

## **The Effect of Stuttering on Speech and Learning process A Case Study**

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**Abstract:** *The aim of this research is to discuss Communicative disorders in general and stuttering in specific. It follows the narrow down approach i.e. from communicative disorders to stuttering. It discusses the types of communicative disorders (hearing impairment, language disorder and speech disorder); their causes, symptoms, treatments, etc. It particularly discusses the problem of stuttering child in detail. The research is carried out using case study method. Various data collection tools like observations and interviews have been used to obtain data. It is followed by the analysis of data. Interviews have been analyzed step by step and observations have been taken and analyzed with the help of specific checklist. The outcome of the research is that communication disorder (stuttering) hampers the clarity in the speech of the person and it also slows down the learning process to certain extent. In the end some recommendations are also given to improve the situation. The research concludes with a reflection upon the new avenues that this research has opened up.*

**Keywords:** *stuttering, speech hindrance, communication disorder, learning process, fluency*

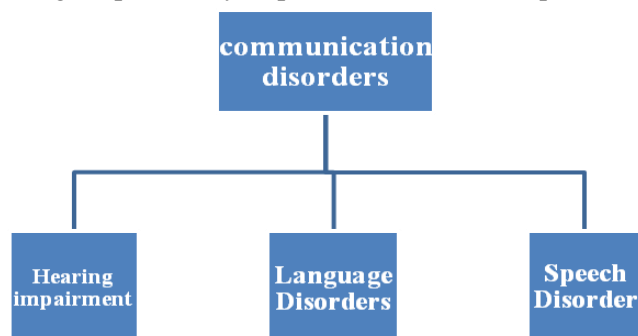
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### **1. INTRODUCTION**

Communication disorder particularly stuttering affects the fluent speech of the person. Person having problem of stuttering is unable to speak a single statement fluently. Stuttering hampers the fluent speech and consequently it affects learning process. There are three different types of communicative disorders which are given below

- 1) Language disorder
- 2) Speech disorder
- 3) Hearing impairment.

Language and speech disorders are often considered same or interchangeably by a lay man. In academia or medical terminology both terms are quite different and address different problems. Language disorder or Language development refers to how a child understands, organizes, speaks and uses words and can be divided into two categories: receptive language and expressive language. The term receptive language refers to how well a child understands what is said to him and the term expressive language refers to a child's ability to express or communicate his thoughts and needs to others, Simms MD (2007). On the other hand speech problem is associated with articulation and quality of voice. There is a third category of speech development or disorder in oral-motor. This term relates to the physical make-up of a person's mouth and his ability to use it properly. Though this area is not the same as speech development, it is often used in connection with speech. But stuttering is specifically a speech disorder. Farooq, Ghulam (2007).



## 2. COMMUNICATION DISORDERS

Communication can be defined as the transfer of information from one person to another person by means of signs and gestures, alphabet boards, video displays, speech synthesizers, etc. All people, whatever their age, education, or ability, need to communicate. Not being able to talk doesn't mean you have nothing to say. According to William and Micheal (1992) cited in Farooq (2007) p.no.136. Communication disorder is “Children who are not able to make themselves understood or who cannot comprehend ideas that are spoken to them by other, are likely to be greatly handicapped in a virtually all aspects of education and adjustment, they need specialized help. These kinds of problem called communication disorder.”

The term communication disorders encompass a wide variety of problems in language, speech, and hearing. Speech and language impairments include articulation problems, voice disorders, fluency problems (such as stuttering), aphasia (difficulty in using words, usually as a result of a brain injury, and delays in speech and language (Holland and Reinmuth,1982). Speech and language delays may be due to many factors, including environmental factors or hearing loss. Hearing impairments include partial hearing and deafness. Deafness may be defined as sufficient loss in hearing ability to make communication difficult or impossible without amplification. According to American Speech-Language-Hearing Association (2009). There are four types of hearing loss which are as follows

- 1) Conductive hearing
- 2) Sensory neural
- 3) Mixed hearing
- 4) A central hearing

Conductive hearing losses are caused by diseases or obstructions in the outer or middle ear and can usually be helped with a hearing aid. Sensory neural losses result from damage to the sensory hair cells of the inner ear or the nerves that supply it and may not respond to the use of a hearing aid. Mixed hearing losses are those in which the problem occurs both in the outer or middle ear and in the inner ear whereas central hearing loss results from damage to the nerves or brain. Many communication disorders result from other conditions such as learning disabilities, cerebral palsy, mental retardation, or cleft lip or cleft palate.

Language disorders can be defined as problems faced by the person in expressions. There are different types of which are as follows

- 1) Developmental expressive language disorder
- 2) Developmental receptive language disorder
- 3) Mixed receptive-expressive language disorder
- 4) A phonological disorder

Developmental expressive language disorder identifies developmental delays and difficulties in the ability to produce speech. On the other hand developmental receptive language disorder spots light on developmental delays and difficulties in the ability to receive language. Mixed receptive-expressive language disorder identifies developmental delays and difficulties in the ability to understand spoken language and produce speech and phonological disorder recognizes difficulties in producing the phonemes Boyle, Loux (2001).

