

## ASSESSMENT OF SPEECH IMPEDIMENT AMONG CHILDREN: THE CAUSE AND CHALLENGES

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### ABSTRACT

*The aim of this paper was to access speech impediment among children: the causes and challenges. A speech impediment is a condition that impacts an individual's ability to speak fluently, correctly, or with a clear resonance or tone. Individuals with speech disorders have problems creating understandable sounds or forming words, leading to communication difficulties. Speech-language disorders are the most common of the childhood disabilities that affect thousands of preschoolers. The inability to articulate speech sounds correctly could be caused by biological factors such as brain damage, damage to the nerves controlling the muscles used in speech, or gross abnormalities of the oral structures like a cleft palate. The effect of a speech impediment cannot be comprehended as it affects a child's communication, which can hinder connections with others. Often, individuals who struggle with language will have a tougher time making and maintaining friendships. The paper reviewed the concept of speech impediment, the prevalence, the causes and symptoms, the effect, the diagnosis, the test, the treatment, and the prevention of speech impediment in children. On the same basis, the paper concluded that "the study concluded that speech impediment is the most frequent sensory deficit in human populations, affecting millions of people in the world. A child with a speech disorder may have difficulty interpreting speech sounds, often producing a reduced ability to communicate, a delay in language acquisition, economic and educational disadvantage, and social isolation and stigmatization. A speech impediment is a sign of physical or developmental differences. Left untreated, a speech impediment can make it difficult for children to learn to read and write. Children with speech impediments might also have trouble socializing. One of the recommendations made was that education boards should organize sensitization programs on the teaching and socialization of pupils with speech and language disorders.*

**KEYWORDS:** Speech Impediment, Causes, Challenge and Children

### Introduction

The most prevalent sensory deficiency in human populations, speech impediments affect more than 250 million people worldwide. The effects of a speech impediment include being unable to comprehend speech sounds, which frequently

results in a diminished ability to communicate, a delay in language development, disadvantage in the workplace and in school, as well as social isolation and stigma. Speech and language are both necessary for communicating thoughts, feelings, and knowledge with others. The majority of young children pick up these communication abilities naturally, but some have trouble picking up on and using the language they hear around them. According to the 2008 fact sheet "Disability Info: Speech and Language Disorders Factsheet (FS11)," speech-language disorders are the most prevalent of all childhood disabilities, affecting 5% to 8% of preschoolers, or 1 in 12 kids. An impairment of speech or sound production, fluency, voice, or language is referred to as a speech and language disorder when it has a major impact on a child's academic achievement or their social, emotional, or career development. Youngsters may stutter or have difficulty expressing their speech. They could struggle with voice issues or a lisp. Children with hearing loss frequently struggle with speech issues as well. Biological issues such as brain injury, damage to the nerves controlling the speech muscles, or obvious abnormalities of the oral structures such as a cleft palate could all contribute to the inability to effectively enunciate speech sounds (Hardman, Drew, & Egan, 2012). Other possible conditions that might contribute to speech and language disorders are environmental factors such as the quality of parent-child communication, emotional disturbances, and hearing loss. Speech and language disorders are characterized by fluency disorders, articulation disorders, and voice disorders.

The majority of speech and language impairments that students have are developmental, meaning that the issues are there from birth and appear as the kid grows and it becomes clear that they are different or slower than their peers. In a small percentage of cases, children who experience a disease or injury that impairs brain function may have speech and language difficulties. According to the American Speech-Language-Hearing Association {ASHA}, (2012), this kind of speech problem is referred to as aphasia. A speech impairment limits a child's ability to communicate, which can make it difficult for them to form relationships with other people. Language-challenged people frequently have a harder time forming and sustaining friendships. In addition to the challenges of bonding with peers, individuals who have speech disorders are more likely to have lower life satisfaction (Blood et al., 2011). Rose (2015) noted that children with speech and language disorders have a harder time in the classroom than children without speech and language disorders. Reading, comprehension, spelling, writing, and mathematics prove to be problems for them.

Speech impairments can be effectively treated if they are found in children so that they have more opportunity to communicate. When it comes to identifying and treating speech abnormalities, parents, teachers, doctors, speech and language pathologists, and other concerned parties each have specific roles to play. People with speech difficulties can overcome their obstacles and improve their communication abilities with the help of professional therapy, family involvement, encouraging words, and a strong support system.

