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## Assessment of Speech Impairment: The Characteristics, Symptoms and Intervention Strategies

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### ABSTRACT

*Speech is defective when it deviates so far from the speech of other people that it calls attention to the speaker, interferes with normal communication, or causes embarrassment to the impaired individual. This study aims to assess the characteristic, symptoms and intervention strategies of speech impairment. The study revealed that speech impairment is characterized by difficulty in articulation of words. Examples include stuttering or problems producing particular sounds. Its symptoms include: struggles to say sounds or words (stuttering), speaks in short, fragmented phrases (expressive aphasia), struggles with using words and understanding others (global aphasia), slow rate of speech (apraxia) and slurred speech (dysarthria). The study also averred some intervention strategies such as allowing the impaired child to mix freely and interact with other children in situations where speech occurs spontaneously. The study concluded that because speech impaired children often feel isolated and different from their peers, especially older pupils when their disability persists, counseling is required. It was therefore recommended that the government should adopt a multidisciplinary approach that positions speech disorders as both a health and educational responsibility, recognizing the educational implications of speech disorders and the need for additional school-based learning support including the provision of speech services as part of a holistic development program.*

**Keywords: Speech Impairment, Characteristics, Symptoms and Intervention Strategies**

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### Introduction

A speech disorder or impairment usually means a child has difficulty producing certain sounds. This makes it difficult for people to understand what he says. Talking involves precise movements of the tongue, lips, jaw and vocal tract. There are a few different kinds of speech impairments: *Articulation disorder* is difficulty producing sounds correctly. A child with this type of speech impairment may substitute one speech sound for another, such as saying wabbit instead of rabbit. *Voice disorder* is difficulty controlling the volume, pitch and quality of the voice. A child with this type of speech impairment may sound hoarse or breathy or lose his voice. *Fluency* disorder is disruption in the flow of speech, often by repeating, prolonging or avoiding certain sounds or words. A child with this type of speech impairment may hesitate or stutter or have blocks of silence when speaking (Carlson, 2013).

Learning problems should be addressed as early as possible. If left untreated, they can lead to a decrease in confidence, lack of motivation and sometimes even depression. Seeking treatment for your child can help significantly. Most kids with speech impairment can succeed with the right services and supports.

### **The Specific Learning Disabilities**

Specific learning disabilities is a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia (Carlson, 2013). People with a learning disability have trouble performing specific types of skills or completing tasks if left to figure things out by themselves or if taught in conventional ways. Individuals with learning disabilities can face unique challenges that are often pervasive throughout the lifespan.

### **Symptoms**

- Problems reading and/or writing.
- Problems with math.
- Poor memory.
- Problems paying attention.
- Trouble following directions.
- Clumsiness.
- Trouble telling time.
- Problems staying organized.

### **Speech Impairment**

Speech is the representation of the vocal symbols of a language, which enhance the exchange of ideas. In school, effective speech is very important if the pupil is to gain and maintain friendship and membership or get recognition and status, which are often given to fluent speakers.

Speech is defective when it deviates so far from the speech of other people that it calls attention to the speaker, interferes with normal communication, or causes embarrassment to the impaired individual.

### **Symptoms**

- Struggles to say sounds or words (stuttering)
- Repetition of words or parts of words (stuttering)
- Speaks in short, fragmented phrases (expressive aphasia)
- Says words in the wrong order (expressive aphasia)
- Struggles with using words *and* understanding others (global aphasia)
- Difficulty imitating speech sounds (apraxia)
- Inconsistent errors (apraxia)
- Slow rate of speech (apraxia)
- Slurred speech (dysarthria)
- Slow or rapid rate of speech, often with a mumbling quality (dysarthria).

### **Characteristics**

Speech Impairment is characterized by difficulty in articulation of words. Examples include stuttering or problems producing particular sounds (articulation). Articulation refers to the sounds, syllables, and phonology produced by the individual. Voice, however, may refer to the characteristics of the sounds produced — specifically, the pitch, quality, and intensity of the sound. Often, fluency will also be considered a category under speech, encompassing the characteristics of rhythm, rate, and emphasis of the sound produced. Disorders associated with speech and language includes: Developmental verbal dyspraxia, Apraxia of speech, Dysarthria, Orofacial myofunctional disorders, Speech sound disorder, Stuttering, Voice disorders, Selective mutism, and Aphasia. Treatments can be applied to correct these impairments (Carlson, 2013).

