**DEBRE MARKOS UNIVERSITY**

**INSTITUTE OF EDUCATIONAL AND BEHAVIORAL SCIENCES**

**DEPARTMENT OF SPECIAL NEEDS AND INCLUSIVE EDUCATION**



**LANGUAGE AND COMMUNICATION DISORDER MODULE**

**SEPTEMBER, 2019**

 **DEBRE MARKOS UNIVERSITY, ETHIOPIA**

Dear 2nd year special needs and Inclusive education learners!! You are expected to read this module from the begging to the end and prepare yourself till the time comes i.e. face to face teaching learning begins. Thus, the module has 5 different units with their own brain storming questions and self-check exercises. These may help you to focus on the gist points of the course “Communication disorder”. The module has been well prepared to make easy for you. As much as possible you have to read each and every details of the module. Your preparation makes things easy when we get in touch the course during our face to face teaching and learning program. Your instructor with regards!! Kassahun Zewdie (Ph.D).

**MODULE INTRODUCTION**

****Communication has a vital role for all human beings. The importance of communication cannot be listed within a single paragraph. All age groups of human beings can equally benefited or loss their advantages because of appropriate communication. Communication is a human nature and capacity that distinguishes from all other animals. Children should communicate effectively and efficiently in order to be successful in their day to day life including educational achievement. However, due to several reason children’s communication ability may not be efficient. Children’s communication disorder can be stated as voice disorder, speech or language impairment and the degree might be stated from mild to profound.

Human communication is a complex activity that draws on a diverse set of linguistic, cognitive and motor skills. These skills are the basis upon which speakers (and writers) generate appropriate communicative intentions, encode and decode linguistic utterances and program and execute the motor movements that are needed to produce those utterances. An understanding of these skills and how they contribute to the formulation and comprehension of linguistic utterances is a prerequisite for the study of communication disorders.

The study of communication disorders also requires an understanding of a number of key clinical distinctions. A communication disorder may have its onset in the developmental period. Alternatively, normally acquired speech and language skills may be disrupted by illnesses and events in late childhood and adulthood. The distinction between a developmental and an acquired communication disorder has implications for all aspects of the management of a communication disorder. Similarly, clinicians recognize a distinction between speech disorders and language disorders and, within language disorders, a distinction between expressive and receptive language impairments. A child may exhibit all of these disorders, or just one. Child development professionals study the changes that occur in speech, language, and communication as children grow and develop. You might interpret these terms as having similar meanings or as being identical. Actually, they’re very different and denote different aspects of development and use.

**Speech** is a verbal means of communicating. Other ways of communicating include but are not limited to writing, drawing, and manual signing. The result of planning and executing specific motor sequences, speech is a process that requires very precise neuromuscular coordination. Each spoken language has specific sounds, or **phonemes,** and sound combinations that are characteristic of that language. In addition, speech involves other components, such as voice quality, intonation, and rate. These components enhance the meaning of the message. Speech is not the only means of face-to-face human communication. We also use gestures, facial expressions, and body posture to send messages. In face-to-face conversation, non speech means may carry up to 60% of the information.

Individual speech sounds are meaningless noises until some regularity is added. The relationship between individual sounds, meaningful sound units, and the combination of these units is specified by the rules of language. **Language** can be defined as a socially shared code or conventional system for representing concepts through the use of arbitrary symbols and rule-governed combinations of those symbols.

Both speech and language are parts of the larger process of communication. **Communication** is the process participants use to exchange information and ideas, needs and desires. The process is an active one that involves encoding, transmitting, and decoding the intended message. It requires a sender and a receiver, and each must be alertto the informational needs of the other to ensure that messages are conveyed effectively andthat intended meanings are preserved.

The probability of message distortion is very high, given the number of ways a message can be formed and the past experiences and perceptions of each participant. The degree to which a speaker is successful in communicating, measured by the appropriateness and effectiveness of the message, is called **communicative competence.**

Therefore, communication has its own process. When that process interrupted due to a certain reason the message may not reach to the intended purpose. The sender who encodes the message, the message (the intended content) and the receiver who decodes the messages are responsible to convey intended meaning. In addition to these three important combinations failures to convey message, problem may arises due to the individual’s speech, voice or language problem. Human communication is a complex, systematic, collaborative, context-bound tool for social action. Complexity can be demonstrated by the multifaceted and multifunctional aspects of the process. These include all aspects of communication and language plus additional mental processes, such as memory and planning, exercised within the cultural beliefs, situational variables, and social conventions of the individual participants (Owens, 2012). Therefore, throughout this module we will try to describe the prevalence, causes, symptoms, identification procedures, assessment strategies and intervention mechanisms of communication disorder.

This module presents about impacts of communication and language disorder in educational and life aspects of students with communication disorder starting from early age, advantages of early intervention for children with speech disorder in relation to develop language and speech. The stage of pre-school and phonological awareness is usually develops in the early school years. Children attend for intervention program at pre-school, pre-literate stage, before they reach at formal school age. Because during formal school age, the child is expected to know relevant sounds phonemes, segments and manipulation of language skills. It is agreed to have a close relationship with early literacy development speech and language of the therapy for children with speech disorder involves tasks that appear, either implicitly or explicitly, to require a phonemic level of awareness.

Symbols and there Representations in the Module

|  |  |
| --- | --- |
| **Symbols** | **Their Representations** |
| **** | **This tells you there is a unit introduction** |
|  | **General and unit objectives** |
| **?** | **This tells you there are questions for you to answer or think about in the module** |
| **** | **This tells you there is topical presentation** |
| **** | **This tells you to take a note, to remember an important point and there is a unit summary** |
| **** | **This tells you there is unit exercises**  |

Table of Contents

[MODULE INTRODUCTION 2](#_Toc15247459)

[Symbols and there Representations in the Module 5](#_Toc15247460)

[Unit One 7](#_Toc15247461)

[1. Meaning of Communication 7](#_Toc15247462)

[1.1 Definition of Communication 8](#_Toc15247463)

[1.2 Models of Communication 11](#_Toc15247464)

[1.3 The Communication Process 13](#_Toc15247465)

[**Unit two** 17](#_Toc15247466)

[**2. Normal versus Abnormal Communication development** 17](#_Toc15247467)

[2.1 Typical Communication Development 17](#_Toc15247468)

[2.2 Meaning and components of Language 21](#_Toc15247469)

[2.3 The concept of Normal and Abnormal in relation to communication 23](#_Toc15247470)

[2.4 Normal Language Milestones 24](#_Toc15247471)

[**2.4.1 Descriptions of Normal Language Milestones at Different Age Level** 25](#_Toc15247472)

[2.4.2 Language Impairment 27](#_Toc15247473)

[2.4.2.1 Impairment in Language Form 28](#_Toc15247474)

[2.4.2.2 Disorders of Content 29](#_Toc15247475)

[2.4.2.3 Disorders of Use (Pragmatics) 29](#_Toc15247476)

[2.4.2.4 Receptive Language Impairment 29](#_Toc15247477)

[2.4.2.5 Expressive Language Impairment 31](#_Toc15247478)

[2.4.2.6 Word Finding or Word Retrieval 32](#_Toc15247479)

[2.4.2.7 Pragmatic Language Impairment 33](#_Toc15247480)

[2. 4. 4 Articulation Impairment 34](#_Toc15247481)

[2.4.5 Psychosocial Problems Associated with Communicative Disorders 37](#_Toc15247482)

[2.4.6 Co-occurrence of Disorders 37](#_Toc15247483)

[**2.5** **Prevalence** 39](#_Toc15247484)

[Unit Three 43](#_Toc15247485)

[3. Types/classification and Causes of Communication and Language Difficulties 43](#_Toc15247486)

[3.1 Causes of communication disorder 43](#_Toc15247487)

[3.2 The Anatomy and Physiology of Speech Production 44](#_Toc15247488)

[3.2.1 The Respiratory System 45](#_Toc15247489)

[3.2.2 Structures of the Respiratory System 46](#_Toc15247490)

[3.2.3 Muscles of the Respiratory System 46](#_Toc15247491)

[3.2.4 Laryngeal System 46](#_Toc15247492)

[3.2.5 Articulatory System 48](#_Toc15247493)

[3. 3.1 Causes of Motor Speech Impairments 49](#_Toc15247494)

[3. 4 Speech Disorders 52](#_Toc15247495)

[3.4.1 Articulation Disorder 53](#_Toc15247496)

[The common articulation errors include the following: 54](#_Toc15247497)

[3.4.2 Fluency disorder 54](#_Toc15247498)

[3.4.3 Voice Impairment 55](#_Toc15247499)

[3.4.4 Voice Disorders Associated with Psychological or Stress Conditions 57](#_Toc15247500)

[3.4.5 Neuromuscular Disorders 57](#_Toc15247501)

[3.5 Communication disorder and Hearing Impairment 58](#_Toc15247502)

[3.5. Characteristics of children with Language and Communication Difficulties 59](#_Toc15247503)

[**3.5.1** **Physical Characteristics** 59](#_Toc15247504)

[3.5.3 Cognitive Characteristics 59](#_Toc15247505)

[**3.5.4** **Language Impairments In relation to Academic Achievement** 59](#_Toc15247506)

[**3.5.5** **Socio-emotional Characteristics** 60](#_Toc15247507)

[Unit Four 63](#_Toc15247508)

[4. Identification and Assessment of Language and Communication Difficulties 63](#_Toc15247509)

[4.1 Identification Mechanisms 64](#_Toc15247510)

[**4.1.1** **Difficulties in early identification and assessment** 64](#_Toc15247511)

[**4.2** **Speech Impairments** 65](#_Toc15247512)

[4.2.1 **Articulation** 65](#_Toc15247513)

[4.2.2 **Voice** 66](#_Toc15247514)

[4.2.3 **Fluency** 66](#_Toc15247515)

[4.2.4 Intelligibility 67](#_Toc15247516)

[4.3 Identification of Language Impairments 67](#_Toc15247517)

[**4.3** **Assessment strategies** 69](#_Toc15247518)

[**4.3.1** **Area of Communication (Language) Assessment** 70](#_Toc15247519)

[Unit five 74](#_Toc15247520)

[5. Intervention of Communication (speech and language) Disorder 74](#_Toc15247521)

[5.1 Clinical Elements include 75](#_Toc15247522)

[5.2 Intervention of Motor Speech Disorders 76](#_Toc15247523)

[5.3 Treatment of Motor Speech Disorders 78](#_Toc15247524)

[5.3.1 Intervention for Voice disorders associated with Vocal misuse or Abuse 78](#_Toc15247525)

[5.3.2 Intervention for Voice Disorders Associated with Medical or Physical Conditions 79](#_Toc15247526)

[5.3.3 Intervention for Voice Disorders Associated with Psychological or Stress Conditions 80](#_Toc15247527)

[**5.3** **Treatment/Intervention for Children with Cluttering and Stuttering** 81](#_Toc15247528)

[5.4 The Educational Implications of Communication Disorders 82](#_Toc15247529)

[References 88](#_Toc15247530)

Unit One

1. **Meaning of Communication**

****Communication skills are of vital importance in today’s society. Anything that interferes with communication creates a serious problem for a child (Day, 1985). Speech and language development are the primary elements of communication. Children need good speech and language skills to succeed in school and in life. Therefore, this module is designed to use as a guide to understanding and providing support for children with communication disorders or impairments. The basis for developing this module is to provide guidelines on how to help all children improve their speech and language skills and use this to maximize their potential. In school settings such as in public or private, a number of children with speech and language problems can attend their schooling. Therefore, it is possible to give support and prevent communication disorder that may observe upon school age children. Having this in mind, the meaning of communication, types, symptoms and many related issues are discussed in this module.

* **General Objectives**

At the end of this course students will be able to:

* Understand the meaning and concept of Communication
* Understand the Process of Communication
* Understand the communication pass way from source, channel and receiver
* Define communication impairments and outline the needs of children with

 communication disorder/impairments.

* Discuss the role of the individuals who work with children with communication disorder.
* Discuss how communication needs are met.

**Specific Objectives**

* Understand the importance of Communication
* Understand the functions of Communication
* Describe the Communication Process
* List the Functions of Communication
* Describe Importance of Communication
* State types of Communication
* Understand the prevalence of children with communication disorder.
* Describe different classification of communication disorder
* List causes of communication disorder
* Justify the different characteristics of Communication disorder
* List down different identification symptoms of communication disorder
* Identify the different assessment techniques of communication disorder
* Identify different Intervention techniques for children with communication disorder.

**?** Define Communication? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Have you tried? Good. Dear learners you might have knowledge about the meaning of communication. The following sections will describe the meaning and nature of communication.

**1.1 Definition of Communication**

****The term "communication" has been derived from the Latin "communis," that means "common". Thus "to communicate" means "to make common" or "to make known", "to share" and includes verbal, non-verbal and electronic means of human interaction. Scholars who study communication analyze the development of communication skills in humans and theorize about how communication can be made more effective. It is the meaningful exchange of information between two or group of people. Communicative competence designates the capability to install inter subjective interactions, which means **that communication is an inherent social interaction** (Velentza & Broni, n.d).

One definition of communication is "any act by which one person gives to or receives from in another person’s information about that person's needs, desires, perceptions, knowledge, or affective states. Communication may be **intentional or unintentional**, may involve conventional or unconventional signals, may take linguistic or non-linguistic forms, and may occur through spoken or other modes.

**?** List some important means of communications to convey message from the source to the receiver? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Did you try? Excellent!**

The act of making communication and known way of exchange of ideas is carried out through different means. The exchange of thoughts and ideas can be done by gestures, signs, signals, speech or writing. People are said to be in communication when they discuss some matter, or when they talk on telephone, or when they exchange information through letters. Basically, communication is sharing information, whether in writing or orally.

Humans convey information through a variety of methods: speaking, telephones, email, blogs, TV, art, hand gestures, facial expressions, body language and even social contexts. Communication can occur instantaneously in closed, intimate settings or over great periods of time in large public forums, like the Internet. However, all forms of communication require the same basic elements: **a speaker or sender of information, a message, and an audience or recipient**. The sender and recipient must also share a common language or means of understanding each other for communication to be successful. As such, a study of communication often examines the development and structure of language, including the mathematical languages used in computer programming.

What is the difference between intrapersonal and intrapersonal skills? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Did you try? Interesting!

The act of communicating draws on several **interpersonal** and intrapersonal skills. These include speaking, listening, observing, questioning, processing, analyzing and evaluating. Recipients of a message must be able to identify the sender's intent, take into account the message's context, resolve any misunderstandings, accurately decode the information and decide how to act on it. Such skills are essential to learning, forming healthy relationships, creating a sense of community and achieving success in the workplace.

