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The Impact of Speech Impairment on Children's Quality of Life and the Role of Speech Therapy

Zoe Levitt
zoe.levitt777888@gmail.com

ABSTRACT

Speech and language impairments can affect an individual's ability to communicate effectively and can have a lasting impact on academic performance, relationships, confidence and overall quality of life. This review examines the effects of speech and language impairments as well as the effectiveness of speech therapy interventions and a variety of interventions. Research articles that were relevant were gathered through Google Scholar and included meta analyses, experimental studies, and review articles. Review findings suggest that early identification and intervention are associated with stronger communication and positive social and emotional outcomes. Individualized speech therapy can improve speech production, articulation, literacy skills, confidence, and participation in school and social environments. However, barriers such as limited access to services, shortages of speech-language pathologists, lack of resources, and socioeconomic factors can prevent individuals from receiving appropriate treatment. Overall, the research demonstrates that early and individualized speech therapy is important for reducing the long-term effects of speech and language impairments and improving quality of life. Future research should further examine long-term academic outcomes, barriers to accessing treatment, and the effectiveness of technology-based interventions and telepractice as well as incorporating AI.

INTRODUCTION

A speech impediment is any condition that affects a person's ability to speak clearly, smoothly, or with typical voice quality. People with speech and language impairments may have difficulty producing sounds correctly or forming words in a way that others can easily understand, thus making communication more challenging (Atakpa & Owushi, 2023). Speech-language impairments also include deficits in expressive language and impairments in linguistic abilities (Newbury & Monaco, 2010). While some speech and language difficulties occur alongside conditions such as autism, hearing impairments, or learning disabilities, others occur independently and are classified as primary speech and language disorders (Feldman, 2019).

Although speech and language disorders are closely related, they affect different aspects of communication. A speech disorder affects a person's ability to physically produce speech sounds clearly or fluently. This can include difficulty pronouncing certain sounds, stuttering, or problems with voice quality. In comparison, a language disorder affects a person's ability to understand or use language. These impairments can affect speech production, language comprehension, language expression, reading, and

writing, with Specific Language Impairment (SLI) serving as an umbrella term for several language-related disorders (Newbury & Monaco, 2010). Speech and language impairments are very common and particularly occur in early childhood.

Speech and language impairments are relatively common among children, especially during the early stages of development. Approximately 1 in 14 children in the United States (U.S.) ages 3-17 has had an impairment that is related to speech or language and 5 percent have had a speech disorder (National Institute on Deafness and Other Communication Disorders [NIDCD], 2024). By the first grade, nearly 5 percent of children have noticeable speech language impairments (NIDCD), 2024). Many speech-sound errors resolve naturally during early childhood. For example, research has shown that approximately 16% of three year olds have speech sound formation problems but these errors only persist in 4% of children at the age of six (Newbury & Monaco, 2010). However, children with persistent speech disorders often experience challenges that extend beyond speech production and can negatively affect their overall quality of life (Namasivyan et al., 2025).

Speech disorders can have a lasting impact on one's quality of life in childhood and adulthood, especially left untreated. Children with specific language impairments often face challenges in school because many classroom activities like reading aloud, participation and group assignments depend on strong language skills (Sheng & McGregor, 2010). As a result, they must put much more effort into understanding instructions and completing assignments that may be easier for their classmates (Jerome et al., 2002).

Speech and language impairments can also contribute to communication disorders that can significantly affect an individual's mental health and overall quality of life, particularly when they are not identified or treated early. Research has linked communication disorders to higher rates of depression, anxiety, substance use disorders, and suicidal thoughts and behaviors. Cummings et al. (2023) found that adolescents with language impairments experienced greater levels of depression and anxiety at age 16, and these difficulties continued into adulthood.

This review will explore speech-language impairments and the effects they have on quality of life. It will then evaluate different types of intervention approaches used to address speech and language difficulties and examine their effectiveness. By comparing these interventions, this review will consider how improvements in communication can influence an individual's academic, social, emotional, and everyday functioning and demonstrate the role that effective speech-language interventions can play in improving overall quality of life.