### **Statement of Problem**

Many people are not aware that there is a treatment for people with language impediments. They are unaware of a speech-language pathologist (SLP), which causes both adults and children to lose hope in articulate and clear communication with high levels of confidence with the people they encounter. Hence, this causes them to isolate

themselves, feel shame and embarrassment, and experience frustration, anger, and depression. Therefore, to raise awareness, the National Institute on Deafness and Other Communication Disorders (NIDCD) and other bodies have educated the public about speech impediment, treatments, and current research that can improve the lives of those with hearing loss or voice, speech, or language disorders. Even with the aforementioned interventions, this one seems inadequate and needs more involvement and attention.

### Concept of Speech Impediment

Speech impediment, or speech disorder, happens when your child cannot speak or cannot speak so people understand what they're saying. In some cases, a speech impediment is a sign of physical or developmental differences. Left untreated, a speech impediment can make it difficult for children to learn to read and write. Children with speech impediments might also have trouble socializing (Cleverl and Clinic, 2022). There are some speech impediments, like tongue tie or cleft palate, that may be treated with surgery. In most cases, however, speech therapy helps treat speech impediments. Speech skills are vital to social relationships and learning, and delays or disorders that relate to developing these skills can impact an individual's function (Feldman, 2016). For many children and adolescents, this can present issues with academics. Children may be unable to participate in certain learning activities, such as answering questions or reading out loud, due to communication difficulties. Adults may avoid work or social activities such as giving speeches or attending parties. Having a speech disorder can have negative social effects, especially among young children. Those with a speech disorder can be targets of bullying because of their disorder. This bullying can result in decreased self-esteem, causing children or adults to feel different from their peers, leading to a lack of self-confidence and, potentially, self-isolation (Krueger, 2019). People who have a speech impediment have a hard time pronouncing different speech sounds. They might distort the sounds of some words and leave other sounds out completely.

A speech impediment is a condition that impacts an individual's ability to speak fluently, correctly, or with a clear resonance or tone. Individuals with speech disorders have problems creating understandable sounds or forming words, leading to communication difficulties. Communication is the cornerstone of human relationships. When individuals struggle to verbalize information, thoughts, and feelings, it can cause major barriers in personal, educational, and business interactions. Speech impediments, or speech disorders, can lead to feelings of insecurity and frustration. They can also cause worry for family members and friends who don't know how to help their loved ones express themselves. Speech impediments can range from speech sound disorders (articulation and phonological disorders) to voice disorders (Maryvile, 2023). Speech-sound disorders may be organic, resulting from a motor or sensory cause, or may be functional with no known cause. Voice disorders deal with physical problems that limit speech.

*Some common speech impediments are:*

- **Stuttering:** This condition might indicate a developmental delay, an inherited condition, or a sign your child's brain is not coordinating the functions that drive speech.

- **Articulation Errors:** This happens when children cannot form speech sounds because they have trouble placing their tongue in the right position. Lispering is an example of an articulation error.
- **Tongue-tie (ankyloglossia):** This is a physical condition that makes it hard for children to move their tongues.
- **Apraxia:** This condition happens when a child's brain cannot coordinate the muscles that enable speech.
- **Dysarthria:** This condition happens when children slur their words because of brain damage.
- **Selective mutism:** This condition happens when children become so anxious about being in certain places and situations that they cannot speak.

In children, signs might also include a lack of babbling or making limited sounds (Maryvile 2023). Symptoms may also include the incorrect use of specific sounds in words, according to the American Speech-Language-Hearing Association (ASHA). This may include the sounds p, m, b, w, and h among children aged 1-2 and k, f, g, d, n, and t for children aged 2-3.