Communication is the sum of all the things one person does when he/she wants to create understanding in the mind of another. It involves a systematic and continuous process of telling, listening, understanding and comprehending the message correctly. Communication can be defined as the process through which two or more persons come to exchange ideas and understanding among themselves.

The word Communication describes the process of conveying messages (facts, ideas, attitudes and opinions) from one person to another, so that they are understood. (M.W. Cumming) Communication is the process whereby speech, signs or actions transmit information from one person to another. This definition is concise and definitive but doesn‘t include all the aspects of communication. There are other definitions, which state that communication involves transmitting information from one party to another. This broader definition doesn‘t require that the receiving party obtain a full understanding of the message. Of course, communication is better when both parties understand each other but it can still exist even without that component Communication is a process of transmitting and receiving verbal and non-verbal messages that produce a response. Communication is considered effective when it achieves the desired reaction or response from the receiver, simply stated, communication is a two way process of exchanging ideas or information between human beings.

It can be argued that communication is a universal characteristic of humans, much like bipedalism (walking with two legs) and opposable thumbs, and thus cultural values are not necessary to claim that limitations in these traits represent ill health. However, if we imagine a world without gravity, legs have no use. It could be possible that a society in such a world would no longer view the absence of legs as a condition of poor health. Likewise, we might have a world where speech and hearing are not necessary for communication, and therefore their absence is no longer viewed as unhealthy. This last example is not hypothetical, but rather is very well exemplified in the Deaf community where speech and hearing are in some circles disvalued, and lack of hearing and speech do not constitute ill health or considered as a problem.

Communication serves to support many other functions in our lives. Indeed, communication is an important means by which we establish and maintain our cultural membership. Thus, it is not just a vehicle for social interaction; it is also a principal means for establishing cultural and sub cultural identity. Since communication also serves as the basic tool for instruction and learning, it is a tool of acculturation. We have considerable evidence that children’s language and communication abilities are very strongly associated with school outcomes.

 Communication skills are of vital importance in today’s society. Anything that interferes with communication creates a serious problem for a child (Day, 1985). Speech and language development are the primary elements of communication**. Children need good speech and language skills to succeed in school and in life.**

Define the term Communication with your own words and describe important elements of communication\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Did you try? Excellent!

1.2 Models of Communication

****The essence of "communication" is that it is a process or an activity that serves to connect **senders** and **receivers** of messages through space and time. Although human beings tend to be interested primarily in the study of human communication, the process is present in all living things and, it can be argued, in all living things. From this we may conclude that communication is a fundamental, universal process. It was **Aristotle, in his Rhetoric** who first gave the science a proper framework. He proposed a simplistic model for communication which had as its components, **a sender, a receiver and a message**. It formed the crux around which the later theories were based. Lasswell later added the concept of **a channel**, which was to be chosen by the sender. Some of the important models which are used to explain the process of Communication are discussed in this section.

Shannon's (1948) model of the communication process is, an important ways, the beginning of the modern field. It provided, for the first time, a general model of the communication process that could be treated as the common ground of such diverse disciplines as journalism, rhetoric, linguistics, and speech and hearing sciences. Part of its success is due to its structural reduction of communication to a set of basic constituents that not only explain how communication happens, but why communication **sometimes fails**. It remains one of the first things most students learn about communication when they take an introductory communication course. Indeed, it is one of only a handful of theoretical statements about the communication process that can be found in understanding the meaning and process of communication in brief.

 Message Channel Message

Receiver

Destination

Information

Source

Transmitter

Signal

Noise

Source

Figure 1: Shannon's Model of the Communication Process

Shannon's model, as shown in Figure 1, breaks the process of communication down into eight discrete components:

 The eight discrete components are described as the above figure presented.

1. **An information source** is as it is imagine a person who creates a message.
2. **The message**, which is both sent by the information source and received by the destination.
3. **A transmitter**, for Shannon's immediate purpose a telephone instrument that captures an audio signal, converts it into an electronic signal, and amplifies it for transmission through the telephone network. Transmission is readily generalized within Shannon's information theory to encompass a wide range of transmitters. The simplest transmission system that associated with face-to-face communication has at least two layers of transmission. The first, **the mouth** (sound) and body (**gesture**) create and modulate a signal. The second layer, which might also be described as a channel, is built of the air (sound) and light (gesture) that enable the transmission of those signals from one person to another.
4. **The signal**, which flows through a channel. There may be multiple parallel signals, as is the case in face-to-face interaction where sound and gesture involve different signal systems that depend on different channels and modes of transmission. There may be multiple serial signals, with sound and/or gesture turned into electronic signals, radio waves, or words and pictures in a book.
5. **A carrier or channel**, which is represented by the small unlabeled box in the middle of the model. The most commonly used channels include air, light, electricity, radio waves, paper, and postal systems. Note that there may be multiple channels associated with the multiple layers of transmission, as described above.
6. **Noise**, in the form of secondary signals that obscure or confuse the signal carried. Given Shannon's focus on telephone transmission, carriers, and reception, it should not be surprising that noise is restricted to noise that obscures or obliterates some portion of the signal within the channel. This is a fairly restrictive notion of noise, by current standards, and a somewhat misleading one. Today we have at least some media which are so noise free that compressed signals are constructed with an absolutely minimal amount information and little likelihood of signal loss.
7. **A receiver.** In Shannon's conception, the receiving telephone instrument. In face to face communication a set of ears (sound) and eyes (gesture).
8. **A destination**. Presumably a person who consumes and processes the message.

**1.3 The Communication Process**

****Communication is the process of passing information and understanding from one person to another. The communication process involves six basic elements: sender (encoder), message, channel, receiver (decoder), noise, and feedback. Supervisors can improve communication skills by becoming aware of these elements and how they contribute to successful communication. Communication faller or breakdown can happen at any one of these elements.

Out of the various models of Communication which have been discussed in the previous pages, the Interactive Model of communication is one of the most used, discussed and implemented model of Communication.

The model of the Communicational Process also can be depicted as follows

Idea

Sender

Encodes

Messages

Meaning

Receiver

Decodes

**Recipients Interprets**

 Signal

Transmission

 Develops sends to provides

 Figure 2: The Communication Process

**The sender** initiates the communication process. When the sender has decided on a meaning, he or she **encodes** a message, and selects a channel for transmitting the message to a receiver. To encode is to put a message into words or images. **The message** is the information that the sender wants to transmit.

The **medium** is the means of communication, such as print, mass, electrical, and digital. As a sender, the supervisor should define the purpose of the message, construct each message with the receiver in mind, select the best medium, time each transmission thoughtfully, and seek feedback. An external stimulus prompts the sender to send a message. This prompt may arrive in a number of ways: letter, email, fax etc. As the sender thinks of the ideas for the message, he/she also reacts to the various conditions in his external environment physical surroundings, weather, noise, discomforts, cultural customs and others.

Next, the internal stimuli have a complex influence on how the sender translates ideas into a message. When the sender encodes, his/her own world of experience, affects his/her choice of symbols – age, mental, physical, psychological, semantic. Attitudes, opinions, emotions, past experience, likes and dislikes, education, job status and communication skills may also influence the way the sender communicates the ideas. Also especially important are the perception of and consideration for the receiver‘s viewpoint, needs, skills, status, mental ability and experience.

The combined effect of all these understand what is said and to be understood by other individuals or listeners. Unfortunately, communication disorder may be happen due to one or several reason when the sender and receiver cannot communicate ideas opinions and feelings. Therefore, in the next units we will let discuss the meaning and type of communication disorder.

**** Communication has a border meaning in human beings day to day life. Communication combines speech and language and form a meaningful understanding among communicators. In any communication process there exist three distinct elements i.e. sender message and receiver.

Human communication is a complex, systematic, collaborative, context-bound tool for social action. Complexity can be demonstrated by the multifaceted and multifunctional aspects of the process. These include all aspects of communication and language plus additional mental processes, such as memory and planning, exercised within the cultural beliefs, situational variables, and social conventions of the individual participants. Although complex, the communication process represents a systematic pattern of behavior.

Conversations don’t consist of disconnected, independent utterances. Instead, communication is collaborative. Partners actively coordinate construction of a joint dialogue as they negotiate to understand each other’s meanings. This process occurs within a specific cultural context that influences interpretation of linguistic units and speaker behaviors. Communication is a tool or a vehicle for social action. We accomplish things as we communicate.

Different scholars tried to describe the process of communication in different approaches. However, in each of this model three elements should exist i.e. these are the sender, the message and the receiver communicates with in a common language which is appropriate and easy for the sender and receiver.

**Self-check exercise**

Choose the correct answer for the following alternatives

1. When do you thing communication exists or happens?
2. Someone thinks alone
3. Someone tells something for him/herself
4. Abebe informed for his classmates that there will be a mid-exam next week
5. The students ready for mid exam
6. Which one is wrong about communication?
7. It comprises at least a sours message and a receiver
8. It is a process that happens between two or more individuals or organizations
9. Speech and language are means of communication
10. Communication happens in a vacuum
11. When a person speaks which part of a human body uses as a transmitter?
12. The brain B. the ear C. the mouth D. All of the above
13. From the following, which one is responsible to encode certain information?
14. The source B. the receiver C. Sender D. A & C
15. Messages that reach to the receiver must be\_\_\_\_\_\_\_ to be understood and convey meaning.
16. Encode B. Decode C. Hear attentively D. all of the above
17. Which one is wrong about communication?
18. Animals particularly primates can communicate
19. The human communication method is well developed as compared to other animals
20. Speech and Language are means of communication
21. Animals do not have means of communications
22. Which **medium** of communication is relatively simple for a typical 4 year old child?
23. Speaking B. writing C. printing D. drawing
24. Which one of the following negatively affects communication process between two individuals?
25. Attention B. Noise C. absence of common language D. B & C

**Unit two**

**2. Normal versus Abnormal Communication development**

**** Human communication involves speech, language, hearing, listening, understanding, using the voice, and all aspects of literacy i.e. reading and writing (Starling, 2016). Among these, language is the key component of communication as well as cognitive development and possible to teach for all Hunan beings in different dimensions based on individual needs, levels and abilities.

Communication takes many forms and can involve one or combinations of our senses, including sight, hearing, smell, and touch. It can include both verbal and nonverbal means, such as the spoken or written word, naturalistic gesture, or sign. The primary vehicle of human communication is language, and speech is the primary means of language expression for most individuals.  **Whereas language** is a socially shared code that is used to represent concepts, ideas, thoughts, feelings, expectations and many other related things. This code uses arbitrary symbols that are combined in rule-​governed ways (Owens, 2012).Therefore; in this unit we will learn typical and atypical communication development at different age level.

* Unit Objectives

 At the end of this unit Students will:

* Describe the similarities and differences of communication and language
* Understand normal communication and language development
* Describe the difference between normal and abnormal language developments
* State normal language millstones at different age level
* Understand important language components
* List important normal language milestone at different age level
* State the importance of early stimulation and responsiveness of parents (caregivers) for infants language development
* List important language components

**?** Can you describe the differences and similarities between communication and language?

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**2.1 Typical Communication Development**

****Communication appears to be present at birth. The newborn and her mother begin communicating almost immediately. The newborn will search for the human voice and demonstrate pleasure or mild surprise when she finds the face that is the sound source. Both she and her mother will do almost anything to attend to the other’s face and voice.

As caregivers respond to an infant’s early reflexive behaviors, the infant learns to communicate its intentions. Gradually, through repeated interactions, the infant refines these communication skills. The process is not one-sided, nor is the child a passive participant. Within the first few months of life, infants are able to discriminate contrasting phonemes, different intentional patterns, and speech from non-speech. Infants are also able to discriminate different voices. Individual differences become evident very early, with infants differing in the amount of their attending to speech (Hampson & Nelson, as cited in Anderson & Shames, 2014). In addition, an infant learns different gaze patterns used in communication. As early as 6 weeks of age, infants are able to coordinate the amount of time spent gazing and will change their gaze patterns based on their partners’ gaze (Crown, Feldstein, Jasnow, Beebe, & Jaffe, as cited in Anderson & Shames, 2014). By the time the child is 3 to 4 months of age, interactions based on eye gaze form early dialogues that eventually evolve into conversational exchanges.

A relationship exists between the infant’s gaze and social behavior (D’Odorico, Cassibba, & Salerni, as cited in Anderson & Shames, 2014). At around 1 year of age, children look at their partners at the beginning of a vocal turn, possibly for reassurance. Six months later, they use a more adult pattern and look at their partners at the end of a turn to signal a turn shift. The infant also learns the signal value of head movements. Both the face and the head are important for early communication because their movements are relatively advanced in their maturation and provide the bases for early communication.

Caregivers respond to these infant behaviors and treat them as meaningful social communication. The degree of caregiver responsiveness appears to be positively correlated with later language abilities. In addition, such responsiveness forges an attachment bond between mother and child that fosters communication. Mothers are able to identify consistently infant behaviors that they perceive to be communicatively important (Meadows, Elias, & Bain, 2000).

Maternal sensitivity is multifaceted and varied. Sensitive mothers vary their rate of speech based on their infants’ behavior (Hane, Feldstein, & Dernetz, as cited in Anderson & Shames, 2014). Over- or under responsive moms (mothers) tend to undermine attachment between themselves and their infants (Jaffe, Beebe, Feldstein, Crown, & Jasnow, as cited in Anderson & Shames, 2014).

Infants receive highly selective language input within the routines of child–parent interactions. Two routines, *joint action* and *joint reference* are particularly noteworthy. Within joint action routines, such as “peek-a-boo” and “this little piggy,” children learn turn-taking skills. Mothers provide a consistent set of behaviors that enable their children to predict the outcome and later to anticipate. In turn, children learn to signal their intention to play.

Using joint reference, caregivers help their children differentiate between objects. Maternal encouragement of her infant to attend is positively related to later language development (Karrass,Braungart-Rieker,Mullins, & Lefever, as cited in Anderson & Shames, 2014). The focusing of attention by both partners on objects establishes a **referent.** Once the referent has been established, mothers provide linguistic input relative to it. These comments are important for the child’s later language comprehension and for early meaning development (Rollins, as cited in Anderson & Shames, 2014). Maternal speech is modified systematically so that it is comprehensible to the child.

For their part, children progress from reflexive, non-intentional communication to conventional, verbal or spoken-word intentions by early in the second year of life. Three developmental stages of early communication intentions exist. Initially, the child’s behaviors are undifferentiated, and his intentions unknown. Next, the child uses gestures and vocalization to express intent. Intentional vocalizations are shorter with a lower overall frequency, a different pitch shape or contour, and a greater intensity than non-intentional ones (Papaeliou, Minadakis, & Cavouras, 2002; Papaeliou & Trevarthen, as cited in Anderson & Shames, 2014). This stage is significant because the child’s intention to communicate is accompanied by eye contact. Finally, in the third stage, words are used to convey intentions previously expressed in gestures.