### ***Stuttering***

Stuttering, also known as stammering is a speech disorder in which the flow of speech is disrupted by involuntary repetitions and prolongations of sounds, syllables, words or phrases as well as involuntary silent pauses or blocks in which the person who stutters is unable to produce sounds. The term stuttering is most

commonly associated with involuntary sound repetition: repetitions of consonant or vowel sounds especially at beginning of words, but it also encompasses the abnormal hesitation or pausing before speech, referred to by people who stutter as blocks, and the prolongation of certain sounds, usually vowels or semivowels.

According to Watkins, Smith, Davis, Howell (2008), stuttering is a disorder of "selection, initiation, and execution of motor sequences necessary for fluent speech production". For many people who stutter, repetition is the main problem. The term "stuttering" covers a wide range of severity, encompassing barely perceptible impediments that are largely cosmetic to severe symptoms that effectively prevent oral communication. In the world, approximately four times as many men as women stutter, encompassing 70 million people worldwide or about 1% of the world's population

### *Voice Disorder*

Comprise abnormal vocal quality, pitch, loudness, and resonance for a speaker's age or sex. Voice disorders are abnormalities in the production of vocal tone. They include abnormalities in the volume of the voice (inordinate loudness or softness) and also abnormalities of the vibratory quality of the vocal cords (hoarseness or a raspy voice quality). Voice depends on the vibratory characteristics of the vocal folds, setting the air above the level of the larynx into vibrations as well. The intonation and stress patterns of conversation and connected discourse require rapid changes in the delicate laryngeal musculature.

A common voice problem in children is caused by stress on the laryngeal tissues from excessive screaming and shouting. Loudness can be generated without damage, as in the case of actors or opera singers. However, in young untrained children, the effect of frequently using a loud voice may be edema and inflammation of the vocal chords. In the long-term, such vocal abuse can cause polyps, necessitating surgical intervention. Speech therapy can reeducate children to vary their voice patterns and thereby prevent these complications.

### **Challenges of Speech Impairment for Children**

The schooling environment presented the children with a range of challenges. The 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. Class presentations were particularly difficult for many of the children.

### *Self-Confidence*

The early years of schooling are a significant time in children's development, with implications for their educational achievement, future lives, and society (Grunewald & Rolnick, 2007). While most children are competent communicators by school-age, some do not have speech and language skills that are equivalent to their peers (McLeod & McKinnon, 2007). For these children, their speech and language competence can limit their engagement with others in social and learning environments (McLeod, Daniel & Barr, 2013).

In a study conducted by Graham and Sharynne (2017), they observed that all of the participants were reported to experience reduced self-confidence in the school context in general, or in particular learning activities within the classroom. This was mostly reported by parents.

### ***Participation in Classroom Learning Activities***

Children with speech disorders are more likely to have reduced social and educational outcomes than typically developing children (McCormack et al., 2009). For example, these children are at increased risk for difficulties with reading (McLeod et al., 2017) and are more likely to require additional support at school (Felsenfeld et al., 1994). Children with speech disorders experience frustration (McCormack, McLeod, McAllister & Harrison, 2010) and are more likely to be bullied (Sweeting & West, 2001). They have been reported as experiencing the world in two significantly different ways, being at ease when at the home or when with those close to them, while being more reserved and withdrawn when in public spaces (McLeod, Daniel & Barr, 2013).

The focus on engaging students in classroom discussion within contemporary learning theory and practice was concerning for teachers and parents due to the observed withdrawal from interactions with other students, as well as the limitations of their speech on their engagement in discussions. Several of the parents in the study were concerned about the educational implications of their child's speech sound disorders. Teachers of two of the focus children noted the children's reduced participation in the classroom in activities that involved verbal responses and student discussion (Graham and Sharynne, 2017).