Traditional Speech Language Impairment Treatments

Speech therapy, a therapeutic intervention that helps individuals who may struggle with their communication and help them improve it, confers important benefits for children with speech language impairments and disorders (Attwell et al., 2022). Speech therapy intervention can be a treatment that can help express thoughts and emotions and help the individual understand what others people are saying

overall improving the ability to talk and communicate with verbal skills. Individuals work with a Speech Language Pathologist (SLP), or in other words a "speech therapist," that creates exercise and treatments based on their needs (Cleveland Clinic, 2023).

When identifying and treating speech abnormalities, parents, teachers, doctors, and SLPs each have specific roles to play. Early identification is key to helping children with speech difficulties overcome their obstacles and improve their communication abilities with the help of professional therapy and intervention (Atakpa & Owushi, 2023). It is important to build relations between parents and SLPs to support engagement in their child's therapy.

Parental involvement in speech therapy interventions improves children's opportunities, as they are more likely to practice communication skills at home and therefore strengthen treatment outcomes (Pritchard et al., 2024). Moreover, early identification of speech and language difficulties in one child can alert families to watch for similar developmental delays in younger siblings, allowing them to seek speech evaluations and early intervention services before those difficulties begin to significantly affect communication, learning, or social development.

METHODS

The purpose of this review paper is to examine how speech language impairments affect communication, confidence, and overall quality of life in both children and adults. This paper will explore how communication difficulties can influence individuals socially, emotionally, academically, and in their everyday lives. It will also examine how speech-language therapy and different treatment approaches may improve communication abilities, strengthen confidence, and contribute to a better quality of life with those with speech language impairments in children and adults. Literature was found on Google Scholar using search terms such as speech, speech impairments, language disorders, speech and language disorders, communication disorders, confidence, social settings, effects of speech impairment on communication, effects of speech impairments academically, effects of speech impairments through relationships, social effects, speech intervention for children, speech intervention for younger ages, early intervention, effects of speech improvement, impact of speech therapy, and social interactions between children.

A variety of studies were included including meta analyses, observational studies, experimental studies, and review articles. Studies that focused on children and adults were both included however studies focused on children were chosen in priority. The literature reviewed was published within the past 15 - 25 years to ensure that the findings reflect current research and clinical practices.

RESULTS

Intervention types

Various speech therapy interventions have been shown to improve communication outcomes in children with speech and language impairments overall. Realizing that each speech-language individual with a speech impairment has his or her own therapy approach is essential (Attwell et al., 2022). Intervention targets are chosen based on the overall characteristics of a child's speech-sound system, such as sound complexity, relationships between sounds, and current phonological knowledge which incorporate the complexity approach into clinical practice explaining the speech language disorders (Storkel., 2018). One such intervention, individualized speech and language therapy, focuses on addressing each patient's specific communication needs through personalized treatment plans and targeted exercises to improve language abilities and overall communication outcomes (Simic et al., 2025).
Speech impairments can often be successfully treated when they are identified early, because it gives children more time and greater opportunities to develop effective communication skills (Kumar, 2024). Through professional therapy, family involvement, encouragement, and a strong support system, individuals with speech impairments can make significant progress and improve their ability to communicate (Atakpa & Owushi, 2023). An SLP helps personalize a therapy plan for the patient by giving the patients exercises such as articulation practice, speech and sound practice, and tongue placement and registering the clients' performance and progress (Law et al., 2003).

Several intervention strategies have been recommended to support children with speech impairments in educational settings. These include instructional approaches such as mastery learning, a practice through which students must demonstrate 80-90% mastery of a topic before moving on to new content (Winget & Persky, 2022), and direct instruction, which emphasizes skill development through structured, individualized learning experiences (Jackson, n.d.). Classroom accommodations, including modified assignments, alternative testing procedures, and specialized seating arrangements, can also help reduce barriers to learning. Additionally, assistive technologies like voice-to-text notetaking and in-class recording accommodations, and special education services like Individual Education Programs (IEPs), additional specialized teaching and tutoring for students with disabilities, provide individualized support to improve academic and communication outcomes (Jackson, n.d.). Overall, these intervention strategies and accommodations can help children with speech impairments make progress related to their communication and learning, allowing them to participate more effectively in school and achieve stronger academic outcomes.