On the other hand speech is the actual behavior of producing a language code by making appropriate vocal sound patterns (Hubbell, 1985). Speech disorders or speech impediments are a type of communication disorders where 'normal' speech is disrupted. This can mean stuttering, lisps, etc. Someone who is unable to speak due to a speech disorder is considered mute.

## 3. CLASSIFICATION

There are certain different types of speech disorder. By a strict classification, only 5% to 10% of the population has a completely normal manner of speaking (with respect to all parameters) and healthy voice; all others suffer from one disorder or another. According to the American Speech-Language-Hearing Association (ASHA), following are the major types of speech disorders:

- Stuttering affects approximately 1% of the adult population.
- Cluttering, a speech disorder that has similarities to stuttering.
- Dysprosody is the rarest neurological speech disorder. It is characterized by alterations in intensity, in the timing of utterance segments, and in rhythm, cadence, and intonation of words. The changes to the duration, the fundamental frequency, and the intensity of tonic and tonic syllables of the sentences spoken, deprive an individual's particular speech of its characteristics. The cause of dysprosody is usually associated with neurological pathologies such as brain vascular accidents, cranioencephalic traumatism, and brain tumors.
- Muteness is complete inability to speak
- Speech sound disorders involve difficulty in producing specific speech sounds (most often certain consonants, such as /s/ or /r/), and are subdivided into articulation disorder (difficulty in production of sound) and phonemic or phonetic disorders (difficulty in distinguishing the phoneme sound).
- Voice disorders are impairments, often physical, that involve the function of the larynx or vocal resonance.
- Dysarthria is a weakness or paralysis of speech muscles caused by damage to the nerves and/or brain. Dysarthria is often caused by strokes, Parkinson's disease, ALS, head or neck injuries, surgical accident, or cerebral palsy.
- Apraxia of speech may result from stroke or be developmental, and involves inconsistent production of speech sounds and rearranging of sounds in a word ("potato" may become "topato" and next "totapo").

#### 4. STUTTERING

Stuttering is a speech problem. People, who stutter, have problem in production of sound or difficulty in moving from one sound to another or sometimes the production of the sound after stop. Charles Van Riper define stuttering as "when the forward flow of speech is interrupted by a meteorically disrupted sound, syllable, or word, or by the speaker's reactions thereto.

More precise definition is given by Jones "Stuttering can be defined as the blockages, discoordination, or fragmentations of the forward flow of speech (fluency). These stoppages, referred to as disfluencies, are often excessive and characterized by specific types of disfluency. These types of disfluencies include repetitions of sounds particularly vowels and semi vowels syllables, prolongation of sounds, and blockages of airflow."(1976)

Stuttering is a confusing and often misunderstood developmental speech and language disorder. Before discussing stuttering, it is important to understand the concepts of speech fluency and disfluency. Fluency is generally described as the forward flow of speech. For most speakers, fluent speech is easy and effortless. **Fluent speech is free of any interruptions, blockages, or fragmentations.** Disfluency is defined as a breakdown or blockage in the forward flow of speech, or fluency. For all speakers, some occurrence of disfluency is normal. For example, people may insert short sounds or words, referred to as "**interjections**," when speaking; examples of such are "**um,**" "**like,**" or "**uh.**"

The occurrence of disfluency is not the same as stuttering, though stuttered speech is characterized by an excessive amount of disfluency. The disfluencies produced by people who stutter will often be similar to those in the speech of individuals who do not stutter; however, certain types of disfluent behavior are likely to appear only in the speech of people who stutter. These disfluencies are sound and syllable repetitions (**i.e., ca-ca-ca-cat**), sound prolongations ("**sssss-salad,**" "**ffffff-fish**"), and complete blockages of airflow. These behaviors, often referred to as stuttering type disfluencies, distinguish stuttered speech from non stuttered speech

Most people who stutter react negatively to their disfluencies. A person may develop a number of physical reactions, including tension of the muscles involved in speech (tongue, jaw, lips, or chest) and tension in muscles not related to speech (such as shoulders, limbs, and forehead). In addition to these physiological reactions, people who stutter will often have negative emotional reactions to the disorder. Among these emotional reactions are embarrassment, guilt and frustration are more common.

## 4.1. Signs and Symptoms of Stuttering

The first signs of stuttering tend to appear when a child is about 18-24 months old and starting to put words together to form sentences. The primary symptoms of stuttering include excessive disfluency, both stuttering and normal types (core behaviors), as well as physical, emotional, and cognitive reactions to the problem. These behaviors will vary in severity across people who stutter from very mild to very severe. Additionally, the behaviors will vary considerably across different speaking situations. There are specific situations when people tend to experience more stuttering (such as talking on the phone or with an authority figure) or less stuttering (speaking with a pet or to themselves). It is likely that this variability might even extend to people having periods (days and even weeks) when they can maintain normally fluent or no stuttered speech Guiter, Barry (2005).