Gestures do not disappear when children begin to speak, but they do change in function (Özçaliskan & Goldin-Meadow, as cited in Anderson & Shames, 2014). Increasingly, children use gestures to reinforce (*ball* + point at ball), disambiguate (*that one* + point at ball), and supplement (*push* + point at ball) speech. Two-element gestural-verbal combinations, such as pointing at a car and saying “Go,” increase as a child approaches the production of two word utterances (McEachem & Haynes, as cited in Anderson & Shames, 2014).

The preschooler learns to use language, emphasis, and stress to improve her message quality. She also adjusts her manner of delivery for her prospective listener. Children as young as 3 years old seem to recognize the need to clarify their gestures and modify their behavior accordingly (O’Neill & Topolovec, as cited in Anderson & Shames, 2014). Four-year-old children will even modify their speech and language when conversing with much younger language learning children.

It is in the school-age period that the child makes the greatest advances in the use of the paralinguistic, nonlinguistic, and meta-linguistic aspects of communication. The older child can use his communication skills to create a mood, role-play, or express sarcasm. He learns to use timing or rate to heighten his delivery or to create curiosity. Gestures are used to enhance or to add emphasis to the message. He adjusts his message and its manner of delivery to his listener and tries to predict the effects of his transmission. When conversing with peers, most teens are careful to direct their partners’ attention, to give positive verbal and nonverbal feedback, and to make responses based on their partners’ statements (Turkstra, Ciccia, & Seaton, as cited in Anderson & Shames, 2014).

What is meta-linguistic ability? How do you describe the term meta-linguistic?

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Did you try? Well!! Compare your answer with the following description.

Meta-linguistic abilities usually emerge after the child has mastered linguistic form. It is a linguistic intuition on the acceptability of communication. Although meta-linguistic abilities appear in the preschool years, full awareness does not occur until about age 7 or 8. The preschool child tends to make judgments of utterance acceptability based on the content rather than on the grammatical structure. By kindergarten, the child is just beginning to separate what is said from how it is said. The school-age child demonstrates an increasing ability to judge the grammatical acceptability of sentences, reflecting a growing knowledge of language structure.

The preschool child attempts to repair her erroneous or misinterpreted utterances and adjusts her speech and language for her intended listener. She also corrects others and comments on the effectiveness of communication. By school age, she can use intonation to signal new words introduced into the conversation; correct utterances inappropriate for the setting or specific listener; identify linguistic units, such as syllables and sentences; provide definitions; and construct humor. In addition, she is able to explain why a sentence is appropriate or impossible and how it should be interpreted. With increased skill, the child is freed from the immediate linguistic context to attend to how a message is communicated. Meta-linguistic skill development is related to many factors, such as cognitive development, reading ability, academic achievement, IQ, and environmental stimulation.

What are components of Language list tem with examples?

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Did you try? Excellent! Here are the details.

**2.2 Meaning and components of Language**

****Language is a social tool, defined as a socially shared code or conventional system for representing concepts through the use of arbitrary symbols and rule-governed combinations of those symbols.Each language, such as English, Amharic, Korean, or Farsi, has its own symbols and rules for symbol combination. Dialects are subcategories of these parent languages that use similar, but not identical rules. Languages exist because users have agreed on the symbols and the rules. This agreement is demonstrated through their use. Because language users can agree to follow the rules of a language, they can also agree to change the rules. New words and rules can be added, while others fall into disuse. Under certain circumstances, language mixing may even result in a new form of two blended languages being used in a community (Backus, as cited in Anderson & Shames, 2014).

**?** What are the common features or characters of language?

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The socially shared code of symbols and rules allows language users to exchange information. Each user encodes and decodes according to his concept of a given object, event, or relationship. Thus, coding is a factor of the speaker’s and listener’s shared meanings, the linguistic skills of each, and the context. Individual symbols communicate little. Most of the information is contained in symbol combinations. For example, “*teacher Bekele a is”* seems to be a meaningless jumble of words. By shifting a few words, we can create Bekele *is a teacher* or i*s Bekele a teacher?* Language is this relational system, and it is the rules for these relationships that give language order and permit language to be used creatively to produce meaning. A finite set of symbols and a finite set of rules governing symbol use are used to create and interpret a seemingly infinite number of sentences. Native speakers of a language do not learn all possible word combinations. Rather, they learn the linguistic rules that enable each language user to understand and to create an infinite variety of sentences.

Some characteristics of language are that it is:

• A socially shared tool

• A rule-governed system

• An arbitrary code

• A generative process

• A dynamic scheme

Language is a social tool for relating to others and for accomplishing a variety of objectives. As pointed out earlier, others must share the language code if communication is to occur. When an infant utters “ga da da ka,” we cannot call this language because this “code” is not shared.

What are meanings of language generative process and language dynamic schema?

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Many people are so accustomed to their own language that they fail to recognize its arbitrary nature. Is there anything in the sound combination or the written letters of the word *water* that resembles the wet stuff? A comparison of different languages rapidly confirms this very arbitrary nature. Each language, in addition to being composed of arbitrary but agreed upon words, consists of rules that dictate how these words are arranged in sentences. In English, an adjective precedes a noun; for example, we say, “brown cow.” The rules of a language make up its **grammar**.

Interestingly, you do not have to be able to explain the rules to recognize when they have been broken. Take, for example the sentence “The leaves of the maple green tree in the breeze swayed.” You know that the sentence is wrong and that it doesn’t sound right. This recognition of “wrong” and “right” grammar is called **linguistic intuition**, and native speakers of a language possess this intuition.

Language is **generative**; this means that each utterance is freshly created. As a speaker, you don’t just quote or repeat what you heard before. Instead, you present your own ideas in an individual way. Imagine a conversation if all you could do was imitating your conversation partner. Languages are also **dynamic**; they change over time. No academy, no school, no law, and no army can keep languages from being modified. For example, American English adds five or six new words each day, many from other languages. Pronunciation, grammar, and ways of communicating also change.

All human languages consist of similar basic ingredients. The primary language components have been labeled form, content, and use. Speech is the process of producing the acoustic representations of language. Features such as articulation, fluency, and voice interact to influence speech production. The final product reflects the rapid coordination of movements associated with each of these features.

**2.3 The Concept of Normal and Abnormal in relation to Communication**

 ****The word *normal* suggests “without problems,” we prefer to use the term *typical* when we mean “like many others of the same age and group.” Classifying people on the basis of statistical percentage is little more than a numbers game. A more valid approach requires clear definitions of speech and language disorders.

Normal and abnormal concepts are very difficult to describe in terms of number but may have different explanation. Abnormal does not show negative, normal does not mean ideal. Abnormal is not something negative, but is unintentionally given. A person performance or action can be stated as a normal state, ill, deviance, and so on are usual terms.

List determinants of normal and abnormal language development?

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Excellent!!

The Definition of Normalcy depends on:

* + The characteristics to be judged,
	+ The environment in which the characteristics appear, and
	+ The individual who is in making the judgement.

Normal is not good or bad but what is typical or atypical to the existing situation or condition. If that is the case, normal means simple in statistical concept of average. Or something commonly happens or likely (expected) can be considered normal.

**2.4 Normal Language Milestones**

****Language acquisition is a complex process determined by the interaction of multiple factors and its course follows both a universal sequence and a language-specific one. The patterns of acquisition displayed by normally developing monolingual children in order to provide a basis for comparison with patterns of deviant or delayed development language via communication disorder. Most studies of acquisition accept the premise that development is a function of the reciprocal interactions between cognitive and linguistic changes that take place within a social-interactional context. Among the processing and cognitive capacities that acquisition and use rest on are attention, auditory and visual perception, working memory and related executive functions, long-term memory, abstraction, generalization, concept formation and representation.

Among the social-interactional skills are joint attention, ability to take perspectives and ability to read others’ minds. The present overview is situated within the framework of this premise although detailed contributions of each process will not be taken up into consideration. Most young children vary somewhat in the timing of their communication development. Typical speech and language development, known as *“normal language milestone*s,” can be used as a reference to monitor a child’s speech and language development. The “normal language milestones” presented below are specific communication behaviors grouped according to the age range when they usually first appear in most children.

Although there is some normal variation in the rate at which children develop, these milestones are usually first seen sometime during the age range specified. The age at which a behavior or absence of a behavior starts to become a *cause for concern* (a clinical clue) corresponds to the upper limit of the age range when this behavior usually first appears in most children.

For example, babbling usually develops between 6 and 9 months of age. A child not babbling or babbling with few or no consonants at the age of 9 months is a clinical clue of a possible communication problem. Some risk factors and clinical clues of a possible communication disorder can be identified at a very early age; others may not be recognized until parents, caregivers, or professionals notice that the child’s use of language seems to be delayed compared to other children within the same age range.

**2.4.1 Descriptions of Normal Language Milestones at Different Age Level**

****During the First 3 Months

Normal Language Milestones

* looks at caregivers/others
* becomes quiet in response to sound (especially to speech)
* cries differently when tired, hungry, or in pain
* smiles or coos in response to another person’s smile or voice

From 3–6 Months

Normal Language Milestones

* fixes gaze on face
* responds to name by looking for voice
* regularly localizes sound source/speaker
* cooing, gurgling, chuckling, laughing

From 6-9 Months

Normal Language Milestones

* imitates vocalizing to another
* enjoys reciprocal social games structured by adult (such as peek-a-boo, pat-a-cake)
* has different vocalizations for different states
* recognizes familiar people
* imitates familiar sounds and actions
* reduplicative babbling (“bababa,” “mama-mama”), vocal play with international patterns, lots of sounds that take on the sound of words
* Cries when parent leaves room (9 mos.)
* responds consistently to soft speech and environmental sounds
* reaches to request object

From 9–12 Months

Normal Language Milestones

* attracts attention (such as vocalizing, coughing)
* shakes head “no,” pushes undesired objects away
* waves “bye”
* indicates requests clearly; directs others’ behavior (shows objects); gives objects to adults; pats, pulls, tugs on adult; points to object of desire
* coordinates actions between objects and adults (looks back and forth between adult and object of desire)
* imitates new sounds/actions
* shows consistent patterns of reduplicative babbling, produces vocalizations that sound like first words (“mama,” “dada”)

From 12–18 Months

Normal Language Milestones

* begins single-word productions
* requests objects: points, vocalizes, may use word approximations
* gets attention: vocally, physically, maybe by using words (such as “mommy”)
* understands that an adult can do things for him/her (such as activate a wind-up toy)
* uses ritual words (such as “bye,” “hi,” “thank you,” “please”)
* protests: says “no,” shakes head, moves away, pushes objects away
* comments: points to object, vocalizes, or uses word approximation
* acknowledges: eye contact, vocal response, repetition of words

From 18–24 Months

Normal Language Milestones

* uses mostly words to communicate
* begins to use two-word combinations; first combinations are usually memorized forms and used in one or two contexts
* by 24 months, uses combinations with relational meanings (such as “more cookie,” “daddy shoe”); more flexible in use
* by 24 months, has at least 50 words, which can be approximations of adult form

From 24–36 Months

Normal Language Milestones

* engages in short dialogues and expresses emotion
* begins using language in imaginative ways
* begins providing descriptive details to facilitate listener’s comprehension
* uses attention-getting devices (such as “hey”)
* able to link unrelated ideas and story elements
* begins to include articles (such as “a,” “the”) and word endings (such as “-ing” added to verbs); regular plural “-s” (cats); “is” + adjective (ball is red); and regular past tense (“-ed”)

**2.4.2 Language Impairment**

****Language impairment results from the delayed or disordered development of the content, form, or use of spoken language. The content of language refers to what individuals talk about or understand. The form of language refers to the shape and sound of the units of language and their combinations such as word endings, the words, or sentence structure. The use of language refers to the reasons why individuals speak and the ways they construct conversations depending upon what they know about the listener and the context (Bloom, 1988). The child with language impairment may have difficulty in any or all of these areas. Language impairment can be further broken down into receptive and expressive language impairments. It may be helpful to determine whether the child has a receptive or an expressive impairment or both, prior to examining form, content, and use.

The term **language impairment (LI)** applies to a heterogeneous group of developmental and/ or acquired disorders and/ or delays that are principally characterized by deficits and/ or immaturities in the use of spoken or written language for comprehension and/ or production purposes that may involve the form, content, and/ or function of language in any combination.

Children and adolescents with LIs are very different from each other. The impairment may occur at any time within the lifespan, and individuals vary in terms of symptoms, manifestations, effects, and severity over time and as a result of context, content, and learning task. The impairment may be a result of developmental abnormalities and/ or may be acquired as a result of accident, injury, or other environmental factors.

* + - * Deficits and/ or immaturities may exist in one or more means of communication, such as listening/ speech or reading/ writing, and may affect receptive and/ or expressive language. For example, preschoolers with LIs are often less able to recognize and copy letters and less likely to write and draw every day, to pretend to read, and to ask questions during parental reading (Marvin & Wright, as cited in Owens, Farinella & Evan Metz, 2015). In short, young children with language impairments are at risk for literacy difficulties when they later attend school (Nathan et al., as cited in Owens, Farinella & Evan Metz, 2015).
* One or more aspects of language-form, content, and use-may affect. For example, as a group, children with LIs use shorter, less elaborated sentences than typical children their age.

**2.4.2.1 Impairment in Language Form**

****Language form includes phonology, morphology, and syntax. We speak in sounds (phonemes) that are combined into words (morphemes), which in turn are combined into phrases and sentences (based on syntactical rules). Errors in sound use, such as not producing the ends of words (“hi shi i too sma” for “his shirt is too small”), constitutes a disorder of phonology. Incorrect use of past tense or plural markers (“the girl wented home” for “the girls went home”) is an example of a disorder of morphology. Syntactical errors include incorrect word order and run‑on sentences (for example, “*I want to go mall and go skate and buy peanuts and you come with me ’cause I want you to but not Jimmy ’cause he’s not big enough to go skate”).* These errors in school‑ age children may affect academic achievement and social well‑ being.

Disorders of form may be due to many factors, including sensory limitations such as hearing problems or perceptual difficulties such as learning disabilities. Limited exposure to correct models may also hinder a child’s language development. For many children who are delayed in their production of mature language forms, the cause is not apparent.