### The Prevalence of Speech Impediment in Children

A large number of different figures have been given for the prevalence of speech defects in childhood. Morley (2007) found that 14% of 5-year-old children had severe defects of articulation, and that these were so marked in 4% of them that teachers found that they were unintelligible. In the 11,000 7-year-old children studied in a national survey, 4-5 percent of boys and 2-3 percent of girls were considered to have 'markedly poor oral ability,' and 20 percent of boys and 15 percent of girls were considered by their teachers to have 'below average oral ability.' In addition, 16 percent of boys and 11 percent of girls were not fully intelligible on testing, and stammering was found on examination in 1-3 percent of boys and 0-8 percent of girls. It is clear from these and similar statistics that the problem of speech defects in the community is considerable, and its importance is increased by the fact that children with significant speech defects very often have difficulty learning to read and spell. Paradoxically, very little instruction is given about speech disorders to nurses, health visitors, social workers, dentists, and medical students in their ordinary curricula. It is often found that children with speech defects are immediately transferred to the care of the speech therapist for diagnosis and treatment without an adequate medical examination having been performed. All too often, the speech therapist is newly qualified and relatively inexperienced and may have to diagnose by 'hunch' and treat by intuition. In contrast, the well-qualified, experienced speech therapist will make a meticulous and scientific assessment of a child's speech disorder, using tests of expressive language, comprehension, hearing, and articulation. Speech-language disorders are the most common of the childhood disabilities that affect about 1 in 12 children, or 5% to 8% of pre-school children.

In the case of Nigeria, studies have investigated the individuals who have been identified as having speech and language difficulties to determine the specific communication disorders they exhibit. Somefun, Lesi, Danfulani, and Olusanya (2006) conducted a study at the Lagos University Teaching Hospital with children between the

ages of six months and fifteen years with communication disorders in Nigeria. Findings revealed that out of their 184 participants, hearing impairment was documented in 65%, speech disorders in 30%, rhinolalia (a nasal quality in speech) in 2%, and stuttering in 2% of the children. Of those with hearing impairment, 70% were considered to have delayed speech and language skills, and of those with speech disorders, 79% had specific language impairment (Somefun et al., 2006). Aremu, Afolabi, Alabi, and Elemunkan (2011) also investigated individuals with speech and language difficulties. They studied 146 children and adults who were referred for speech and language therapy at the University of Ilorin Teaching Hospital in North Central Nigeria. More than half (58%) of the patients had a diagnosis of deaf-mutism, defined as the inability to speak. Twenty-one percent were diagnosed as having delayed speech development, 4% slurred speech pathology, 13% impaired speech, 3% stammering or stuttering, and 1% with aphasia. At the University of Nigeria Teaching Hospital in Enugu, Iloeje and Izuora (2009) studied 965 children with neurological disorders over a three-year period (1985–87) and found 8.3% had speech impairments.

### **The Causes of Speech Impediment in Children**

Speech disorders may be caused by a variety of factors related to physical features, neurological ailments, or mental health conditions. In children, they may be related to developmental issues or other unknown causes and may go away naturally over time. In some cases, the cause is unknown (Maryvile, 2023). However, there are various known causes of speech impediment, such as;

- Hearing loss,
- Neurological disorders,
- Brain injury,
- An increase in mental strain,
- Constant bullying
- Intellectual disability,
- Substance use disorder,
- Physical impairments such as cleft lip and palate,
- Vocal abuse or misuse
- Muscle and bone problems such as dental issues or cleft palate
- Dementia and
- Degenerative diseases (i.e., Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease)

According to Basilakos (2018), after strokes there is known to be a higher incidence of apraxia of speech, which is a disorder affecting neurological pathways involved with speech (Robinson, 2008). Poor motor function is also suggested to be highly associated with speech disorders, especially in children. Hereditary causes have

also been suggested, as many times the children of individuals with speech disorders will develop them as well (Kang, 2011). 20–40% of individuals with a family history of a specific language impairment are likely to be diagnosed, whereas only 4% of the population overall is likely to be diagnosed. There are also language disorders that are known to be genetic, such as hereditary ataxia, which can cause slow and unclear speech (Vogel, 2014).