## 4.2. Causes of Stuttering

It has proved through researches that there is not only a single cause but there appears to be several factors which are viewed as being important to the onset and development of stuttering. Therefore, stuttering is often described as being related to multiple factors and having possibly multiple causes. Some of them are given below:

### 4.2.1. Genetics

First, there is a genetic predisposition to stutter, as evidenced by studies of families and twins. Children who have first-degree relatives who stutter are three times as likely to develop a stutter. Recent researches are carried out by NDCID with some researchers of Pakistan from Punjab University Lahore; they have identified three genes i.e. GNPTAB, GNPTG and NAGPA, as a source of stuttering. In the latest research, Drayna (2010) refined the location of this place on chromosome 12 and focused their efforts on the new site. They have identified the mutations in a gene known as GNPTAB in the affected family members. This GNPTAB gene is carried by all higher animals, and helps encode an enzyme that assists in breaking down and recycling cellular components, a process that takes place inside a cell structure called the lysosome.

### 4.2.2. Physiological

A second important factor in the onset of stuttering is the physiological makeup of people who stutter. Research suggests that the brains of people who stutter may function abnormally during speech production. These differences in functioning may lead to breakdowns in speech production and to the development of disfluent speech.

In recent brain imaging studies during stuttering, an abnormal network of brain activation has been shown to relate to the severity of stuttering rather than an abnormality in one particular brain region (Christy Ludlow, 2002). The findings suggest increased brain activity in regions {that are} normally less active during speech associated with speech disfluency (Braun et al., 1997; Fox et al., 2000). In addition, deficits in sensory processing {in the brain} have been found in adults who stutter (DeNil and Abbs, 1991) ....The occurrence of stuttering following brain injury in adults could indicate which brain regions may be involved in the maintenance of fluent speech.

Furthermore, a study, published in the lancet medical journal (August 3, 2002) indicates that a disconnection of speech-related areas in the brain is the cause of stuttering. Specifically, Martin Sommer (2011) in Germany found that the tissue structure of a region in the left hemisphere of the brain in people who stutter was significantly different from that of the control group. Recent studies have also shown that in stutters there is an increased activity in the right side of the brain as compared to the left side of the brain (Soo-Eun Chang, 2011). Although there can be many reasons for stuttering but recent studies and researches are carried out in physiological make up of the human beings due to the progress in the field of brain imagining studies.

### 4.2.3. Congenital

Congenital factors may play a role. These may include physical trauma at or around birth, including cerebral palsy, retardation, or stressful situations, such as the birth of a sibling, moving, or a sudden growth in linguistic ability.

### 4.2.4. Auditory

Auditory processing deficits have also been proposed as a cause of stuttering. Stuttering is less prevalent in deaf and hard of hearing individuals and stuttering may be improved when auditory feedback is altered, such as masking, delayed auditory feedback (DAF), or frequency altered feedback. There is some evidence that the functional organization of the auditory cortex may be different in stutters.

### 4.2.5. Environmental

Environmental issues have a significant impact on the development of stuttering behaviors. An environment that is overly stressful or demanding may cause children to have difficulties developing fluent speech. Though the environment, in particular parental behaviors, does not cause stuttering, it is an important factor that might adversely affect a child who is operating at a reduced capacity for developing fluent speech.

## 4.3. Characteristics

### 4.3.1. Primary Behavior

Primary stuttering behaviors are the overt, observable signs of speech fluency breakdown, including repeating sounds, syllables, words or phrases, silent blocks and prolongation of sounds. These differ from the normal disfluencies found in all speakers in that stuttering disfluencies may last longer, occur more frequently, and are produced with more effort and strain. It is characterized by following features:

- **Repetition** occurs when a *unit of speech*, such as a sound, syllable, word, or phrase is repeated and is typical in children who are beginning to stutter. For example, "**to-to-to-tomorrow**".
- **Prolongations** are the unnatural lengthening of continuant sounds, for example, "**mmmmmmmmilk**". Prolongations are also common in children beginning to stutter.
- **Blocks** are inappropriate cessation of sound and air, often associated with freezing of the movement of the tongue, lips and/or vocal folds. Blocks often develop later, and can be associated with muscle tension and effort.

### 4.3.2. Secondary behaviors

Secondary behaviors include **escape behaviors**, in which a stutterer attempts to terminate a moment of stuttering. Examples might be physical movements such as sudden loss of eye contact, eye-blinking, head jerks, hand tapping, interjected "starter" sounds and words, such as "um," "ah," "you know" In many cases, these devices work at first, and are therefore reinforced, becoming a habit that is subsequently difficult to break.

