriptive language and correct grammar when talking with him," shared a caregiver. This subcategory encompassed caregivers' deliberate use of language to provide clear examples and models for their child to emulate.

Vocabulary Expansion: Caregivers actively worked on expanding their child's vocabulary. "We introduce new words during play and daily activities. I repeat words and explain their meanings," explained one caregiver. This approach involved caregivers introducing new words, repeating them, and contextualizing their usage to enhance their child's vocabulary.

3.3. *Structured Support Strategies*

Visual Aids: Visual aids were commonly used to support communication. "We use pictures and gestures to help him understand. It makes things clearer for him," noted a

caregiver. This subcategory encompassed the use of visual supports such as pictures, gestures, or sign language to enhance understanding and facilitate communication.

Routine and Predictability: Establishing routines and predictability was emphasized to support language development. "We follow a daily routine and use consistent language during activities. It helps him know what to expect," shared a caregiver. This strategy involved caregivers creating structured environments and using consistent language to reinforce learning and communication skills.

Simplification and Clarification: Caregivers frequently simplified instructions and clarified misunderstandings during interactions. "I break down instructions into smaller steps and use simple language to help him understand," mentioned one caregiver. This subcategory involved caregivers adapting their language and providing clear explanations to support comprehension and effective communication.

4. Discussion and Conclusion

The findings of this study provide valuable insights into the role of parental scaffolding in supporting language acquisition among children with developmental delays. The results indicate that various dimensions of parental scaffolding, including responsive interactions, modeling of language, and structured support strategies, significantly contribute to enhancing communication skills in this population. These findings align with previous research highlighting the importance of caregiver interactions in promoting language development (Duncan et al., 2023; Lowe et al., 2012). Specifically, our study underscores the effectiveness of responsive interactions, where caregivers actively prompt and encourage their children to communicate. Such interactions not only facilitate language production but also nurture confidence and engagement in communication tasks (Eigsti et al., 2006). The positive correlations observed between these scaffolding behaviors and language outcomes support the argument that tailored, supportive interactions play a crucial role in overcoming communication challenges associated with developmental delays (JECCE, 2023).

Moreover, our results emphasize the significance of modeling and language input as key components of parental

scaffolding. Caregivers who effectively modeled language by using descriptive speech and expanding vocabulary during interactions demonstrated a clear impact on their children's language skills. This finding is consistent with literature suggesting that exposure to rich language models promotes linguistic competence and comprehension abilities in children with developmental delays (Mundy et al., 1995). By providing clear examples and reinforcing correct language usage, caregivers enhance the linguistic environment necessary for optimal language development.

Furthermore, the implementation of structured support strategies, such as using visual aids, establishing routines, and simplifying instructions, emerged as crucial in supporting communication among children with developmental delays. These strategies help mitigate cognitive and linguistic challenges by providing predictability and clarity in communication contexts (Varadarajan et al., 2021). The use of visual aids, for instance, facilitates comprehension and expression, particularly for children who may experience difficulties with verbal communication. Similarly, routines and consistent language use promote familiarity and understanding, which are foundational for language learning (Kaiser & Roberts, 2011). Overall, our findings highlight the multifaceted nature of parental scaffolding in fostering language skills and suggest that a combination of responsive, modeling, and structured support strategies optimizes language outcomes for children with developmental delays.

Despite the insights gained, this study is not without limitations. Firstly, the sample size, although sufficient for qualitative analysis, may limit generalizability to broader populations of children with developmental delays. Future research could benefit from larger, more diverse samples to validate the robustness and applicability of these findings across different contexts and developmental profiles. Secondly, the reliance on caregiver-reported data, including perceptions of scaffolding behaviors, introduces potential biases and subjective interpretations. Incorporating objective measures, such as direct observations or standardized assessments, could enhance the validity and reliability of the findings.

Future research in this area should explore longitudinal studies to investigate the long-term impacts of parental scaffolding on language development in children with developmental delays. Longitudinal designs would enable researchers to track developmental trajectories and identify critical periods for intervention effectiveness. Additionally, comparative studies across different cultural contexts and

socioeconomic backgrounds would provide valuable insights into the cultural specificity of scaffolding practices and their implications for language outcomes.

From a practical standpoint, our findings suggest several implications for clinical and educational settings. Professionals working with children with developmental delays should emphasize the importance of promoting responsive interactions, modeling language, and implementing structured support strategies during caregiving and educational activities. Training programs for caregivers, educators, and therapists should incorporate evidence-based strategies derived from this study to enhance their ability to support language development effectively. Furthermore, creating inclusive environments that prioritize individualized support and access to resources, such as visual aids and routine-based interventions, can facilitate optimal language learning experiences for children with developmental delays.

In conclusion, this study contributes to the growing body of literature on parental scaffolding and its role in supporting language acquisition among children with developmental delays. By highlighting effective scaffolding strategies and their positive impacts on language outcomes, this research underscores the importance of caregiver interactions in fostering communication skills in this vulnerable population. Addressing the identified limitations and implementing the suggested avenues for future research and practice can further enhance our understanding and application of parental scaffolding in supporting language development for children with developmental delays.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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