### **The Symptoms of Speech Impediment in Children**

The symptoms of speech disorders vary widely depending on the cause and severity of the disorder. People can develop multiple speech disorders with different symptoms. People with one or more speech disorders may experience the following symptoms:

- Repeating or prolonging sounds
- Distorting sounds
- Adding sounds or syllables to words
- Rearranging syllables
- Having difficulty in pronouncing words correctly
- Struggling to say the correct word or sound
- Speaking with a hoarse or raspy voice
- Speaking very softly
- making jerky movements while talking, usually involving the head
- blinking several times while talking
- visible frustration when trying to communicate

### **Effects Speech Impediment Among Children**

Speech impediment, or speech disorder, happens when your child cannot speak or cannot speak so people understand what they're saying. When left untreated, a speech impediment can make it difficult for children to learn to read and write. Children with speech impediments might also have trouble socializing. Preschool children identified as having language disorders often have long-term problems with language and academic skills. The school-aged language-disordered children may continue to have difficulty expressing their ideas. They may begin to compensate by producing only short, simple sentences in which they are not likely to make a grammatical error, or they may avoid talking except when necessary. They may also have difficulty comprehending complex sentences and figurative language such as idioms and metaphors. Poor language skills put these children at risk for reading problems. Therefore, it is not surprising that even children with relatively mild language disorders may have academic problems (Plante and Beeson, 2014). On socialization, Mansson (2010) asserted that socialization was a developmental process in which an individual came into contact with people and things that allowed them to be socially acceptable.

This process begins at birth and is constant throughout a person's entire life. There are many things that could factor into a person's perception of the world as they see it and how they behave in it. These influences are known as socializing agents, which are determined by the surroundings and experiences the individual has been exposed to. Socialization agents may have both positive and negative impacts on an individual.

The ability to communicate with peers and adults in the educational setting is essential for pupils to succeed in school. According to Hardman, Drew, and Egan (2012), children with communication disorders frequently did not perform as expected at grade level. They may struggle with reading, have difficulties understanding and expressing language, misunderstand social cues, avoid attending school, have poor social interaction, and underachieve in tests. Children with speech and language disorders who cannot get their message across may simply stop trying. Morales (2019) argued that speech could seriously limit the manner in which an individual interacted with others in school, social, and even home environments. Inability to correctly form speech sounds might create stress, embarrassment, and frustration in both the speaker and the listener. Over time, this could create an aggressive response on the part of the listener for being misunderstood or out of embarrassment. Alternatively, it could generate an avoidance of social situations that create these stressful situations. Blood and Nalesnik (2010) also stated that children with speech and language disorders could easily be bullied and were more common in childhood. Bullying involves the consistent and intentional harassment of individuals and may be physical or verbal in nature. This trend has a great effect on the socialization of children with speech and language disorders. Blood, Blood, Tramontana, Sylvia, Boyle, and Motzko (2011) stipulated that the social implications of speech and language disorders were so powerful that they had the potential to influence self-esteem, depression levels, and academic success. Blood, Blood, Tellis, and Gabel (2013) equally indicated that the stigmatization associated with speech disorders influenced self-esteem, as children with speech disorders often experienced depression, social isolation, and poorer performance on academic and standardized tests. Social acceptance, confidence, and overall life satisfaction could be at stake. Without the ability to hold fluent and successful conversations, many huge milestones, such as maintaining friendships, could be unsuccessful.

### **Diagnosis/Test of Speech Impediment in Children**

Typically, a pediatrician, social worker, teacher, or other concerned party will recognize the symptoms of a speech disorder in children. These individuals, who frequently deal with speech and language conditions and are more familiar with symptoms, will recommend that parents have their child evaluated (Sara, 2019). Adults who struggle with speech problems may seek direct guidance from a physician or speech evaluation specialist. A speech-language pathologist (SLP) is a healthcare professional who specializes in speech and language disorders. An SLP will evaluate a person for groups of symptoms that indicate one type of speech disorder. To make an accurate diagnosis, SLPs need to rule out other speech and language disorders and medical conditions (Jamie, 2019). An SLP will review a person's medical and family history. They will also examine how a person moves their lips, jaw, and tongue and may inspect the muscles of the mouth and throat. Other methods of evaluating speech disorders include:

- **Denver articulation screening examination:** This test evaluates the clarity of a person's pronunciation.
- **Prosody-voice screening profile:** SLPs use this test to examine multiple aspects of a person's speech, including pitch, phrasing, speech patterns, and speaking volume.
- **Dynamic evaluation of motor speech skills (DEMSS) manual:** The DEMSS is a comprehensive guide for helping SLPs diagnose speech disorders.
- **Early language milestones scale:** This test, created by neuro-developmental pediatrician James Coplan, determines a child's language development. This test can quickly identify delayed speech or language disorders.