Secondary behaviors also mean avoidance strategies such as avoiding difficult words, situations and people etc. Such covert stutterers may have high levels of anxiety, and extreme fear of even the mildest disfluency (Büchel C, Sommer M, 2004)

### 4.3.3. Variability

The severity of a stutter is often not constant even for severe stutterers. Stutterers commonly report dramatically increased fluency when talking in unison **with another speaker, copying another's speech, whispering, singing, and acting or when talking to pets, young children, or themselves**. Other situations, such as public speaking and speaking on the telephone are often greatly feared by stutterers, and increased stuttering is reported.

## 4.4. Types of Stuttering

### 4.4.1. Developmental

Stuttering is typically a developmental disorder beginning in early childhood and continuing into adulthood in at least 20% of affected children. The mean onset of stuttering is 30 months although there is variability, early stuttering behaviors usually consist of word or syllable repetitions, and secondary behaviors such as tension, avoidance or escape behaviors are absent. Most young

children are unaware of the interruptions in their speech. With early stutterers, disfluency may be episodic, and periods of stuttering are followed by periods of relative fluency. Though the rate of early recovery is very high, with time a young stutterer may transition from easy, relaxed repetition to more tense and effortful stuttering, including blocks and prolongations.

#### 4.4.2. *Acquired*

In rare cases, stuttering may be acquired in adulthood as the result of a neurological event such as a head injury, tumor, and stroke or drug misuse. The stuttering has different characteristics from its developmental equivalent: it tends to be limited to part-word or sound repetitions, and is associated with a relative lack of anxiety and secondary stuttering behaviors. Techniques such as altered auditory feedback which may promote fluency in stutterers with the developmental condition are not effective with the acquired type Guiter, Barry (2005).

### 4.5. **Diagnosis**

Speech-language pathologists are responsible for making the **diagnosis** and managing the treatment of adults and children who stutter. Preferably, a board-certified speech-language pathologist board should be sought for direct **intervention** or consulting. Diagnosis of stuttering, or identifying children at risk for stuttering, is difficult because most children will show excessive disfluencies in their speech. With children, diagnostic procedures include the collection and analysis of speech and disfluent behaviors in a variety of situations. In addition, the child's general speech-language abilities will be evaluated.

Finally, the speech-language pathologist will interview parents and teachers regarding the child's general developmental, speech-language development, and their perceptions of the child's stuttering behaviors. For adults and older children, the diagnostic procedures will also include **gathering and analyzing speech samples** from a variety of settings. In addition, the speech-language pathologist will conduct a lengthy interview with the person about their stuttering and history of their stuttering problem. Finally, the person who stutters might be asked to report his/her attitudes and feelings related to stuttering, either while being interviewed or by completing a series of questionnaires.

## 5. **RATIONALE**

On the basis of above literature review stuttering is selected as a topic to be researched. The main reason for the selection of this topic is that stuttering is very common in people. There are several factors contributing to the problem of stuttering. Although much work has been done in this field but this research touches the language problem as well as the learning problem associated with stuttering. Stutters not only face difficulty in learning language but also other learning abilities are affected.

## 6. **CASE STUDY**

### **Subject's Profile**

<b>Name</b>	MUHAMMAD Sohail
<b>Age</b>	10 years
<b>Education</b>	Primary Hafiz Quran
<b>Place of study</b>	Home and Institute
<b>Problem</b>	Stuttering
<b>Language</b>	L1 of the child is Punjabi L2 of the child is Urdu and English
<b>Interests of the child</b>	Games and watching T.V.
<b>Sources of collection</b>	1) <b>subject</b>
<b>Data</b>	2) <b>subject's mother</b> 3) <b>Subject's teacher</b> 4) <b>Subject's molvi Sahib</b>

## 7. RESEARCH TOOLS

Data for the research process was gathered using various tools of data collection. In order to achieve triangulation, both conventional and inventive sources of data were tapped to collect information and to validate and authenticate the information received from different sources. A description of the tools and rationale for their use is provided below:

- Observations
- Interviews

Both “**open and closed observations**” were taken. Specific checklist was developed to substantiate the research. Open observation were taken in the informal situation. In open observations the researcher noticed the problematic areas for the subject to speak. The researcher jotted down observations about the speech problems and subject’s behavior towards his disorder in points.

Second tool was interviews. The “**structured interview**” was taken from the subject in which few general questions were asked and recorded for further assistance and for evidence. The researcher has also taken “**semi structured interview**” from child’s mother in which she wanted to know about the attitude of the parents and rest of the family towards disorder of the subject and also the proper treatments they have taken to cure this disorder. The researcher also took the interview of subject’s teacher to know about his attitude and learning problems in the institute. Molvi Sahib of the subject was also interviewed to collect the information.

### 7.1. Observations

The behaviors which were commonly observed during the research process in informal setting are given below:

- Behavior of the subject with his siblings
- Behavior of the subject in the class and Madrassa
- Confidence level of the subject
- subject’s attitude towards his problem

### Analysis

The purpose of open observations was to observe the subject in the informal setting. It is a fact that informal setting reveals more information about a person or a situation.