### ***Learning Outcomes***

Children with speech disorders benefit from targeted interventions to increase their ability to produce speech sounds, resulting in increased intelligibility and acceptability within social situations. Children's frustrations with communication in public settings, strategies children adopt to assist in communicating with others, and avoidant behaviours including withdrawal in public environments have been

reported previously (McLeod, Daniel & Barr, 2013). Previous research has identified children with speech sound disorders have an increased likelihood of experiencing reading difficulties (McLeod et al., 2017).

## **Intervention**

Early intervention is believed to help significantly in the remediation of this problem. Pupils with a severe impairment in the uses of words (aphasia) require extensive services.

Speech pathologists are indispensable specialist in speech correction. In order of importance, the following factors are listed as contributing to success of therapy:

### **Elementary Level**

1. Consistence attendance
2. Motivation
3. Parent cooperation
4. Therapist's interest

### **Secondary Level**

1. Student's motivation
2. Consistence attendance
3. Attitude of others as seen by pupil
4. Therapist's interest.

Because speech impaired children often feel isolated and different from their peers, especially older pupils when their disability persists, counseling is required. The teacher's role in this regard is very important. When the child with speech problems comes to school, he should be allowed to mix freely and interact with other children in situations where speech occurs spontaneously. The teacher's attitude will determine to a large extent the attitude of other children to the speech-impaired child in the classroom.

## **Terms Associated with Speech Disorders**

**Apraxia of speech** - Apraxia of speech is the acquired form of motor speech disorder caused by brain injury, stroke or dementia.

**Developmental verbal dyspraxia**- Developmental verbal dyspraxia refers specifically to a motor speech disorder. This is a neurological disorder. Individuals suffering from developmental verbal apraxia encounter difficulty saying sounds, syllables, and words. The difficulties are not due to weakness of muscles, but rather on coordination between the brain and the specific parts of the body (Souza, Payão & Costa (2009), ("Child Speech and Language", 2009).

**Dysarthria-** Dysarthria is a motor speech disorder that results from a neurological injury. Some stem from central damage, while other stem from peripheral nerve damage. Difficulties may be encountered in respiratory problems, vocal fold function, or velopharyngeal closure, for example.

**Orofacial myofunctional disorders** - Orofacial myofunctional disorders refers to problems encountered when the tongue thrusts forward inappropriately during speech. While this is typical in infants, most children outgrow this. Children that continue to exaggerate the tongue movement may incorrectly produce speech sounds, such as /s/, /z/, /f/, /tʃ/, and /dʒ/. For example, the word, "some," might be pronounced as "thumb" ("Child Speech and Language", 2009).

**Selective mutism-** Selective mutism is a disorder that manifests in a child that does not speak in at least one social setting, despite being able to speak in other situations. Selective mutism is normally discovered when the child first starts school (ibid).

**Aphasia** - Aphasia refers to a family of language disorders that usually stem from injury, lesion, or atrophy to the left side of the brain that result in reception, perception, and recall of language; in addition, language formation and expressive capacities may be inhibited.

**Acquired disorders** - Acquired disorders result from brain injury, stroke or atrophy, many of these issues are included under the Aphasia umbrella. Brain damage, for example, may result in various forms of aphasia if critical areas of the brain such as Broca's or Wernicke's area are damaged by lesions or atrophy as part of a dementia.

## **Conclusion**

Children with speech sound disorders face challenges to their learning in the early years of schooling. This study provides the intervention strategies of such children through the adoption of appropriate teaching and learning styles. Because speech impaired children often feel isolated and different from their peers, especially older pupils when their disability persists, counseling is required. Teachers should exhibit positive and encouraging attitude towards these children in order to motivate them to speak and associate more



## **Recommendations**

1. There is a need for current and pre-service teachers to develop their awareness of the needs of children with speech disorders, and of strategies that might better meet these needs in the educational environment.
2. The government should adopt a multidisciplinary approach that positions speech disorders as both a health and educational responsibility, recognizing the educational implications of speech disorders and the need for additional school-based learning support including the provision of speech services as part of a holistic development program.
3. Without professional awareness, skills development and speech and learning support services, schools, and society are not able to fully promote the development of children with speech sound disorders towards their potential.

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