The form or structure of a sentence is governed by the rules of **syntax.** These rules specify word, phrase, and clause order; sentence organization; and the relationships between words, word classes, and other sentence elements. Syntax specifies which word combinations are acceptable, or grammatical, and which are not. For example, the syntax of English explains why “Maddi has thrown the ball” is a possible sentence, while “Maddi the ball has thrown” sounds awkward (Maddi is the name of a child used as noun).

**2.4.2.2 Disorders of Content**

****Children and adults with limited vocabularies, those who misuse words, and those with word‑ finding difficulties may have disorders of content or semantics. Similarly, limited ability to understand and use abstract language, as in metaphors, proverbs, sarcasm, and some humor, suggests semantic difficulties. A persistent pattern of avoiding naming objects and referring instead to “the thing” is another indication of a disorder of content. Although limited experience or a concrete learning style may contribute to this problem in youngsters, among older people, cerebrovascular accidents (strokes), head trauma due to accidents, and certain illnesses may result in word‑ retrieval problems and other content related difficulties.

**2.4.2.3 Disorders of Use (Pragmatics)**

****Pragmatic language problems may stem from limited or unacceptable conversational, social, and narrative skills; deficits in spoken vocabulary; and/ or immature or disordered phonology, morphology, and syntax. Examples of impaired pragmatic language skills might include difficulty staying on topic, providing inappropriate or incongruent responses to questions, and constantly interrupting the conversational partner. Culture, group affiliations, setting, and participants described earlier in this chapter play a major role in judgments regarding pragmatic competence (Owens, Farinella & Evan Metz, 2015).

What are the symptoms of receptive language impairment?

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**2.4.2.4 Receptive Language Impairment**

****Receptive language impairment is the difficulty in listening to and/or understanding language. The difficulty may be in the word level (vocabulary/word knowledge) and/or the sentence level syntax/morphology (Harris, 1994). The following characteristics may indicate that the child is having difficulties understanding language. Problem of expressive language impairment can be expressed in terms of form, content and use as we have seen in language impairment.

**The child has:**

* An inadequate attention span, particularly during oral presentations.
* Poor listening skills
* Difficulty following directions
* Poor memory for information presented verbally
* Difficulty retaining concepts from one day to the next
* Limited receptive vocabulary
* Difficulty understanding words with multiple meanings
* Difficulty categorizing related words or concepts
* Difficulty understanding figurative language
* Difficulty with concepts of space, time, and quantity

Impairment in Language Form

* Difficulty comprehending simple sentences.

 e.g. Can the child point to pictures or perform an action from a spoken target sentence?

Impairment in Language Content

* Difficulty understanding vocabulary used in the grade level curriculum e.g. If the theme is The Sea, do they comprehend words in this category?
* Difficulty pointing to a picture or performing an action based on a given target to display comprehension e.g. Point to the picture that shows “the whale is in the water”.

Impairment in Language Use

* Difficulty comprehending social language and react age appropriately i.e.
* Difficulty using appropriate eye contact -
* Difficulty using turn taking appropriately
* Difficulty displaying comprehension of social greetings.

Can you describe some appropriate social greetings related to age and time context?

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Excellent!!

**2.4.2.5 Expressive Language Impairment**

**Expressive language** impairment is difficulty with the production of language that adequately represents the child’s/youth’s intended message and may include problems with word retrieval, word use, sentence formulation, and/or conversational skills (Harris, 1994). The following characteristics may indicate difficulties in producing language. Problem of expressive language impairment can be expressed in terms of form, content and use as we have seen in language impairment.

The child:

* speaks in words, phrases, incomplete or inaccurate sentences
* relies upon gesture to supplement or substitute for oral language
* uses pronouns, plurals, and possessives incorrectly
* has difficulty with the agreement of subjects and verbs
* has difficulty telling a story or describing an event or procedure in a logical sequence
* uses run-on sentences
* has limited expressive vocabulary
* has difficulty finding the appropriate word (s) to express meaning overuses filler words such as “ah” or “um”
* avoids speaking in class
* has difficulty interacting with peers or adults

**Expressive Impairment in Language Form**

English grammatical morphemes (e.g., plural-s, past ed) develop in a more or less predictable sequence. Present progressive usually develops first and third person irregular is one of the last to develop. The reason for this sequence of development lies in the linguistic complexity of the morpheme. Impairment in language form may show a child developing these morphemes in an unusual order or an inability to use grammatical morphemes appropriately.

**Expressive Impairment in Language Content**

Children who have expressive language disorders/delays in language content often give grammatically correct responses that do not make sense. They correctly use all the grammatical morphemes but give inappropriate responses (Lahey, 1988).

These children are sometimes described as hyperverbal. They have appropriate articulation, intonation and stress patterns but are weak in content. (Lahey, 1988).

They may be the hardest to identify with the specific problem as they sound like everyone else except they lack appropriate vocabulary in their communication.

**Expressive Impairment in Language Use**

Children who have expressive language use delays/disorders have learned how to use language to code ideas but have not learned to use it to communicate. (Lahey, 1988). Ask whether the child:

* Responds appropriately to social greetings?
* Maintains the topic of conversation?
* Initiates conversation with peers
* Uses non-verbal communication appropriately

? What are the main differences between receptive and expressive language impairment?

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Did you try? It is expected you will write major points that distinguishes one form the other.

**2.4.2.6 Word Finding or Word Retrieval**

****Some children may have difficulty coming up with the word they wish to use. They often give the attributes of the item they are trying to name, or frequently use words such as this, that, thing and stuff. This may occur occasionally or constantly. In some children, word finding problems can greatly affect their spoken and written language as they have very few words that they can readily access. The skill of retrieving words needs to be directly addressed with these children.

**Phonological Awareness Impairment**

Phonological awareness is the ability to think about the **form of language** independent of its meaning (Rosner, 1993). It is the awareness of the sounds and syllables of words. Research suggests (Kahmi and Catts, 1989) this is a prerequisite for written language, i.e., reading and spelling development. The following characteristics may indicate that a child is having difficulties with phonological awareness. The child has difficulty:

* recognizing long and short words
* counting syllables or beats in words
* recognizing and producing rhymes
* identifying beginning, final and middle sounds of words
* segmenting words into their component sounds
* discriminating differences between sounds
* learning letter-sound correspondences
* learning decoding skills
* learning spelling patterns

Although research has demonstrated a hierarchy in the development of phonological awareness skills, individual children may vary in their ability to master these skills (Walsh, 1995).

**2.4.2.7 Pragmatic Language Impairment**

****Pragmatics refers to the understanding and use of social language. It may include eye contact, topic maintenance, turn taking, and/or the appropriate use of social cues (Harris, 1994). The following characteristics may indicate that a child is having difficulties with social language.

The child:

* has difficulty interacting with peers and/or adults
* violates conversational rules
* has limited eye contact
* interrupts frequently
* makes odd, irrelevant comments
* repeats content
* confuses listeners
* has poor topic maintenance
* dominates conversation
* violates personal space
* is unable to interpret and use non-verbal cues

Pragmatics refers to the use of language as was discussed briefly in expressive and receptive language. It has been included as a separate category as some children may have a distinct impairment in this area of language.

Table 2.1

Components of Language

|  |
| --- |
| Language |
| Form | Content | Use |
| Phonology  | Semantics |  Pragmatics |
| Morphology |
| Syntax  |

As it presented in the previous section language components are summarized in Table1:

**2. 4. 4 Articulation Impairment**

****Speech-language pathologists (SLP) and audiologists historically used the term **articulation** to describe the development and disorders of the speech sound system. Articulation refers to the motor movements involved in speech production. Phonology, like other aspects of language, was viewed as a series of units in this case, consonants and vowels produced by motor gestures and strung together one after another. Even articulation is no longer viewed as separate groups of movements to produce a sequence of individual consonants or vowels. There is much more involved in the speech sound system and its development than just the movements of articulators or their mastery. The units of phonology range in size from phonetic features that describe articulator movements (e.g., the vibration of the vocal folds) to segments (consonants and vowels) to larger units (syllables, words, phrases) in which the focus is on the rhythm (stress pattern).

The term *articulation* is still used, but **phonology** subsumes articulation. Phonology includes broader aspects of speech production and speech perception along with the cognitive-linguistic aspects of the speech sound system. This seems like a simple change in terminology, but there are important theoretical and clinical implications. It reflects a clinically useful distinction between phonetic components of the speech sound system, which include peripheral motor-speech production and auditory perception, and phonology, which includes mental representations, categories, and rules or constraints. The phonetic components may be viewed as the form of speech, whereas phonology represents the cognitive-linguistic functions of speech-language. An important part of language acquisition is learning the sounds, rules or patterns, and rhythm specific to the language of the environment.

Most children acquire the phonology of their first language without direct instruction and without any difficulty. This is a gradual process that begins with speech perception and early vocalizations. The perception of speech begins before birth. During the first 6 months of life, speech perception is quite general, and children are sensitive to differences that are important across many languages.

At the beginning of 6 months of age, children’s perceptual sensitivity narrows to focus on those features that are important in the language of their environment. The same is true of their vocalizations. Early meaningful speech is characterized by certain types and patterns of errors that disappear gradually. Once children reach school age, their phonology changes as a result of further maturation and they learn to read and write. These changes permit the acquisition of complex, formal phonological rules.

A phonological disorder is the most common problem for the 15% of all children who have a primary or a secondary (to some other condition) communication disorder. Hearing impairments interfere with speech perception, causing some of these disorders. Others are caused by deviations in the speech production mechanism (e.g., cleft palate), in the development of complex motor behaviors (e.g., speech), or in the neural control of the speech mechanism (e.g., developmental apraxia). Some are secondary to general developmental disabilities (e.g., Down syndrome or autism). Finally, there are disorders in which the child’s phonology may be organized differently than those of peers with no apparent physical basis. These disorders may be manifested in speech production, speech perception, or both. The following characteristics may indicate that a child is having difficulty with articulation.

The child:

* is not understood by the teacher or unfamiliar listeners
* omits, substitutes or distorts sounds
* is in Grade 1 or higher and has difficulty with any sounds

 Table 2.2

 Guidelines for Articulation Sound Development

|  |
| --- |
| Articulation Guidelines |
| As a general guideline, children are expected to produce the following sounds correctly at these ages: | Most common error sounds at these ages: |
| By age 3 years  | p, b, m, w, h |  |
| By age 4 years  | n, t, d, k, g, ng | K, g  |
| By age 5 years  | F, y, sh, ch | Sh, ch, k, g, f |
| By age 5years and 6 months  | I, j, v | i, sh, ch, j |
| By age 6 years  | S, z, th, and blends e.g. sm, gl, bl, ps | S, l and blends |
| By age 6years and 6 months | r | S, r  |

Adapted by speech language pathologists, Elk Island Public Schools from: Sander, E. K. (1972) “When are speech sounds learned?” Journal of Speech and Hearing Disorders, 37, 55-63.

If a child is not correctly articulating a number of sounds and is difficult to understand, a referral should be made to a speech-language pathologist. There are many reasons why children may have articulation errors. Following is a discussion of one of these reasons - motor speech impairments.

Children with any motor speech impairment may present with any or all of the following characteristics:

* drooling (dribbling)
* imprecise consonant articulation
* distorted vowel sounds
* difficult to understand
* groping of the tongue when speaking
* inability to move the tongue and lips on command

What are the psychological problems associated with communication disorder?

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Excellent!

**2.4.5 Psychosocial Problems Associated with Communicative Disorders**

****Individuals who study communicative disorders have long been interested in the psychosocial difficulties associated with these problems. This interest has taken different faces over the years as researchers and clinicians have focused on various aspects of the relationship between communicative impairment and psychological and social difficulties. For example, relatively early in the development of the profession of speech-language pathology, some investigators approached specific communicative disorders, such as stuttering, as manifestations of underlying psychological dysfunction (e.g., Travis, 1957). More recent approaches have moved away from considering psychiatric dysfunction as the basis for most speech and language impairment.

 Despite this reorientation, there is still considerable interest in the psychosocial aspects of communicative disorders. The literature is both extensive and wide-ranging, and much of it focuses on specific types of impairment (e.g., speech, language impairment). There are two general areas of study, however, that are of particular interest. The first is the frequent co-occurrence of speech and language impairment and socio-emotional problems. A great deal of research has been directed toward exploring this relationship as well as toward determining what mechanisms might underlie this co-morbidity. A second area of interest concerns the long-term outcomes of communicative problems across various areas of psychosocial development (e.g., peer relations, socio-emotional status). Both of these lines of work are briefly discussed here.

**2.4.6 Co-occurrence of Disorders**

****Numerous investigators have reported a high level of co-occurrence between communicative disorders and socio-emotional problems. This high level of co-occurrence has been observed in various groups of children, including both those with a primary diagnosis of speech and language impairment and those with a primary diagnosis of psychiatric impairment or behavior disorder.

For example, Beitchman, Brownlie, and Wilson (1996) proposed several potential relationships, including the following:

(1) Impaired communicative skills lead to socio-emotional impairment

 (2) Impaired communicative skills result in academic problems, which in turn lead to behavioral problems

(3) Other variables (e.g., socioeconomic status) explain, in part or in whole, the relationship between communicative problems and socio-emotional difficulties, and

(4) An underlying factor (e.g., neurodevelopmental status) accounts for both types of problems.

Further research is needed to clarify the relationship between speech and language ability and socio-emotional status. One approach to this problem has been to investigate various child factors that may contribute to developmental risk. For example, Tomblin et al. (2000), reported that reading disability is a key mediating factor predicting whether children with language impairment demonstrate behavioral difficulties.

It is clear that speech and language skills play a critical role in social interaction and children who have difficulty communicating are likely to have difficulty interacting with others. The way in which various components of behavior interact, however, is not as straightforward as might initially be thought. For example, Fujiki et al. (1999) found that children with language impairment were more withdrawn and less sociable than their typical peers, consistent with much of the existing literature. More specific evaluation revealed that these differences were based on particular types of withdrawal (reticence, solitary active withdrawal). Furthermore, severity of language impairment, at least as measured by a formal test of language, was not related to severity of withdrawal. Further clarification is needed to determine how these areas of development interact to produce social outcomes, and what factors may exacerbate or moderate socio emotional status.

**?** What additional symptoms a child show when he/she speaks and stature?

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Did you try? Well!! There are co-occurring symptoms observed during speech production.