It is observed that the subject possessed the good confidence unlike the other stutterers. He did not have any kind of complex regarding his disorder. The subject behaved normally with his siblings. He played with his brother and sister, argued over petty matter (instead of the fact that he faces problem in speaking at certain places) etc. Sohail (the subject) was aware of his problem but he did not take any special notice of it and lives his life like a normal child. It is also observed that though he behaved like a normal child but he faced problems in speaking and learning in the school. Sometimes it became difficult for him to express himself so he conveyed his thoughts through the small words use or through body language.

As far as **closed observations** are concerned there was a proper checklist (see **Appendix A**) to observe the subject. The subject has the obvious traits of the stutters which is evident from the result of the checklist. Checklist is comprised of 14 items based on the general characteristics found in stutters. Most of the items answer in “yes” and few of them results in “No”. Analysis of the checklist is given below

The traits of the subject which is common to stutters are as fellows

- Repetition of the whole word
- Repetition of the first letter
- Repetition of the first syllable
- Complete block on the first letter

- Omission of the complete words
- Blockage of sounds (before the sound for the second word initiated)
- Complete block two words
- Prolongations of the vowel (liiiiike)
- Visible attempt to speak (mouth movement but no sound coming)
- Accompanying physical tension and struggling while speaking
- Tensing of mouth

Traits which were found least in the subject

- Blinking
- Anxiety
- Excessive or pronounced breathing

## 7.2. Interviews

Four interviews were conducted to carry out this research

Subject's interview (**structured** interview)

Subject's mother's interview (**semi structured**)

Subject's teacher's interview (semi **structured**)

Subject's molvi sahib's interview (semi **structured**)

## 8. ANALYSIS

Structured interview was conducted to get the special information about the subject. This interview was consisted of ten general questions. The purpose of this interview was to get the deeper insight in the subject's personality and also in his problem. This interview has served its purpose. Many features of his problem came to light.

Unstructured interviews were conducted to participant's teacher and mother. The intentions behind these interviews were to know about the problems which child is facing in school as well as at home and the cause of the problem (stuttering). It brought to light the treatments which have been taken to cure the problem.

### 8.1. Analysis of the Interview of Student

The subject was interviewed to collect the authentic information. Analysis of the interview is done on the basis of the literature review. Many traits of his personality came to the light through the analysis. The analysis is as under

Q- What is your name?

A- My name is SSS.....SSuu.....Suhail.

This general question was asked to make the subject frank and candid for the further proceedings. But in the first answer stutters' characteristics is revealed. Repetition of the first letter of his name "sss...ssu...hail" was observed which is one of the most common characteristics of the stutters. Another feature came to the light is the blockage. Although the gap is small yet it is obvious enough to be noticed.

Q- In which classes do you read?

A-I am studying in ffff....Ivvve (five) class.

The purpose of this question was to know the level of qualification of the subject. The subject is in fifth class. Side by side "**prolongation of the first word (ffff), block (...)** and **prolongation of the long vowel (IIVVVE)**" were strongly prominent.

Q-How many brothers and sisters do you have?



A-I have two brothers and sisters.

There was complete omission of the word “TWO” was found in this answer.

Q-Who is your best friend? Why do you like him?

A-My best friend is Ahemad. Heee is very caring that’s why I llliiike him.

In this answer prolongation of the vowel was observed. Firstly, there was prolongation of short vowel in the speech and then there was prolongation of the long vowel was found.

Q- Who is your favorite teacher?

A- Sir Feee..rrroo...zzz is my favorite teacher. Hee teaches UUU....uurrr...du.

Three main features were seen in together in this answer. Firstly, there was prolongation of the short vowel (**eee** in Feroz, in he and **uuu** in urdu). Secondly there was block. Thirdly, there was prolongation of the consonants was also noticeable i.e. **rrrr** and **zzzz**. This answer depicts that the prolongation of vowels and consonant is not restricted to a single vowel or a specific consonant. Therefore, there is variability in the prolongations. Further, blocks do not occur at the specific interval rather they are also random or haphazard.

Q- Which subject do you like the most? And why do you like it?

A- My favorite subject is UU...ur....dddd.....du, I likeeee it because it is eeee..asy to understand. And it....of Sir Feee...roz .....attra...cttss me.

Besides other characteristics like prolongation of vowels uu and eee, there was complete **omission** of the certain words i.e. “is because” and “who”. Even though there was complete omission of the words but his expressions are not vague.

Q- What do you do in your leisure time?

My lee...lee...leisure time activity is playing with my friends.

This answer brought to light the fact that the subject possessed **repetition of first syllable lee...lee**.

Q- Which is your favorite game?

A- I... lliike cricket.

Again in this answer **block** and **prolongation of diphthongs** was observed.

Q- Who is your favorite player in cricket?

A- I rea...really.... llii...ke Shahid Afridi.