Timing of speech therapy

Earlier speech and language intervention is linked to stronger improvements academically and socially than interventions initiated later in childhood (Pak et al., 2023). That is why early speech intervention, typically initiated before a child with speech language impairment is three (CDC, 2026), is important for the child (Law et al., 2003). Early childhood, particularly during the toddler and preschool stage, is critical for language development, as language areas in the brain show the greatest language learning ability at this time (Atakpa & Owushi, 2023). Early identification can also allow children to begin intervention sooner, which may improve their academic performance, especially in areas such as reading and spelling (McLeod & Bleile, 2004). In addition, early speech therapy can help children express

language and be better understood by their families, educators, and peers. Many children who start early experience significant improvements in vocabulary, sentence structure, and pronunciation. With improved communication, managing emotions and making friendships can improve as well. Overall, early speech therapy builds strong communication skills, improves social and emotional development, supports academic readiness, and reduces long term therapy needs (Therapeutic Potentials, 2025).

Tailoring Interventions

Speech therapy is most effective when interventions are tailored to the child's specific speech or language needs, development level, strengths, and challenges. Speech impairments can present in several different ways, and intervention should be tailored to the specific type of disorder. For instance, articulation disorders involve difficulty producing speech sounds accurately. Children may substitute, omit, or distort sounds, such as saying "wabbit" instead of "rabbit." Voice disorders affect the quality, pitch, volume, or resonance of the voice, causing a child to sound hoarse, breathy, or experience periods of voice loss. Fluency disorders involve disruptions in the natural flow of speech, including repetitions, prolonged sounds, or blocks that interrupt speaking. Children with fluency disorders may stutter, hesitate, or experience moments of silence while trying to communicate (Jackson, n.d.).

When tailoring interventions, it is important to consider personal factors of the client, such as age of the child, self-confidence, motivation, attention, cognitive ability, beliefs, learning style, and experience with communication failure on intervention. Although these are all important individual-level factors that are considered when determining a treatment plan, the individual therapist will determine which factors are most important when tailoring interventions to children on a case-by-case basis (McLeod & Bleile, 2004). Other factors can be seen in children with communication impairments of known origin, who often have impairments in specific body structures like cleft palate, ankyglossia or malformed cochlea. Impairment-based goal setting for children with impaired body structures often includes medical intervention such as surgical repair of a cleft, or a cochlear implant (McLeod & Bleile, 2004). Overall, effective speech therapy requires an individualized approach that considers the type of impairment, the child's specific needs and abilities, and any underlying physical factors to create the most appropriate treatment plan.

Speech Skills

Relationships and learning require speech skills. Delays and disorders that relate to speech can impact an individual's function and quality of life across social and academic domains like communicating with peers, participating in discussions and developing self-confidence (Atakpa & Owushi, 2023). People who have speech language impairments have a hard time pronouncing different speech sounds. They might distort the sounds of some words and leave other sounds out completely, thus causing them to struggle in communication with others (Atakpa & Owushi, 2023). Children with speech disorders demonstrated a variety of communication difficulties and performed worse than their peers in areas such as speech production, syntax, coherence, and the use of conversational context (Nathan, 2002). A child with a

speech-language impairment may produce certain sounds incorrectly, leading to challenges with articulation. They may also struggle with fluency, affecting the flow of sounds and syllables or causing words to be repeated or prolonged.

Speech therapy has been found to significantly improve speech sounds, articulation, vocabulary, and communication abilities in individuals with speech and language disorders (Furlong et al., 2021). Through repetition of challenging speech patterns during routine therapy, children can experience improvement through their speech production and articulation.

Reading & Writing Skills

Children with speech and language impairments often experience reading and writing development difficulties (Puranik et al., 2008). It is found that children with speech difficulties are more likely to have delays in literacy development (Nathan et al., 2010). However, targeted intervention can help improve and reduce challenges (Nathan et al., 2010). The timing of when these speech difficulties are resolved can also play an important role in a child's later academic abilities. Literacy skills are developed normally when speech difficulties are resolved before reading instruction begins (Nathen et al., 2010). However, although children whose speech problems were resolved performed similarly to their peers in reading and mathematics, they continued to show weaknesses in spelling (Nathen et al., 2010).