For example, a person who stutters may also exhibit behaviors such as **facial grimaces** or unusual body movements (Alberta Health, 1993). Stuttering often has a significant impact upon the children/ youth’s self-esteem and social success. The following characteristics may indicate that a child is having difficulties with fluency. The child:

* repeats sounds, syllables or words
* hesitates or blocks when speaking
* inserts sounds or fillers such as “um” or “ah”
* prolongs sounds within words
* exhibits frustration or embarrassment when speaking
* insert such as wa vowel in repetitions e.g. w wa wa want
	1. **Prevalence**

**Prevalence** refers to the number or percentage of people within a specified population who have a particular disorder or condition at a given point in time. If you determined the prevalence of stuttering in the entire U.S. population, among first-​grade children, among college seniors, among U.S. males, or among U.S. females, you would get different prevalence figures in each case. For this reason, prevalence statistics must specify the population on which they are based.

Many professionals believe that children with speech or language impairments constitute (form) the largest population of students with disabilities in schools. However, officials’ reports show that the largest single category of children with special needs is learning disabilities. It is understood that children are reported by their primary disabling condition. For a large proportion of children with speech and language impairments, the primary disabling condition is learning disabilities, intellectual disabilities, hearing impairments, or health impairment. When children have only a speech or language impairment, they are counted in this group. But when we look closely at the case loads of speech language pathology, we see that 42% of all children with communicative difficulties have another primary disabling condition.

Current estimates suggest that about 17% of the total U.S. population have some communicative disorder. About 11% have a hearing loss, and approximately 6% have a speech, voice, or language disorder. Many of those with hearing losses also have speech, voice, or language disorders. Six to 10 million Americans (about 3% of the population) have a disorder of swallowing, and many of these individuals also have a communicative impairment. Although these figures are relatively low, it is likely that more, generally mild, cases are not reported (Tierney et al., 2000).

What are the possible reasons for the variations regarding the prevalence of young and adults with hearing loss?

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It is interesting! You learned about persons with hearing impairment.

The percentage of people with hearing loss increases with age. Between 1% and 2% of people less than 18 years of age have a chronic hearing loss, compared with approximately 32% of those over age 75. As a result language and speech development may occur. Impairments of speech-​sound production and fluency are more common in children than adults and more common among males than females. Speech disorders due to neurological disorders or brain and spinal cord injury occur more often among adults. It has been estimated that anywhere between 3% and 10% of Americans have voice disorders; the percentage is greater among school-​age children and among people over age 65.

Language disorders occur in 8% to 12% of the preschool population; the prevalence decreases through the school years. Language deficits in older adults may be associated with stroke or dementia. It is likely that 5% to 10% of people over age 65 experience language disabilities related to these disorders.

**** In summary, children communicate start from the time of birth. Early communication does not depend on the use of language or speech. In fact, communication provides the vehicle within which initial language develops. As language skills improve, there is also a corresponding improvement in overall communication abilities. Language is a complex and dynamic system of conventional symbols that is used in various modes for thought and communication.

* Language evolves within specific historical, social, and cultural contexts.
* Language, as rule-governed behavior, is described by at least five parameters phonologic, morphologic, syntactic, semantic, and pragmatic.
* Language learning and use are determined by the intervention of biological, cognitive, psychosocial, and environmental factors.
* Effective use of language for communication requires a broad understanding of human interaction including such associated factors as nonverbal cues, motivation, and socio cultural roles.

Languages exist because users have agreed on the symbols to be used and the rules to be followed. This agreement is demonstrated through language usage. Thus, languages exist by virtue of social convention. Just as users agree to follow the rules of a language system, they can agree to change the rules. However, children or persons with communication disorder may violate the roles or unable to perform as the role says. These inabilities also create so many problems and lead their life more complicated to interact with others.

**Articulation** refers use of the articulators such as teeth, tongue, etc. to produce speech sounds. The motor movements involved in the production of speech. Articulation impairment refers to errors in the production of speech sounds which are not consistent with the child’s chronological and/or cognitive ability (Alberta Health, 1993). **Articulators are** those structures responsible for the modification of the vocal tract: tongue, lips, soft and hard palates, and teeth. When there is a certain kind of defect in one or more of these structures the person’s or the child’s articulation may not correct at it is expected.

 It is difficult to estimate the prevalence of children and adults with communication disorder. The primary reason is that communication disorder co-morbid with other impairments and disabling conditions. For instance, cerebral palsy, muscular dystrophies, profound intellectual disabilities and many other conditions can affect the communication and language performance of an individual.

**** True/ False Item Questions

1. Language has arbitrary rules that govern users to communicate with one another.
2. Children without problem easily learns the language spoken around them
3. The prevalence of children with communication disorder is equivalent to that of learning disability
4. An infant at the age of 3 and 6 months show similar language milestone
5. The presence of language problem can affect the socio-emotional interaction of a person.

Multiple choice items

1. Which one is not the characteristic of language?
2. A socially shared tool
3. A rule-governed system
4. An logical code
5. A generative process
6. An infant starts imitation of sounds and vocalizing to another at approximately
7. two month
8. Three months
9. 6 to 9 months
10. 9 to 12 months
11. Which one of the following is false about language?
12. Language evolves within specific historical, social, and cultural contexts.
13. Language, as rule-governed behavior is described by at least five parameters
14. Language learning and use are determined by the intervention of biological, cognitive, psychosocial, and environmental factors
15. Language is formed and stays for ever
16. Language use is determined by the parameters of \_\_\_\_\_\_\_\_\_\_\_\_\_\_
17. Phonology
18. Morphology
19. Syntax
20. Pragmatics
21. Which one of the following is not normal language milestone at the age of 18- 24months?
22. Uses mostly words to communicate
23. Begins to use two-word combinations
24. Uses combinations with relational meanings
25. Just babbling

**Unit Three**

**3. Types/classification and Causes of Communication and Language Difficulties**

****Communication disorders as consisting of disorders of speech (articulation, voice, resonance, fluency), oral neuromotor patterns of control and movement, language impairment, feeding and swallowing disorders, cognitive and social communication deficits, and hearing and processing difficulties. Communication disorder is broadly classified in to speech disorder and language disorder. Communication disorders may be categorized on the basis of whether reception, processing, and/ or expression are affected. Is the problem primarily one of hearing, comprehending and manipulating language, or speaking? In fact, the three dimensions may be intertwined, reflecting the integration of the processes of speech, language, and hearing.

In this unit we will try to see the causes of communication disorder, the Anatomy and Physiology of Speech Production, the respiratory systems and related subsystems, causes of language disorders.

* **Unit Objectives**

After thoroughly reading this unit Students will be able to:

* Describe type of communication and/or language disorder
* Understand the varied causes of communication and/or language disorder
* Illustrate the causes of speech disorder
* List organic causes of speech disorder
* Understand how speech production and anatomy and physiology are related
* Describe the causes of speech impairments
* Differentiate each speech impairment

**3.1 Causes of communication disorder**

****Researchers put their efforts what factors and causes lead to communication disorder so as to understand and sick solution for the problem. There are various theories and explanations given by professionals regarding the causes and types of speech or language impairments. Therefore, some speech and language impairments are preventable and others are not. Like so many disability areas, some of the causes of speech or language impairments are unknown. As you read through this section, however, you will find that many causes for some specific impairment are well known.

**3.2 The Anatomy and Physiology of Speech Production**

****Basically, speech production is a joint effort of the three systems shown in Figure 3.1 respiratory, laryngeal, and articulatory all of which serve other important functions. The respiratory system provides the essential air supply for speech by generating air pressures and flows, the laryngeal system generates sound (voice or phonation) using the air supply from the lungs, and the articulatory system (or supralaryngeal system, where *supra-* means “above”) serves as a resonator to form the sound energy from the larynx into recognizable speech sounds. Basically we have a chain of three processes: Energy Source (respiratory system) + Vibrator and Valve (laryngeal system) + Resonator/Shaper (articulatory system). We now take a closer look at each of these systems.

**?** What are the three physiological subsystems involved in speech production? Write each briefly

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Did you try? Compare your answers with the next descriptions!!

**Anatomy** is the study of the structures of the body and the relationship of these structures to one another. The production of speech is more complicated. Speech production does require control of air pressure and air flow from your lungs through your vocal tract into the atmosphere. Three physiological subsystems are involved in speech production:

1. The **respiratory system** provides the driving force for speech by generating positive air pressure values beneath the vocal folds;

2.The vocal folds, anatomical structures in the **laryngeal system** or *larynx,* vibrate at high rates of speed, setting air molecules in the vocal tract into multiple frequencies of vibration; and finally,

3. The **articulatory/ resonating system** acts as an acoustic filter, allowing certain frequencies to pass into the atmosphere while simultaneously blocking other frequencies. Therefore, we discuss the basic structures, muscles, and physiology of the subsystems of speech production and address the changes in each across the lifespan.

**3.2.1 The Respiratory System**

****The primary biological functions of the respiratory system are to supply oxygen to the blood and to remove excess carbon dioxide from the body. This process is automatic and controlled by the respiratory centers located within the brainstem of the central nervous system. Although the primary function of respiration is to sustain life, it also serves as the **generating source for speech production**. Air is inhaled into your lungs to become the potential energy source for sound production. The air is then expelled in a controlled manner, to be modified by your vocal folds and articulators to generate speech sounds.

**?** What is the difference between inspiration and expiration?

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Human beings normally speak on exhaled air. The respiratory system generates the air pressures and flows that provide the basic power of speech. The actions performed on a stream of air are called **aerodynamics**, and one way of understanding speech is to view it as an aerodynamic system. It **is** the study of air and other gases in motion, forces setting them in motion, and results of such motion. In speech, aerodynamics refers especially to the air pressures and flows involved in speech production. The basic requirement for speech is to draw air into the lungs (an inspiratory phase) and then to release the air gradually to form the syllables of speech (an expiratory phase). It makes good sense to keep the inspiratory phase brief because no speech sounds are produced in this phase and to prolong the expiratory phase so that several words can be produced on a single breath. This is the essence of breathing for speech: Inspire rapidly and then regulate the expired air to produce a number of syllables and words. Inspiratory and expiratory phases are also used in ordinary breathing to maintain life, but for this purpose, the two phases tend to be nearly equal in their duration.

The respiratory rhythm of inspiration and expiration imposes on speech (and singing as well) a biologically mandatory pattern called the breath group, which is the number of syllables produced on a single expiration. When we talk or sing, we must stop to breathe. This is not true for many other kinds of movements we perform. We can wave our arms, perform keystrokes with our fingers, and move our legs quite independently of the respiratory cycle. Most people can talk on a maximal inspiration for about 20 or 30 seconds, but in ordinary conversation, we typically speak for no more than 10 seconds on a single breath.

**3.2.2 Structures of the Respiratory System**

****The primary components of the human respiratory system include (1) the pulmonary apparatus, which is further subdivided into the lungs, the trachea (windpipe), and the pulmonary airways, and (2) the chest wall (thorax), comprising the rib cage wall, the abdominal wall, the abdominal content, and the diaphragm (Hixon & Hoit, 2005). The structures of the chest wall surround and encase the pulmonary apparatus, and together they form a single functional unit (Hixon et al., 2014). The **lungs** are a pair of air-filled elastic sacs that change in size and shape and allow us to breathe. **The left lung is smaller than the right to allow room for the heart**. Air moves to and from the lungs via the **trachea** and the intricate network of branching tubes called bronchi

**3.2.3 Muscles of the Respiratory System**

****The respiratory muscles are divided functionally into muscles of inspiration and muscles of expiration. Inspiratory muscles are generally found above the diaphragm; expiratory muscles are located below the diaphragm. With the exception of the diaphragm, all respiratory muscles are paired (i.e., located on both the right and left sides of the body).

**3.2.4 Laryngeal System**

****The larynx, or voice box, is an elaborate structure composed of various cartilages, muscles, and other tissues. The function of the larynx is to act as a valve that controls the flow of air into and out of the respiratory system. As an example of a non-speech function of the larynx, suppose that you are about to pick up a heavy object. As you do so, you probably will close the laryngeal passage to maintain a rigid (air-filled) respiratory system. The vocal folds are like muscular cushions or bands that run lengthwise from the front to the back of the larynx. If you feel the “Adam’s apple” at the front of your neck, you might be able to detect a small notch at its upper boundary. The vocal folds have their frontal attachment (Kent in **Anderson & Shames,** 2014).



The vocal folds have a very important function in speech: They vibrate to produce sound. We refer to this sound source as **voiced speech** or **phonation.** The respiratory system pushes air through the trachea and larynx, but the vocal folds are drawn together at the midline to form a valve**.** This valve resists the flow of air from the respiratory system. The muscle forces that draw the folds together are carefully regulated so that the air from the lungs sets the folds into a vibratory motion a series of openings and closings that define the cycles of vibration.

**3.2.5 Articulatory System**

****As we saw with the respiratory and laryngeal systems, speech production deploys the same anatomy that is used for other biological purposes. And so it is with the articulatory system, which is used not only for speech, but also for chewing, licking, swallowing, and conditioning inspired air. The articulatory system is a three-part passageway, shown initially as cavities or air spaces.

**?** Which parts of articulatory system are responsible to produce sound?

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Did you try? Excellent! Here is the explanation how sound is formed within the articulators of speech.

The first part of this passageway, which connects directly to the laryngeal opening, is the **pharyngeal cavity**, or pharynx. The pharynx is a muscular tube formed by the pharyngeal walls and the back of the tongue. This tube can be divided into three sections: nasopharynx (near the nasal cavity), oropharynx (adjoins the oral cavity), and laryngopharynx (just above the larynx). The pharynx opens into two other passages, the **oral cavity** and the **nasal cavity**. These two cavities are separated by the hard and soft palates. The **hard palate** is an unmovable bony plate. The **soft palate** is a kind of muscular valve that can open or close the entrance into the nasal cavity. When this entrance is closed, sound energy from the larynx is directed into the oral cavity. When the entrance is open, sound energy can pass into both the oral cavity and the nasal cavity. Energy produced by phonation, therefore, can travel through three routes to reach the outside world: an exclusively oral route (through the mouth), an exclusively nasal route (through the nose), and a combined oral-nasal route (through both mouth and nose).

Articulation means movement. The system of speech production has several different moving parts, or **articulators**: lips (upper and lower), jaw (mandible), tongue, pharyngeal walls, and soft palate. These structures change their positions (and some change their shapes) to form the various sounds of speech. As children learn to speak, they are discovering how to move the articulators to certain positions corresponding to the sounds of the language. Speech impairment occurs when all or in one part of the above system has limitation.

**3. 3.1 Causes of** Motor **Speech Impairments**

****Many structures and systems combine together to produce speech. They are all regulated by the nervous system. Any damage or disease that affects this system will disrupt (interrupt) the ability to produce speech, resulting in motor speech impairment. Children with these impairments are usually very difficult to understand and have many articulation errors.