In this answer repetition of the first syllable accompanied with the blocks at two places. Moreover, there was an elongation or prolongation of the diphthongs.

Q- What are your comments about the victory of India of the world cup 2011?

A- What can I sa...say??? Sad! We are responsible for their..... victoryyyy.

It was observed from this answer that there was repetition in the start as well as at the end of word i.e. **sa...say** and victoryyyy. There was another thing which became obvious in this answer that the subject has faced physical tension and stress in uttering the words at the end of the sentence.

Q- Do you read any novel or newspaper?

A-Noo....noo I don’t read it. But I llii....ke to reee...read stories.

This answer brought to the light that there was prolongation of the words side by side the stress and emphasis has been observed in saying **noo, noo**. And again there was prolongation of the diphthongs in the word like.

Q-which type of story books do you like?

A-I lliike adventuroooooo stoo...rie...ree ...ressss.

Prolongation of the diphthongs in the words like and adventurous and elongation at the end of the word stories was observed.

Q- Do you watch Indian movies?

A-Yyy...es I wwa....watch them.

Physical tension and strain was observed in the speech of the subject.

## **8.2. Analysis of the Interview of the Mother**

Few general questions were asked from the mother of the subject to get the deeper insight of the problem. The analysis is as under:

Q- Is there any effect of his stuttering problem on his routine?

This question was asked to know the influence of the disorder on the daily routine life of the subject. But it is evident from the answer that stuttering does not create any hurdle in the normal routine life. He lives like other normal children.

Q-Is he interested in the studies?

The purpose of this question was to check the interest and ability of the subject. And it is obvious from the answer that he was an average child in the studies. He found difficulty in learning English like other students and nothing else.

Q-Is there any specific food fixed for him because of his problem?

This question was asked to get detail as to disorder whether specific kind of food is helpful or required in this disorder. It is apparent from the answer that there was no special food prescribed by the doctor as it is not a disease but it's a disorder.

Q-Do you give him any medicine?

This question was aim to know about the degree of the problem, medicines and doctor advises, if any given, to the subject. But it is revealed from the answer that there were no medicines and the subject was not under special treatment.

Q- Does any other person in the family face this problem? Is it inherited?)

This question was asked to know the root cause of the problem. The reply of mother cleared that it was inherited as his father (mild form of stuttering) and one of his uncles were facing the same problem.

Q-When did you diagnose that he has this problem?

The purpose of this question was to get the information about time period of his disorder. It was apparent from the answer that he was facing this problem since childhood.

Q-Have you seen any differences and similarities in the speaking (stuttering) intervals of his uncle?

Q-Does he stutter more in emotional state?

Q-Is there any specific time when he stutters the most? And if so what is that time?

These three questions were asked to get the details of the disorder. It came to light from the answers that the subject has similarity with his father and uncle (as it is inherited disorder). He has the same time intervals in stuttering as his uncle used to have in childhood and with the passage of time these intervals were reduced. Furthermore, subject's stuttering increased in the emotional state which depicts that anxiety and nervousness has great effect on this disorder. It is further added by his mother that he stutters a lot when he meets a new or strange person.

Q-Has he ever complained you about the strange behavior of his friends or any other relative with him because of his problem?

Q-Have you ever observed the perplexity in his behavior while meeting any new person?

These two questions were related to the social problems faced by the child due to this disorder. It is evident from the answers that the child faced the changed behavior of the other people (some

are sympathetic; some make fun of him etc). Moreover, child has faced problems while communicating with others in childhood but with the passage of time he has gained the confidence.

### **8.3. Analysis of the Interview of the Teacher**

This interview was designed to get deeper insight of the child's problem. It focuses three main areas child's personality i.e. his disorder, as a student and his general attitude (due to this disorder).

Q- What is the method of teaching?

Q- Does he need any extra attention or help as compared to other children?

Q- Is he a good student in the class?

These three questions were asked to know that whether there is any special kind of treatment on the part of the teacher or not as he was suffering from stuttering. Teacher told that he does not use any special technique to teach him. He (the subject) can easily understand the lesson taught through normal method. Although he does not need any extra help due to his disorder but sometimes he requires more attention from the teacher. It depicts his normal behavior. According to his teacher he is an average student.

Q- Does he mix up words while speaking?

Q- Is there any difference of intervals of stuttering while he speaks normally like with his friends and when he reads out the given task?

Q- Is there any difficulty which he faces while speaking words with difficult pronunciation like statistics?

These questions were asked to have profound look on the problem of the subject. It was told that he mixes words due to his disorder. It shows that he faces problem in conveying message so he wants to utter the words fluently which causes the words to mix up and make the communication unclear. He stutters a lot when he is reading a given task. It may be due to the reasons that he is in the formal setting and under stress of speaking correctly which create the vagueness in his speech. Furthermore, it came to the light that he feels a lot of difficulty in pronouncing the difficult words and level of difficulty is greater as compared to normal children. It depicts that the subject has much difficulty in the articulation of the articulator when he tries to utter comparatively difficult words.