Overall history of speech difficulties may have lasting impacts on spelling development and literacy skills (Nathen et al., 2010). Many children with speech and language impairments have trouble with organization and planning their writing, which is a very important step in writing (Sheng & McGregor, 2010). Students with a history of a speech language impairment are at risk for failure in reading more than students without an impairment (Hitchcock et al., 2015). When reading, children with an SLI may only produce short and simple sentences where they are not likely to make a grammatical error. They may also have difficulty comprehending complex sentences and figurative language when reading, especially reading aloud and in front of their peers (Atakpa & Owushi, 2023). Students may have difficulty decoding and identifying printed words through letter-sound correspondences and may have trouble with comprehending complex discourse due to their lack of written comprehension (National Center on Educational Outcomes, n.d.). Through specifically improving decoding skills and sound-letter connection, speech therapists can improve reading and writing skills alongside speech (Nathan, 2002).

Social Skills

Speech and language impairments can limit children's social participation and relationships that can affect confidence and social interaction. People with speech disorders may be more vulnerable to bullying because of their communication differences (Krueger, 2019). This negative treatment can lower their self-esteem, make them feel different from their peers, and reduce their confidence (Krueger, 2019). In some cases, these experiences may lead individuals to withdraw from social situations and become isolated (Krueger, 2019). Positive self-esteem can help children with SLI stay motivated and persistent in

their schoolwork despite academic challenges (Joffe & Black, 2012). It may also protect them from some of the social difficulties they experience at school (Joffe & Black, 2012).

Many children with SLI tend to be quiet or withdrawn in social settings, which may both result from and contribute to low self-esteem (Jerome et al., 2002). In contrast, strong self-esteem can reduce feelings of loneliness and give children the confidence needed to start and maintain friendships with their peers (Jerome et al., 2002). Without intervention, children are in danger of these negative self-reflections being carried into adulthood. This could compound into increased polarization, limited opportunities, and decreased life satisfaction for individuals with SLI (Jerome et al., 2002).

Due to speech impairments, the schooling environment presented children with a range of challenges. Children were reported by their parents and teachers as having lowered self-confidence in school and reduced engagement in learning activities, particularly those involving spoken language (Nathan, 2002). Class presentations were particularly difficult for many of the children (Nathan, 2002). Speech impairments could limit the manner in which individuals interact with others in school, social, and home environments (Atakpa & Owushi, 2023). Having the inability to correctly form speech sounds might create stress, embarrassment, and frustration in both the speaker and the listener over time, and could create an aggressive response on the part of the listener for being misunderstood or out of embarrassment (Atakpa & Owushi, 2023).

DISCUSSION

Overall, this review paper highlights that speech and language impairments can affect quality of life, including academic performance, social relationships and emotional feelings. The reviewed research demonstrates that early intervention can lead to improved speech and language outcomes and which can overall support quality of life. Intervention has been shown to improve speech production, such as more accurate articulation of sounds; literacy skills, including reading, writing, and spelling; confidence, such as greater skills to communicate and participate in social interactions; and academic performance, including improved classroom participation and learning. These findings demonstrate the importance of identifying speech and language difficulties early and providing appropriate intervention to support multiple areas of a child's development. Effective treatment should be individualized to each child's specific needs in areas such as articulation, fluency, language and skills.

There are many barriers that can prevent children with speech-language impairments from receiving the therapy they need, including limited time, lack of collaboration, difficulty accessing services, and a child's lack of readiness or knowledge (Binns et al., 2022). Access can be especially challenging in rural and remote communities, where difficulties in recruiting and retaining speech therapists and other allied health professionals contribute to ongoing workforce shortages. Although rural service providers have implemented strategies to reduce therapist travel and improve access to care, individuals with disabilities in these areas continue to experience reduced access to essential services (Dew et al., 2012). Similar challenges occur in school settings, where many speech-language pathologists manage large caseloads

and clients and have limited resources while serving many students with communication needs. As a result, some school districts prioritize speech-language services for children with the most significant needs while not considering the others (Sylvan et al., 2023).

However, decisions regarding service eligibility should be guided by best practices in speech therapy rather than resource limitations alone. These barriers are particularly concerning during early childhood because early intervention is important for improving outcomes, yet many young children and their families experience delays in accessing speech-language services. Factors such as socioeconomic status, limited resources, insufficient clinician knowledge, and lack of collaboration can further delay the initiation of speech therapy for preschool-aged children (Binns et al., 2022). Overall, these barriers demonstrate how limitations in staffing, resources, and accessibility can prevent children from receiving timely and appropriate speech-language intervention.