Children with physical disabilities such as cerebral palsy often have motor speech disorders. However, children without physical disabilities can also have motor speech impairment. Some children present with poor control of the muscles in the face and mouth. This creates problems in articulating and combining sounds in the rapid way necessary for speech.

Verbal Apraxia and dysarthria are types of motor speech impairments. **Verbal Apraxia** is the inability to perform coordinated movements with the tongue, lips and jaw. **Dysarthria results** from impaired motor control of the throat tongue or lips. Children with these motor speech impairments need intervention from a speech-language pathologist.

Table 3.3: Possible Classification of Speech Communication Disorders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Reception***  | ***Expression***  | ***Etiology***  | ***Time of Onset***  | ***Severity*** |
| *Hearing Acuity:*ConductiveSensorineuralMixed*Auditory Processing:*DecodingIntegrationOrganizationUnderstanding speechunder adverseconditionsShort‑ term memoryMultiple categories | *Speech:*ArticulationFluencyVoice*Language:*FormPhonologyMorphologySyntaxContentVocabularyUsePragmatics | NeuromotorabnormalitiesHearing impairmentEnvironmental/ learningfactorsCognitive deficitsAnatomical orphysiologicalimpairments | CongenitalAcquired | BorderlineMildModerateSevereProfound |

Table3. Present various systems for categorizing communication disorders. The American Speech‑ Language‑ Hearing Association (ASHA) discusses various disorders that affect children and adults who may benefit from the help of a speech‑ language pathologist (SLP).

**Risk Factors for Speech and Language Problems in Young Children**

A. **Genetic/Congenital Problems**

* Prenatal complications
* Genetic disorders
* Prematurity
* Fetal alcohol syndrome
* Microcephaly
* Known exposure to a teratogen
* Dysmorphic child
* Positive toxicology screen at birth

**B. Medical Conditions**

* Ear and hearing problems
* Oral-motor or feeding problems
* Cleft lip or cleft palate
* Tracheotomy
* Autism
* Neurological disorders
* History of intubation
* Lead poisoning
* Failure to thrive
* Persistent health/medical problems, chronic illness, or prolonged hospitalization

**C. Family/Environmental Risk Factors**

* Family history of hearing or speech/language problems
* Parents with hearing impairment or cognitive limitation
* Children in foster care
* Family history of child maltreatment (physical abuse or child neglect)

**Clinical Clues of a Possible Communication Disorder**

****Clinical Clues/Cause for Concern in First 3 Months

* lack of responsiveness
* lack of awareness of sound
* lack of awareness of environment
* cry is no different if tired, hungry, or in pain
* problems sucking/swallowing

The cause of Communication and speech/ language impairment can be studied also as follows

**Organic causes**

****Motor speech disorders are difficulties related to problems of movement resulting from neurological disorder or injury. There are heterogeneous group of neurological impairments that affect motor planning, programming, coordination, timing, and execution of movement patterns used for speech production in both children and adults. Any or all of the processes of respiration, phonation, resonation, and articulation are organic causes. In general

* Brain damage;
* Malfunction of the respiratory or speech mechanisms, or malformation of the articulators;
* Severely misaligned teeth; and
* Cleft lip or palate affects the production of nasal sounds;
1. **Functional causes**
* Inappropriate practices and psychological causes
* Undue abuse of the voice by screaming, shouting, and straining can cause damage to the vocal cords and result in a voice disorder.
* Stress that creates stuttering- a lack of fluency in speaking, may be characterized by severe hesitations or the repetition of sounds and words.
1. **Causes of Language Impairments**

****Many problems that fall in the area of language impairments have multiple causes.

* Traumatic brain injury (TBI) is a disruption in the normal functioning caused by a blow or jolt to the head or a penetrating head injury.
* Brain injury or disease that damages the central nervous system results in aphasia.
* Inability to hear well at the time of language development.
* **Aphasia** is impairment due to localized brain injury that affects understanding, retrieving, and formulating meaningful and sequential elements of language.

**Aphasia** means literally “without language,” a feature that describes the most severe varieties of this impairment. The aphasic population is extremely diverse. Although aphasia results from localized brain damage, the exact locations and the resultant severity and type of aphasia are not a perfect match. Although mildly aphasic individuals may have language that is similar to that of typical elderly persons, individuals with aphasia usually exhibit greater deficits in expressive language and overall efficiency of communication.

1. **Environmental factors /functional factor/**
* Lack of stimulation or modeling,
* Lack of proper experiences for mental development and learning language,
* Inappropriate role models’
* Punishment for speaking or being ignored trying to communicate.

**?** List important components of speech impairments?

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Did you try? Interesting!! Compare your answers with the following description.

**3. 4 Speech Disorders**

****Speech is a major part of being human and living in a social world. But for people who cannot use speech easily or successfully, life can become complicated and frustrating. To come to terms with speech disorders and to appreciate how children acquire speech, we need to know how speech is produced.

The basic task of speech production is to select the right combination of muscles, working in the proper sequence, to produce the speech sounds needed to transmit a message. As many as 100 different muscles may be involved, and each muscle is made up of many different muscle fibers, the basic units of muscle contraction. It has been said that speech requires the use of more muscle fibers than any other routine behavior.

Any imperfection in the production of sounds of language caused by problems such as inadequate muscle co-ordination, faulty articulation, poor voice quality, or organic defects results in speech disorder. The most accepted definition emphasizes that the condition must interfere with communication, call attention to the speaker, or cause the person anxiety or maladjustment. Ysseledyke and Algozine (1995) gave a more elaborate definition as follows: “Speech disorders are problems with producing speech sounds (articulation), controlling sounds that are produced (voice), and controlling the rate and rhythm of speech (fluency).

Speech disorder: is impairment in the production of oral or spoken language. Speech is abnormal when it is unintelligible, unpleasant, or interferes with communication (Van Riper & Erickson, 1996). Thus, speech disorder is an impairment of voice, articulation of speech sounds, or fluency.

Any one of these three speech impairments is distracting to the listener and can negatively affect the communication process.

Voice disorder: refers to absence or abnormal production of vocal quality, pitch, intonation (loudness or softness), loudness, resonance (tone or character), and/or duration.

**?** What is articulation disorder? State the description of articulation disorder.

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Did you try? It is interesting!! Now compare your answers with the next description.

**3.4.1 Articulation Disorder**

**Articulation** refers use of the articulators such as teeth, tongue, etc. to produce speech sounds. The motor movements involved in the production of speech. Articulation impairment refers to errors in the production of speech sounds which are not consistent with the child’s chronological and/or cognitive ability (Alberta Health, 1993). Articulation disorder described as the abnormal production of speech sounds, interruptions in the flow, rate, and/or rhythm of verbal expression.

The common articulation errors include the following:

* + Omissions of sounds from words
	+ Substitutions of one sound letter in place of another as "wed" for "red"
	+ Addition or inclusions of an extra sound (phoneme) in words "summber" for “summer”
	+ Distortions or improper productions or pronunciations of a sound

Although stuttering can develop at any age, the most common form of stuttering begins in the preschool years and is called **developmental stuttering**. Developmental stuttering is contrasted with another form of stuttering, called **neurogenic stuttering**, which is typically associated with neurological disease or trauma. Neurogenic stuttering differs from the more common developmental stuttering in several ways.

**3.4.2 Fluency disorder**

**Fluency disorder** is defined as the abnormal flow of verbal expression, characterized by impaired rate and rhythm verbal expression. A fluency problem usually involves hesitations or repetitions that interrupt the flow of speech. Stuttering is one type of fluency problem.

Continuous stuttering is manifested through:

* + repetition of consonant sounds, vowel sounds, complete syllables
	+ hesitation in general speech pattern
	+ prolongations

Fluency impairment is more commonly referred to as stuttering. Stuttering is the disruption in the flow and rhythm of speech. These disruptions may be repetitions of words or parts of words, prolongation of a sound, or unusually long hesitations between words.

Children who present with any of these characteristics should be referred to a speech-language pathologist (PLP).

Children exhibit many hesitations, revisions, and interruptions in their utterances. Children are not born as fluent speakers. Fluency requires some degree of physical maturation and language experience, but it does not develop linearly as the child matures. Stuttering or stuttered speech involves audible or silent repetitions and prolongations (Andrews et al., 1983). Tense pauses and hesitations within and between words may also be regarded as **stuttering**. Within-word and some between-word disfluencies are believed to be the cardinal, universal features of stuttering.

Disfluencies associated with developmental stuttering usually occur on content words (e.g., nouns, verbs), whereas disfluencies associated with neurogenic stuttering can occur on function words (e.g., conjunctions, prepositions) and content words. People who have developmental stuttering frequently exhibit secondary characteristics and anxiety about speaking, whereas neurogenic stutterers do not. Also, developmental stuttering tends to occur on the initial syllables of words, whereas neurogenic stuttering can be more widely dispersed throughout an utterance (Ringo & Dietrich, as cited in Owens, et al., 2015).

**Cluttering** is a fluency disorder characterized by a [rate](http://en.wikipedia.org/w/index.php?title=Vocal_rate&action=edit) that is perceived to be abnormally rapid, irregular? These rate abnormalities further are manifest in one or more of the following symptoms:

1. An excessive number of disfluencies the majority of which are not typical of people who stutter
2. The frequent placement of pauses.
3. Inappropriate (usually excessive) degrees of **co-articulation** among sounds, especially in multisyllabic words.

It displays inconsistence rhythm, and producing words or groups of words unrelated to the sentence. The person with cluttering may experience a short **attention span**, poor concentration, poorly organized thinking, inability to listen, and a lack of awareness that one's speech is unintelligible. Cluttering is also characterized by **slurred speech**, especially dropped or distorted /r/ and /l/ sounds; and monotone speech that starts loud and trails off into a murmur. Clutter persons or children often also have reading and writing disorders, disorderly handwriting, which poorly integrates ideas and space. Individuals who clutters have poor awareness of their disorder.

**3.4.3 Voice Impairment**

****Voice is a primary means of expression and is an essential feature of the uniquely human attribute known as speech (Boone & McFarlane; Colton & Casper; Titze as cited in Owens et al., 2015). Your voice reflects gender, personality, personal habits, age, and the general condition of your health. Your voice is an emotional outlet that mirrors your moods, attitudes, and general feelings. You can express anger by shouting and express affection by speaking softly; these types of vocal expression have great potential to evoke emotional responses from a listener.

Disorder of voice production involves deviations in voice quality, pitch, loudness, and flexibility that may signify illness and/ or interfere with communication (Aronson, as cited in Owens, et al., 2015). Voice disorders can affect people of any age. It is estimated that approximately 3% to 6% of school-age children and 3% to 9% of adults in the United States have a voice disorder. In the adult population, men are more commonly affected than women (Ramig & Verdolini, as cited in Owens, et al., 2015).

**?** Which part of the respiratory organs responsible for voice disorder?

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Did you respond? Just refer the anatomy and physiology of respiratory organ human beings.

*Resonance* refers to the quality of the voice that is produced from sound vibrations in the pharyngeal, oral, and nasal cavities. Sound energy produced by the vibrating vocal folds travels through the vocal tract, an acoustic resonator that serves to enhance or reduce particular frequencies of that sound. Thus, the size and shape of the pharynx, oral cavity, and nasal cavity will directly affect the perceived sound, or quality, of your voice. In addition, the velopharyngeal mechanism, responsible for coupling and decoupling the oral and nasal cavities during speech and swallowing, regulates sound energy and air pressure in the oral and nasal cavities (Kummer & Lee, 1996). Recall that the production of most speech sounds requires the velum to be elevated to prevent air from escaping through the nose and also to ensure adequate air pressure buildup in the oral cavity to produce high-pressure consonants (e.g., / p/, b/, / s/). Failure of the velopharyngeal mechanism to separate the oral and nasal cavities during speech production and swallowing is called **velopharyngeal inadequacy (VPI)**. VPI is a frequent result of malformations of the hard and soft palate early in embryonic development.

Voice impairment exists when a speaker’s voice differs significantly along one or more of the dimensions of pitch, loudness, and quality in relation to the speaker’s age, and sex (Alberta Health, as cited in Owens, et al., 2015). The following characteristics may indicate that a child is experiencing problems in the area of voice. The child:

* produces a pitch that is too high or too low
* sounds hypo-nasal (like you have a cold)
* has a harsh, hoarse or breathy sounding voice
* uses inappropriate volume when speaking, i.e., speaks too softly, too loudly, or with too little loudness variation (monotone) talks through their nose (hyper-nasal).

**3.4.4 Voice Disorders Associated with Psychological or Stress Conditions**

Your voice involuntarily responds to emotional changes. Strong emotional reactions such as extreme sadness, fear, anger, or happiness are reflected by your voice. When experiencing strong emotions, you might not be able to control your voice.

Strong emotions, when they are suppressed, can cause *psychogenic* voice disorders. Psychogenic voice disorders that result from psychological suppression of emotion are called **conversion disorders** because the person is converting emotional conflicts into physical symptoms. In these cases, the vocal folds are structurally normal, and they function normally for nonspeech behaviors. One type of vocal conversion disorder is called **conversion aphonia**. People who suffer from conversion aphonia whisper to produce voice. Although these individuals are capable of coughing and clearing the throat, indicating the capability of glottal closure, they do not approximate the vocal folds for speech production. In many cases, people with conversion aphonia believe they have a physical condition that prevents them from using their voice (Duffy, as cited in Owens, et al., 2015).

 It is believed that conversion aphonias develop out of a desire to avoid some type of personal conflict or unpleasant situation in the person’s life (Duffy, as cited in Owens, et al., 2015). Conversion aphonia is not a common condition, and it will likely persist until the person is willing to resolve the emotional conflict. People with deeply rooted psychological problems may require psychotherapy or psychiatric treatment.

**3.4.5 Neuromuscular Disorders**

The dysarthrias are a group of motor- speech disorders caused by neuromuscular deficits that result in weakness or paralysis and/or poor coordination of the speech musculature. Dysarthrias typically affect respiration, phonation, resonance, and articulation. About 75% to 85% of children with **cerebral palsy (CP)** have impaired speech production skills (Love & Webb, 2001). CP is a neuromotor disorder caused by brain damage before, during, or soon after birth (Pena-Brooks & Hedge, 2007). The location and severity of brain damage predict dysarthria type(s) and degree of communication impairment. However, articulatory difficulties are the most prominent deficit for children with CP (Mecham, cited in Owens, et al., 2015).