Q- Do the students in the class have the same behavior with him like other students?

Q-How is his behavior with other students?

These questions were based on interactive ability and the behavior of the subject among other students. It is evident from the answer that his class fellows have good behavior with him and so as the subject. They all are comfortable with one and another. The subject does not feel any kind of hesitation in communication. It illustrates that child has become normal about his disorder. Although he knows his problem but he has overcome his weakness and behaves normally. He does not lag behind in communication.

### **8.4. Analysis of the Interview of the Molvi Sahib**

A short interview was also taken from the subject's Molvi Sahib to strengthen the research findings. The analysis of the few important questions is given below;

Q-When he came to you for the first time, were you hesitant to teach him?

Q-What were your first remarks when you saw him?

Q-When he reads out his first given task what were your remarks, means were you expecting the same response or did he make you surprise positively?

These questions were asked to check the response of molvi sahib's behavior towards a disordered child. It is evident from the answers that molvi sahib was not reluctant to take the subject as his student and he was not afraid of his disorder. He took him as he takes other normal students.

Actually Molvi sahib was good natured man he did not make any difference among children. He was much concerned about his students. He observed his students keenly. When the subject recited his first lesson he was surprised to see him because he was of the view that the subject will be unable to perform his job efficiently due to the disorder or he will take the advantage of it. But to his (molvi Sahib) surprise the subject was competent enough to hifiz Quran Pak. It satisfied the Molvi Sahib. It depicts that although the subject was suffering from the disorder yet he has enough competencies to learn Quran Pak by heart. And stuttering has more or less no effect on learning Quran Pak.

Q-Due to his problem does he face any difficulty to learn?

Q-When he is reading out his given task do you feel any difficulty in understanding it?

Q- How much time does he consume in learning one rukoh or verse?

Q-Due to his problem is there difference of the quantity of topic he takes from you as compared to other children?

These questions were asked to check degree of disorder. The answers showed that the subject has astonishingly different kind of behavior in learning Quran Pak. He recited the Holy Quran with a great fluency. There was no stuttering at all during the recitation. He was so clear in his expression that there was no difficulty in understanding him. Moreover, amazingly he took similar time to learn the lesson as did the normal child. And he also took same amount of the lesson as other students. It elucidates that the subject has an extraordinary potential to learn the Holy Quran. Although he was suffering from the stuttering and he has its symptoms in his general speech but in recitation there was no sign of stuttering. It may be possible that it is special blessing of Allah on him.

What sort of nature he has, means does he co-operate with other students or not?

It is palpable from the answer that the subject was socially active person. He did not feel shy due to this disorder. So He was not an introvert kind of person.

## 9. DISCUSSION

Discussion of the case study is based on the information, got through the analysis of observations and interviews.

The main finding of the research shows that the subject (Sohail) has severe stuttering problem. Through research and observations it comes to light that he is suffering from this disorder due to **genetics**. His father and his immediate paternal uncle also have this disorder. Hence, this disorder is transferred to him by his parents through genes. Sohail's siblings also have this problem but they have mild form of stuttering. He is suffering from this disorder from his childhood. In the start it was very difficult to diagnose (developmental stuttering mentioned on the page 8). As he grew up, symptoms became more clear and obvious.

Sohail has many vivid characteristics of stutterers. He has **repetition** problem. He repeats words again and again even in the single sentence e.g. he repeated his name **ssu...su...sohail** in the interview (see appendix **B**). Repetition of the word is not restricted to first letter or syllable of the word. It is found in the beginning and at the end of the word as well. Furthermore, it is not confined to a particular word or words. Intervals are also not fixed, sometimes repetition occur after three words or sometimes it takes place several time in the single sentence (appendix B). It is observed erratically or indiscriminately. Secondly, prolongation of the words is strongly observed in the subject's speech. He prolongs the words while speaking like **ffff...iivve** (see appendix **B**). Prolongations of the words consist of elongation of consonants and vowels. Consonants elongation is observed in the start and at the end of the word like "**ffff**" in five and **ryyy** in the word victory. Even it is observed in the same word i.e. **rrrr** and **zzz** in Feroz. Prolongation of the vowels includes long and short vowels i.e. the diphthong in the words "like, adventurous, five and short vowels are "e", "u" in the words He and Urdu. One aspect of the speech, which is more prominent, is the elongation of the diphthong in the word "like" observed everywhere. It is also apparent that prolongation of the vowels is not systematic. It is arbitrary. Furthermore **blocks** are very prominent in the speech of the subject. This creates problem for him to convey his ideas and thoughts clearly. It also hinders fluency in the speech. Sometimes, they make his speech

ambiguous. It becomes difficult for the listeners to understand what he wants to say and one can only predict if he is aware of the context. e.g. when he wanted to say he likes Saturday because he has holiday on Sunday his speech blocked and he was unable to speak it clearly rather he put much effort to speak this sentence. There are several other examples of his speech which are characterized by the blocks (See appendix B). Omission of the complete words is also noticeable in speech like he has omitted the word “two” in 3<sup>rd</sup> question.