These tests will help determine if you have a speech disorder, but they won't necessarily determine the exact causes of your speech disorder. Additional testing may be required to determine the underlying cause of your speech disorder so that appropriate treatments can be recommended (Cleverl and Clinic, 2022).

### **Management/Treatment of Speech Impediment in Children**

Children with communication difficulties must receive as much early intervention as possible. The ideal time to begin treatment is when a child is a toddler or in preschool. Normally, a crucial time for learning a language is during these years. Even infants can be examined for the foundational abilities required for typical speech and language development. The speech-language pathologist collaborates with the parents at that age to encourage speech and language development at home. Individual therapy is the most common kind of active treatment, and it often begins between the ages of 2 and 4 years. Talk to your child's doctor if you have any worries about their communication skills. In order to assess and treat the child, the doctor will probably refer him or her to a speech-language pathologist. Also, all kids with speech and language issues should have their hearing tested.

Speech-language pathologists can work directly with children and their parents, caregivers, and teachers. If a child has a language or speech delay or issue, they may be eligible for early intervention assistance from a third-party organization as well as special education programs (for children aged 3 and older). To determine if a child requires help, schools can test for language and speech impairments on their own. If the child's hearing, conduct, or emotions are also a concern, a medical expert evaluation is required (Centre for Disease Control and Prevention, 2022). To discover the appropriate referrals and therapies, parents, healthcare providers, and the school can collaborate. If your child's speech is impacted by a developmental delay, speech therapy may be able to help. Speech therapy is a helpful part of treatment for children who have conditions such as autism, cerebral palsy or hearing loss.

### **Prevention of Speech Impediment in Children**

According to Welcomecure (2023), most speech impediments cannot be predicted or prevented. Talk to your child's healthcare provider if you notice your child is struggling to speak or not speaking. They can assess your child's speech, identify any potential problems, and recommend steps you can take to help your child. It is not



possible to avoid speech impediment, but some measures can be taken for its prevention.

- Be sure that your child uses a helmet and seat belt.
- Since child learns speech by listening, parents act as first teacher for their children. Hence talk to your infants, read them stories etc. Hearing speech is beneficial to your newborns. Respond to your baby's babbles. Make sure you answer your kid as they grow up.
- Encourage your child to speak more but do not force. Parents should also talk a lot to their small babies.
- Be vigilant of your child's milestone development. If you notice any speech development delay consult specialist at the earliest.
- Use belt to prevent accidents that cause brain injury
- Be watchful of milestones like- Infant should babble by 9 months, should say 'moma dada' by 1-year age, speech should be understandable to stranger by the age of 3- 4 years etc.
- Has your child's hearing checked regularly?
- Learn about speech and language development
- Don't drink or use drugs while you are pregnant
- If you feel your baby is having hearing problems or low intelligence, consult doctor for timely treatment and speech therapy (Asha 2023).
- Seek early treatment for better prognosis.
- Reduce risk factors for stroke by
  - stopping smoking
  - keeping your blood pressure down

## Conclusion

The study concluded that speech impediment is the most frequent sensory deficit in human populations, affecting millions of people in the world. A child with a speech disorder may have difficulty interpreting speech sounds, often producing a reduced ability to communicate, a delay in language acquisition, economic and educational disadvantage, and social isolation and stigmatization. Speech impediments can make it difficult for children to learn to read and write. The major causes of speech impediments are hearing loss, neurological disorders, brain injury, and an increase in mental strain. Its symptoms are making jerky movements while talking, usually involving the head, blinking several times while talking, and showing visible frustration when trying to communicate. A speech impediment can be prevented by having your child's hearing checked regularly and not drinking or using drugs while pregnant.

### Recommendations

1. Education boards should organize sensitization programs on the teaching and socialization of pupils with speech and language disorders.
2. Teachers who make early identification of pupils with speech and language disorders should inform guardians for early intervention and treatment.
3. Healthcare providers should collaborate with schools to help a child with speech or language disorders get the special services they need.
4. Parents should get a diagnosis once they notice their child is struggling to speak or not speaking.

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