The speech characteristics associated with dysarthria depend on the type of CP. The most common type is spastic CP, caused by lesions to motor neurons in one or both frontal lobes. If the lesions are bilateral, the child exhibits spastic dysarthria, which results in a slow speech rate, imprecise articulation of consonants,harsh voice, hypernasality (with possible air escape out of the nose), and prosodic abnormalities (e.g., equal and excess stress patterns). Errors tend to be similar whether reading aloud, speaking to a group, or during one‑to‑one conversation. Speech training or the use of augmentative or alternative communication may be required.

**3.5 Communication disorder and Hearing Impairment**

****It is difficult skipping the association between communication disorder and hearing impairment. Any degree or type of hearing loss in childhood can **reduce exposure to spoken language**, thus delaying the development of speech and language skills. This has academic implications for development of listening, speaking, reading, writing, and social skills. The following characteristics may indicate that a child is having difficulty hearing. The child:

* consistently speaks using inappropriate volume
* constantly asks for information to be repeated
* has a family history of hearing loss
* has “tubes” in the ears
* complains of earaches
* is inattentive or distractive

If you suspect a child has a hearing loss he/she should be referred to any one of the following; itinerant teacher for the deaf and hard of hearing, the speech-language pathologist, public health nurse, audiologist or family physician for a hearing screening.

**Other Areas of Speech/ Language Concern**

There are a number of additional disorders that commonly have speech/language impairments as secondary to other conditions. These include conditions such as attention deficit/hyperactivity disorder, autism, emotional/behavioral disabilities, cerebral palsy, fetal alcohol syndrome, learning disabilities, or traumatic brain injury can negatively affects the child’s communication performance.

**3.5. Characteristics of children with Language and Communication Difficulties**

****Language impairments have many different outcomes. Unlike most speech impairments, however, multiple results beyond the production of oral language are observed. Many youngsters' social competence is affected, and a variety of their social skills are inferior to those of peers without this disability. It is also quite common to find correlated cognitive and academic difficulties in children with language impairments.

* + 1. **Physical Characteristics**

Studies indicate that language and communication difficulties alone will not delay motor development. When language and communication difficulties is occurred as primary disabling condition in most cases delayed in motor development will not be observed but if language and communication difficulties is occurred as secondary disabling condition delayed in motor development may perhaps will not be observed.

Children with language disorders have been found to have difficulty copying simple figures when compared to their age peers. In a study examining the relationships between fine motor skills and linguistic abilities of developmentally delayed learners, they found that language disorder were strongly associated with poor fine motor skills.

**3.5.3 Cognitive Characteristics**

****Cognition involves the representation and processing of knowledge about physical objects, events, and their relationships. The foundation of cognitions is language.

* They have difficulties mastering reading when they are in elementary school (Catts, Hu, Larrivee, & Swank, 1994); and
* Reading comprehension is the most seriously affected (Catts, 1993).
	+ 1. **Language Impairments In relation to Academic Achievement**

Difficulties in language can result in more serious learning problems than speech impairments do. Lack of language competence influences children's ability to learn to read and write at the pace of their classmates as well as their ability to communicate orally with others.

* Academic difficulties in all school activities
* Learning disability during the school years is observed
* Problems occur across the entire range of cognitive abilities
* Problems may profoundly affect a student’s learning; and
* High risk of reading difficulties for students with speech and language delays.
	+ 1. **Socio-emotional Characteristics**
* Language impairments due to problems in the area of pragmatics can result in other difficulties that negatively impact social skills. Many of these youngsters are unable to understand ambiguity in messages. They are unable to identify the features that uniquely identify of specific objects due to undeveloped pragmatic skills.
* Most children with language impairments do not develop the skill of using oral language to persuade others to adopt their position on an issue,
* Students may have low self-esteem,
* Students may experience social isolation, and
* Students may develop behavior problems

****Communication disorders consists of disorders of speech (articulation, voice, resonance i.e. the quality of being loud and clear, and fluency), oral neuromotor patterns of control and movement, language impairment, feeding and swallowing disorders, cognitive and social communication deficits, and hearing and processing difficulties.

Communication disorder also may coexist with other disabilities. Such as cerebral palsy, the person’s facial structure is deformed, or the vocal cord has something wrong uttering a word may be difficult, or when a person has hearing impairment, developmental delay, cognitive impairment, traumatic brain injury and many related reasons can lead into communication disorder.

**Etiology**, the cause or origin of a problem, may be used to classify a communication problem. Disorders may be due to faulty learning, neurological impairments, anatomical or physiological abnormalities, cognitive deficits, hearing impairment, or damage to any part of the speech system. Sometimes a dichotomy is made between **congenital** and **acquired** problems. Congenital disorders are present at birth; acquired ones result from illness, accident, or environmental circumstances anytime later in life. Finally, disorders may range from borderline or mild to profoundly severe.

Language Disorder - generally influenced by cognitive abilities or by the underlying syndrome

* Characteristics of speech disorders relate to the areas of voice, articulation of speech sounds, and/or fluency.
* A voice disorder is the atypical production of voice quality, pitch, and/or loudness.
* An articulation disorder is the atypical production of speech sounds.

A fluency disorder is the atypical flow of verbal expression, characterized by impaired rate and rhythm, such as stuttering.

Speech production begins with phonation, or sound produced by vocal fold vibration. Fundamental frequency is associated with the speed of vocal fold vibration and is measured in **hertz (Hz)**, or the number of complete vibrations per second. The perceptual correlate of fundamental frequency is *pitch*. For example, on average, adult men have fundamental frequencies of around 125 Hz (the vocal folds open and close 125 times per second), whereas adult women have fundamental frequencies around 250 Hz. Therefore, the perceived pitch of male voices is, on average, lower than the perceived pitch of female voices. The fundamental frequency of young children’s voices can be as high as 500 Hz, resulting in a very high- pitched voice. The difference in vocal fundamental frequency (and resulting vocal pitch) among men, women, and children is due largely to the structure of the vocal folds themselves Disorder of voice production involves deviations in voice quality, pitch, loudness, and flexibility that may signify illness and/ or interfere with communication (Aronson, as cited in Owens, et al., 2015). Voice disorders can affect people of any age. It is estimated that approximately 3% to 6% of school-age children and 3% to 9% of adults in the United States have a voice disorder. In the adult population, men are more commonly affected than women (Ramig & Verdolini, as cited in Owens, et al., 2015).

**** Say True or False

* 1. During speak we use exhaling air.
	2. Voice disorder affects mainly adults.
	3. The system of speech production has several different moving parts, or **articulators**.
	4. The voice box (larynx) is an elaborate structure composed of various cartilages, muscles, and other tissues
	5. Lack of (exposure) experience during the developmental periods can cause language disorder.
	6. Language and speech impairment may be congenital

Multiple Choice Items

* 1. Which one of the following not directly part articulator?
1. Lips (upper and lower), B. jaws (mandible) C. tongue D. lungs
	1. Voice is produced initially in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Lungs B. Larynx C. Mouth D. Nasal
	1. What are the three Speech organs?
3. Articulatory C. Laryngeal
4. Respiratory D. All are speech organs
	1. Which one of the following is not congenital cause for speech and language development?
5. Prenatal complications
6. Genetic disorders
7. Prematurity
8. Injury during childhood period
	1. What is aphasia?
9. It is impairment due to localized brain injury
10. It affects understanding, retrieving, and formulating meaningful and sequential elements of language.
11. **Aphasia** means literally “without language
12. All of the above
	1. Which one is not correct about the characteristics of children with communication disorder?
13. Their academic performance is lagging behind their peers
14. The physical appearance is not different for their peers
15. They show pragmatic language problem
16. They do not show expressive language difficulty

**Unit Four**

**4. Identification and Assessment of Language and Communication Difficulties**

****As we have seen how speech is formed, different causes and related problems of communication and language impairments such as speech, articulation and fluency disorders there are distinct symptoms and assessment strategies. Naturally symptoms of communication and language impairments are clearly observable or detectable by parents, family members, teachers or speech language professionals (SLP). When a child utters words, phrases, closes or sentences, there are clear indicators of articulation, fluency or voice disorders. Language impairments also easily detected in the speaker’s language form, semantics and use.

Assessment on the other hand, should be done by multidisciplinary professionals. Any comprehensive assessment and plan for treatment can only be successfully carried out in the light of full knowledge about all aspects of the patient's function; physical, psychological, social and environmental conditions. These help a comprehensive understanding of the communication and language impairment. Thereby, appropriate intervention can be given for children as the diagnostic results suggested. In this unit we will try to see identification and assessment strategies for each disorder,

* **Unit Objectives**

After thoroughly reach each section students will be able:

* Understand the objective of identification.
* Describe assessment techniques of children and adults with communication and language impairment.
* Describe identification mechanisms of communication, language and related problems.
* List important symptoms of communication and language disorders.
* Least multidisciplinary professionals who participate in the identification and assessment procedures.
* State the focus of identification mechanisms of speech disorders.
* List the focus of identification mechanisms of language impairment
* Understand how language and speech impairments are assessed
* Describe important assessment strategies of language and speech disorders

**4.1 Identification Mechanisms**

****In order to identify young children with communication disorders as early as possible, all persons involved with young children (including parents and professionals) need to understand:

* typical communication development
* how to recognize signs of difficulty with communication
* steps to take when concerns are identified
	+ 1. **Difficulties in early identification and assessment**

****Early identification of children with communication disorders can occur in a variety of ways. In some cases, certain behaviors or lack of progress in the child’s development may cause parents or other caregivers to become concerned that the child may have a communication problem. In other instances, a professional person observe the child for routine health care may become concerned about a possible communication disorder based on information from the parents or direct observation of the child.

There are a number of *risk factors* and *clinical clues* that increase the concern that a child may have a communication disorder. Risk factors and clinical clues may be noticed by the parents, by others familiar with the child, or by a professional who is evaluating or caring for the child.

Risk factors are current or historical observable behaviors or findings that suggest a child is at increased risk for either having or developing a communication disorder. For example, a history of chronic ear infections is a risk factor for communication disorders.

Clinical clues are specific behaviors or physical findings that are a cause for concern that a child may currently have a communication disorder. For example, a child having no spoken words at 18 months would be a clinical clue of a possible communication disorder, including hearing loss.

**?** What are the main focuses of identification mechanisms of speech impairments?

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Did you try? Excellent!! Here are the main focuses of speech impairment.

Comprehensive assessment by a speech language pathologist (SLP) is necessary to determine the nature of a speech-sound disorder. The goals of speech- sound assessment are as follows:

• Describe the individual’s speech- sound inventory.

• Identify patterns of errors (i.e., phonological processes).

• Determine the impact of speech- sound errors or error patterns on communicative effectiveness.

• Identify factors that may relate to etiology or maintenance of the speech- sound impairment.

• Plan treatment when appropriate.

• Make a prognosis.

• Monitor change over time (Bernthal et al., as cited in Owens, Farinella, Metz, 2015 ).

In addition, the case history, interview, hearing screening, and structural functional examination may provide insight into the etiology of a disorder and contribute to predictions of improvement. Collection of baseline data from which to measure change over time with or without intervention is an integral part of the initial assessment. Typical assessment procedures are briefly described and explained in the following sections.

* 1. **Speech Impairments**

****Each of the three aspects of speech - articulation, voice, and fluency - requires a different type of assessment to determine whether a child has impairment or not. Given that it is the most common problem in children, let's look at articulation first.

* + 1. **Articulation**

****Some children make articulation errors because they do not use the right motor responses to form the sounds correctly. The cause may be a physical problem, such as a cleft palate, where the roof of the mouth is not joined together, or an injury to the mouth. The cause may also be errors in the way the individual uses the speech mechanisms – tongue, lips, teeth, mandible (jaw), or palate – to form the speech sounds. People can make four different kinds of articulation errors: substitutions, distortions, omissions, and additions;

Omission: A sound or group of sounds is left out of a word. Small children often leave off the ending of a word (sounds in the final position).

* + Substitution: A common mis-articulation among small children, one sound is used for another. *Example* Intended: I see the rabbit. Substitution: I tee the wabbit.
	+ Distortion: Give the pencil to sally (the/p/is nasalized).
	+ Addition: An extra sound is inserted or added to one already correctly produced. Example Intended: I miss her. Addition: I missed her.

**Phonological Process Analysis is another important assessment.** Many research studies have shown that targeting a process rather than an individual phoneme has the advantage of encouraging generalization of learning to similar phonemes and phonological contexts ( Gierut, as cited in Owens et el., 2015). Therefore, if an individual has numerous errors, it is helpful to identify which phonological processes are apparent.

* + 1. **Voice**

****Sign or symptom may arise due to a serious laryngeal disease that needs medical examination. Overall, there are two general reasons for voice problems in children: an organic cause (such as a tumor) and a functional cause. Functional causes of voice problems are usually due to individuals using their voices inappropriately. For example, screaming for long periods of time puts undue stress on the vocal folds and larynx, causing damage to the voice mechanisms: The voice will sound hoarse, too low or high in pitch, or breathy.

* + 1. **Fluency**

****The third kind of speech impairment is a fluency problem. The flow of speech breaks down because syllables are repeated or a communication includes many hesitations or extraneous words or sounds. Stuttering is a fluency problem, but there are important distinctions between stuttering and dysfluent speech. When a child or a person show any one or all of the above signs or symptoms the presence of speech impairments can detected.

**?** What is intelligibility in relation to speech components such as voice, fluency, rate or rhythm?

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Did you try? Well! Here is the gist point of speech intelligibility.

**4.2.4 Intelligibility**

Speech **intelligibility is one important assessment area. It** refers to how easy it is to understand an individual. Poor intelligibility has a negative impact on communicative effectiveness. Intelligibility depends on such factors as the number, type, and consistency of speech- sound errors. The person’s voice, fluency, rate, rhythm, language, and use of gesture also contribute to ease of comprehension, and these should be noted. Other factors beyond the speaker include the listener’s hearing acuity, familiarity with the speaker, and experience listening to disordered speech, as well as environmental noise, message complexity, and environmental cues.

**?** What are the main focuses of identification mechanisms of Language impairments? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Did you write the answer? Well!! Here are the descriptions.

**4.3 Identification of Language Impairments**

**** Assessment helps to distinguish between children who have a disorder and those who do not. Accurate diagnosis is a prerequisite to ensuring that scarce resources, especially in schools, are allocated in the most beneficial way. As with other diagnostics, language assessment is a systematic process of discovery and information gathering. As should become evident, good clinical practice requires that the boundary between assessment and intervention be permeable. A portion of any good assessment is attempting to determine possible avenues for intervention. In turn, each intervention session should contain some assessment of a client’s current skill level. Assessment should be sufficiently broad and deep so that all areas of possible concern are identified and described as accurately as possible. For example, assessment of semantics must include more than receptive understanding and expressive vocabulary size. A thorough examination might also include areas such as word learning abilities and word storage and retrieval (Brackenbury & Pye, as cited in Owens, Farinella & Metz, 2015).