The subject also possesses **variability** it means that he stutters when he talks to new or strange people (mentioned on page no 9). Surprisingly, when he learns his lesson of Holy Quran he does not stutter at all, he speaks so fluently as if he has no stuttering problem. He recites surrah of Holy Quran so beautifully that it spells bound listeners. He does not confuse in front of people during recitation.

It is commonly observed that the stutterers confuse or feel embarrass in front of people but the situation is different in case of this particular subject. He is quite confident in communicating people that he does not feel any kind of anxiety or embracement while speaking. He is so friendly and cooperative in nature that he does not hesitate to answer any of the questions. Although he has problem in speaking many words as mentioned earlier yet he was not frustrated at all due to his disorder. In fact, He was enjoying the question answer session in the interview. He also talks to his siblings very confidently.

Parents of Sohail are not worried for him due to this disorder. They do not have any insecurity for his future but they are very much concerned about it. They also got him the treatment when he was young. Doctor treated him for three months through medicines. But after that, doctor advised them its genetic disorder and it will be cured automatically with the passage of time. As they are living in the backward area and also they are not educated they have no access to proper speech pathologist/doctor. They also believed that the subject’s disorder will be vanished with the time. And according to the mother of Sohail there is an improvement in his speech. She told that he stuttered more when he was young but comparatively now he is able to speak clearly. (See appendix C)

The subject’s teacher in the school added that he is a very good child and he has no problem in learning his lesson. Stuttering does not create any hurdle as far as his comprehension level is concerned. But it becomes difficult for him to learn the lesson by heart. (See appendix D). On the other hand, the Molvi Sahib of the subject gives quite different opinion about the subject as compared to school teacher. He mentions that he does not stutter while reciting the Holy Quran. It is relatively astonishing behavior of the subject. Furthermore, he tells that he plays and interacts with other children actively (see appendix E).

However, it is a fact that stuttering hampers the clarity in the speech of the subject and it also slows down the learning process to certain extent. Because it is noticed that he prolongs and repeats the word which badly affects the correct pronunciation of the words. Consequently, he is not able to pronounce certain words with their exact and accurate pronunciation. In school, sometimes it becomes difficult for him to learn the lesson orally. He has to put great effort in pronouncing some words as a result it affects the learning process. Moving on, in the light of this research it can be said that stuttering has little effect on comprehension level but it affects speech i.e. fluency, pronunciation etc.

## 10. CONCLUSION

To conclude, this term paper discussed stuttering problem of Sohail in detail. The purpose of the term paper was to see the effect of stuttering on speech and on the learning process. Many features of the stutterers like repetition of the whole word, repetition of the first letter, repetition of the first syllable, Complete block on the first letter, Omission of the complete words, Blockage of sounds, Complete block two words, Prolongations of the vowel (liiiiike), visible attempt to speak, accompanying physical tension and struggling while speaking and Tensing of mouth were noticed. It has been observed in the research (case study) that stuttering creates the disfluency in speech. It also highlighted his indifferent and distinctive behavior and his family. Some suggestions have been given in the end to improve his speech fluency. Overall this case study was very interesting and informative. It has covered all the aspects related to the stutterers like studies, speech and social behavior.

## 11. RECOMMENDATIONS

Following recommendations can be helpful in the treatment of stuttering problem:

- Carefully determine the nature of disfluency to determine whether the child is stuttering or merely struggling with linguistic development in two languages. A good place to start would be in taking a language sample to differentiate between normal speech disfluencies (NSDs) which may characterize second-language learning rather than stuttering.
- If you initiate direct treatment for stuttering, treat the child in his/her stronger language and monitor the weaker language(s) to determine whether the treatment effects carry over when the second language becomes more complex.
- Fluency shaping therapy is helpful for stutters to speak fluently by controlling their breathing, phonation, and articulation. It is based on operant conditioning techniques.
- Stuttering modification therapy is also another effective treatment for the stutters. It does not eliminate stuttering but to modify it so that stuttering is easier and less effortful.
- Altered auditory feedback, so that stutterers hear their voice differently, can be used treatment of stuttering.
- Anti-stuttering medications are also helpful for the treatment of stuttering.

### For parents or family

- Don't interrupt your child or tell him to start over.
- Don't tell your child to think before speaking.
- Provide a calm atmosphere in the home. Try to slow down the pace of family life.
- Speak slowly and clearly when talking to your child or others in his presence.
- Maintain natural eye contact with your child. Try not to look away or show signs of being upset.
- Let your child speak for himself and to finish thoughts and sentences. Pause before responding to your child's questions or comments.
- Talk slowly to your child. This takes practice. Modeling a slow rate of speech will help with your child's fluency

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