Researchers have reported that many parents are frustrated when their children are denied school-based speech therapy because their speech difficulties are not considered severe enough to affect academic performance (NIDCD, 2024). Parents argue that even when a child performs well academically, speech sound errors can still have a substantial impact on their confidence, social interactions, and overall well-being (NIDCD, 2024). There is currently a global shortage of speech-language pathologists; as a result, many children with communication disorders are unable to receive the therapy they need. However, because software-based speech therapy programs, such as Tactus Therapy apps, Speech Bulbs, and computer-based articulation programs, are widely available in developed countries, technology has the potential to increase access to speech therapy services without requiring in-person contact, allowing individuals to receive consistent support regardless of geographic location or barriers to attending traditional therapy sessions (Attwell et al., 2022).

The findings of this review paper have important implications for those who support individuals with speech and language impairments. Parents play a critical role in identifying speech and language concerns early on in their child's life, getting the speech therapy needed, and participating in at-home practice. Teachers can further support students by creating an inclusive classroom environment, providing accommodations and collaborating with speech-language pathologists to help the student succeed. In those who delay treatment until adulthood, in the workplace, employees can provide accommodations, foster awareness and create a supportive environment where employees with speech and language impairments can live comfortably.

One of the strongest findings in the research was evidence demonstrating the significant social and emotional impact of speech and language impairments. Researchers have found that language impairments can affect an individual's quality of life, particularly in social and school-related areas. These effects may occur because communication is central to many everyday experiences at school, including participating in class discussions, expressing ideas, asking for help, developing friendships, and interacting with peers. When children have difficulty understanding or expressing language, these everyday interactions may become more challenging. Research has also connected language disorders

with difficulties forming and maintaining peer relationships, social withdrawal, and challenges regulating emotions (Hitchcock et al., 2015). These social difficulties are important because negative experiences with peers can influence children's emotional well-being and self-esteem as they grow older (Hitchcock et al., 2015). All together, these findings demonstrate that the effects of speech and language impairments can extend beyond the impairment itself.

While the social and emotional effects of speech disorders are well studied, there are fewer studies involving long-term reading and writing outcomes. Although existing research has identified difficulties such as delayed literacy development, challenges with reading and written language, and persistent weaknesses in spelling, there are fewer studies examining why speech-language impairments contribute to difficulties in these areas and how these challenges may continue over time. In addition, there are limited studies examining the barriers to accessing speech therapy services and the strategies that could improve access for individuals worldwide.

Several limitations should be considered when examining the methods used in this literature review. First, research was collected exclusively through Google Scholar which may have limited the number and variety of relevant studies included. Although research involving both children and adults was examined, studies focusing on children were prioritized which could limit the findings related to adults with speech-language impairments. Another limitation is the variety of research methods used across the selected studies, including observational studies, experimental studies, meta-analyses, and review articles. Differences in study designs, sample sizes, and methods of measuring confidence and quality of life may make it difficult to directly compare findings. These limitations should be considered when interpreting the findings of this review.

Future research should continue to investigate strategies that improve access to speech-language services, specifically in areas where there are shortages of speech-language pathologists. To better identify the impacts of speech and language impairments on quality of life, more tailored and standardized assessment measures are needed for both pediatric and adults. Because there are limited, brief, validated assessment tools for evaluating speech-language impairments and their effects on quality of life, future research should focus on developing and validating reliable measures that can improve identification and help guide treatment. Other avenues to explore include researching the long-term effects of speech therapy on academic achievement, social development, and later employment. Studies should also explore the effectiveness of technology-based interventions and telepractice. As artificial intelligence becomes increasingly integrated into healthcare, future research could examine whether AI-based tools can assist speech-language pathologists in identifying speech and language difficulties, personalizing therapy activities, and tracking patient progress.

In summary, early identification and intervention in speech therapy are essential for maximizing communication development, preventing long-term challenges. Ultimately, speech and language support can improve communication for both children and adults, strengthening academic or professional success, social relationships, emotional well-being, and overall quality of life.

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