Any assessment of children with culturally and linguistically diverse backgrounds must recognize the relationship of the risk for Language impairment (LI) and sociao-economic status (SES). Children from low-SES backgrounds with **poorer maternal education** have an increased incidence of LI (Schuele, as cited in Owens, Farinella & Metz, 2015).

Identifying andassessing individual's language competence can be done through a thorough evaluation, which usually includes assessment of the three aspects or components of language: form, content, and use.

**Form:** To assess the form or structure of an individual's language, the speech language professionals (SLP) determines how well the child uses the rules of language. Problems with form cause errors in letter or sound formation, grammatical structure usage, or sentence formation. Many children who have difficulty with the rules of language also have problems recognizing sounds and understanding the meaning of different grammatical constructions; sentence types, and sentence complexities. For example, a child who has not mastered the rules of language might not be able to tell the difference between sentences.

**Content:** Children with problems in language content often do not understand the meaning of what is said to them and choose inappropriate words for their oral language communications. They might also have difficulty comprehending the written material presented in textbooks- the third aspect of language competence.

Use (pragmatics): is discussed to determine how appropriately a child uses language in social contexts and conversations.

One aspect of evaluation or assessment is a case history that documents the child's birth, development, and cognitive and physical growth. Usually, the child's doctor and the parents complete a case history form. When the parents bring their child to the clinic for the evaluation, they are interviewed and the child's language is evaluated in several different situations: free play, informal testing, and formal testing. The free play situation is the primary source of the assessment of the child's spontaneous speech.

Once an increased concern about a communication disorder has been identified, it is important for professionals to perform or arrange for appropriate screening and assessment of the child’s communication. It is important that all professionals involved in the assessment process be knowledgeable and has experience working with infants and young children.

* 1. **Assessment strategies**

****Communication is important to all aspects of a child’s development and can have a long-term impact on socialization and learning. It is important to monitor communication development, including hearing, in all children from birth.

It is important for parents and professionals to be able to identify potential communication disorders as early as possible. However, early identification and accurate diagnosis of communication disorders can be challenging in children under 3 years of age who are in the early stages of language development. As the child gets older, the accuracy of the diagnosis usually increases.

It may be particularly difficult to diagnose a communication problem in children who otherwise seem to have no apparent developmental problems. Although most people can tell that someone has speech or language impairment by observing or listening the person, the formal assessment of speech and language impairments is complicated.

Assessment may take many forms. Ideally, a clinician should sample a broad variety of communication skills through multiple procedures in several settings. The focus should be on the collection of **authentic data**. That is, actual real-life information, in sufficient quantity to be able to make meaningful and accurate decisions.

The need for the use of a variety of procedures should be readily apparent. How often as a student have you said that a test did not accurately measure what you know or what you can do? The same is true for individuals with communication impairments. By using multiple measures and reports, an SLP or audiologist tries to obtain the most accurate description of a child’s communication possible. These methods may include:

• A case history filled out by a parent, family member, professional, or the client

• A questionnaire completed by a parent, family member, professional, or the client

• An interview with a parent, family member, and/ or the client

• A systematic observation of the client’s communication skills

• Testing with more than one assessment tool and including a hearing screening and an **examination of the peripheral speech mechanism**

• **Dynamic assessment**

• Communication sampling and analysis

Most tests are **norm referenced**, meaning they yield scores that are used to compare a client with a sample of similar individuals. Norm-​referenced instruments should be chosen carefully to fit the characteristics of each individual child. In contrast, a **criterion-referenced** test evaluates a client’s strengths and weaknesses with regard to particular skills and does not make comparisons to other children. This more descriptive method is usually reserved for dynamic assessment and sampling.

**Dynamic assessment** includes probing (questioning) to explore a client’s ability to modify behavior by producing previously misarticulated sounds, learning a language rule, reducing disfluencies, and the like. The goal is to mesh (interconnect) more flexible non standardized approaches with more formal, structured methods found in most tests. Dynamic assessment often takes the form of a *test- teach-test* paradigm to examine the “teach ability” of a communication feature.

The child’s potential for learning is assessed by giving small amounts of assistance and determining the difficulty for the child of performing the newly learned behavior. Most clinicians also use a **speech** and/ or **language sampling** technique when assessing the communication of both children and adults. Guidelines for sample collection and analysis are described in Chapter 4 and Chapter 8. With adult clients, sampling can be accomplished while reviewing the case history with clients or asking them to explain how they spent their day or tell about their last vacation (Duffy, as cited in Owens, et al., 2015).

* + 1. **Area of Communication (Language) Assessment**

**?** What are the main language assessment areas? List at least two areas

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Have you tried? Good!! Here are the possible answers and check your attempt.

****Form: Does the student demonstrate the following language forms?

* a flexible vocabulary (varies with person or setting)
* regular grammar
* tense and subject/verb agreement
* clear use of referents
* appropriate use of subordinators

**Function: Does the student:**

* sustain topics
* phrase for intent
* support points of view
* use elaborated codes (school, peer, and home language codes)
* use social and cognitive language
* use varied functions and intents of language
* use tactful deviousness
* modify his or her utterance when needed

**Style: Does the student:**

* take into account the listener’s need
* plan the content of responses
* have adequate word finding
* express himself or herself fluently
* speak intelligibly
* use distinct speech
* speak at a comfortable rate
* speak audibly

**** The primary goal of diagnosis is determining exactly what is wrong. Sometimes **diagnostic therapy** is suggested. In this case, the SLP will work with the client for a time and will obtain a clearer picture of the person’s communication abilities and limitations in the process.

As mentioned earlier, communication impairments may involve hearing, speech, language, and/ or processing or, more likely, some combination of these. During assessment, specifics of all of these are probed. Both the client’s communicative strengths and limitations are noted. An SLP provides data reporting the consistency of behaviors and, where appropriate, indicates how the client compares with more typical communicators.

 If a problem exists, an SLP will want to describe its severity. Exactly what determines a particular severity rating is related to several factors. Although published tests often suggest severity ratings depending on a client’s performance scores, these must be used with caution. There is a broad range of typical communication behavior, and an SLP should not rely overly on any single test.

Thus, the goal of assessment sought by the communication disorders specialist is charged with answering the following questions when assessing an individual:

1. Does a communication problem exist?

2. What is the diagnosis?

3. What are the deficit areas? How consistent are they?

4. What are the individual’s strengths?

5. How severe is the problem?

6. What are the probable causes of the problem?

7. What recommendations should be made?

8. What is the prognosis (likely outcome) without and with intervention?

At any time possible, an SLP should try to ascertain the reason(s) for the communication deficit, especially if the cause persists. The cause is referred to as the **etiology**. There may be **predisposing causes** that underlie the problem, such as genetic factors, **precipitating causes** that triggered the disorder, such as a stroke, and **maintaining** or **perpetuating causes** that continue or add to the problem. Whether the etiology is known or not, an SLP must thoroughly describe the client’s communication behavior.

Recommendations for addressing the client’s communicative deficiencies are often the most read portion of an assessment report. In making a plan, the first decision is whether intervention is warranted. If it is, then its nature must be described. Treatment recommendations can be thought of as a “working hypothesis” that may need to be altered as intervention proceeds. Assessment continues throughout treatment, in the forms of data collection and probes of behavior.

In communication disorders, an SLP makes a **prognosis** regarding whether the problem will persist if no intervention occurs and what the likely outcome is if a course of therapy or other treatment plan is followed. A prognosis is an informed prediction of the outcome of a disorder, both with and without intervention, and is based, in part, on the nature and severity of the disorder; the client’s responsiveness to trial therapy during assessment; and the client’s overall communicative, intellectual, and personal strengths and weaknesses. The client’s home and school environments are also important factors that can affect the outcome.

****Say true if the statement is TRUE or FALSE if it is not

* 1. Clinical clues are specific behaviors or physical findings that a child may currently have a communication disorder.
	2. Current or historical observable behaviors are risk factors that indicates communication disorder
	3. Voice, fluency and articulation disorders are assessed with one assessment strategy.
	4. One of the goals of speech- sound assessment is to identify patterns of errors.
	5. Laryngeal diseaseis the symptoms of voice disorder.
	6. When a sound or group of sounds is left out of a word its voice impairment.

**Multiple Choice Items**

* 1. Which one is considered Form related language assessment?
1. Sustain topics C. Regular grammar
2. Phrase for intent D. plan the content of responses
	1. Which one is not included in **dynamic assessment** probing to explore a client’s ability?
3. Misarticulated sounds, C. Reducing disfluencies
4. Learning a language rule D. All are the concerns
	1. Which one is not included in the assessment of speech impairment?

A. Fluency B. Voice C. Articulation D. Intelligibility

**Unit five**

**5. Intervention of Communication (speech and language) Disorder**

****Children bring their sense of self to the therapeutic situation. Most of their self-​concept has grown out of interactions with family members and individuals in the immediate community. An SLP’s failure to recognize and include these dimensions of an individual’s social identity can negatively impact intervention (Demmert, McCardle, & Leos, cited in Owens et al., 2015).

Providing culturally responsive intervention is extremely important for children from culturally linguistically diverse (CLD) backgrounds. SLPs can integrate culturally based materials into intervention. Intervention for individuals with communication disorders is influenced by the nature and severity of the disorder, the age and status of the client, and environmental considerations, as well as personal and cultural characteristics of both client and clinician. Despite this, some general principles and procedures can be identified.

For many people, speech is a highly robust channel of language expression that functions well over a lifetime. But for others, speech is affected by various disorders that are considered in this unit. A basic step in understanding the disorders of speech is to know how speech is produced. For this reason, in speech-language pathology and audiology includes instruction in anatomy, physiology, and psychology related to human communication. The inquiry is multidisciplinary. The understanding of even one part of speech production, such as laryngeal vibration, draws on knowledge from anatomy, physiology, aerodynamics, acoustics, and other branches of science.

* **Unit Objectives**

After thoroughly read this unit contents students will be able:

* Describe important methods of intervention mechanisms.
* List interdisciplinary professionals involved in the intervention process.
* State the main objectives of intervention.
* Understand each speech and language impairment seek specific intervention technique
* List clinical elements of intervention techniques
* Describe different clinical techniques.
* List the focus of speech motor treatments

**5.1 Goals of Speech-Language Pathologists**

**?** What are the main goals of speech-language pathologists?

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Did you try? Compare your answer with the next description

Intervention in speech-​language pathology has as its overriding goal the improvement of the client’s communication skills:

1. The client should show improvement not just in a clinical setting; progress should generalize to his or her real-​world environments, such as home, school, and work.

2. The client should not have to think about what has been learned; in large part, it should be **automatic.**

3. The client must be able to **self-monitor**. Although modifications shouldbe automatic, they will still require monitoring. The client should be ableto listen to and observe himself or herself and make corrections as needed,without the therapist’s being present.

4. The client should make optimum progress in the minimum amount of time.

5. Intervention should be sensitive to the personal and cultural characteristics of the client.

Successful intervention is multifaceted and includes a variety of elements. This may include, but is not limited to, direct and incidental teaching, counseling, and inclusion of the family and family environment.

**5.2 Clinical Elements include**

? What are the clinical interventions techniques of communication disorder?

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Have you tried? Interesting!!

**Direct Teaching** Traditional clinical methods include explainingor reviewing the target and guided practice. **Behavior modification** trainingapproaches have been shown to be successful for a broad variety of communicationdisorders. Behavior modification is a systematic method of changing behavior.During training, the SLP attempts to elicit the desired response from theclient by providing a **stimulus**. The client is expected to *respond,* and the clinician **reinforces** this response if correct or provides corrective feedback if it is not.

**Incidental Teaching:** Behavior modification follows a highly structured format that an SLP directs.

A low-​structured or more client-​led approach may also be used. In this method, the SLP follows the client’s lead but teaches along the way. This is referred to as The SLP manipulates the environment so that communication occurs more naturally. For example, imaginary play with a young child or a cooking or art project with one who is older may serve as situations in which therapy occurs.

**Counseling**

In addition to direct work with the client on a communication problem, an SLP can provide a supportive environment for the client and other key people in the client’s life. A person with a communication disorder may experience a host of feelings, including embarrassment, anger, depression, and inadequacy.

Family members may have similar emotions regarding the client’s communication and may also feel pity or guilt, perhaps blaming themselves for the problem.

**Family and Environmental Involvement**

An individual might spend 2 hours a week with an SLP and 110 a wake hours alone and with other people, often family. Depending on the family circumstances, family members may be asked to help the client with specific activities at home to foster carryover to everyday situations. A spouse may be critical in assisting therapy for an adult who had a stroke or has a voice problem due to recent accident or illness. An SLP must recognize the significant others in the client’s life, from infancy through advanced age, and engage them in productive ways.

**Support groups** consisting of individuals who have similar difficulties often provide an avenue to practice what has been learned in therapy, to share feelings related to the disability, and to maintain communication skills once formal treatment has been terminated.

**5.2 Intervention of Motor Speech Disorders**

? What are the differences and similarities of assessment and intervention?

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****To correctly identify motor speech disorders, you must first obtain a thorough case history from the client or client’s caregiver, as motor speech disorders are often accompanied by predictable complaints and symptoms. In addition, it is important to have a client attempt various speech production tasks specifically designed for purposes of differential diagnosis, along with perceptual and objective measures of the speech production subsystems (i.e., respiratory, phonatory, resonatory, articulatory). Such measures will allow you to determine the most effective treatment approach for the client. As an SLP, you will likely serve on a diagnostic team with medical professionals, particularly when your client is exhibiting generalized neurological impairments. By correctly identifying different speech patterns consistent with a particular type of motor speech disorder, you as an SLP provide valuable information to other members of the team responsible for differential diagnosis of underlying neurological conditions. When assessing a child or adult client, the purposes of the motor speech evaluation are many and include the following:

* To determine whether a significant long- term problem exists
* To describe the nature of impaired functions, specifically the types of problems, their extent/severity, and the effect of these impairments on everyday functional communication
* To identify functions that are not impaired
* To establish appropriate goals and decide where to begin intervention
* To form a well-reasoned prognosis, based on the nature of the disorder, the client’s age, the age or stage of injury or disease, the presence of other accompanying conditions, client motivation, and family support

A speech-​language pathologist (SLP) will evaluate the structure and function of a client’s or a child’s oral mechanism, connected speech, and speech in special tasks. Although a few commercial test procedures are available, many SLPs working in hospitals or outpatient clinics have a standard assessment protocol that they use for their motor speech evaluations in pediatric and adult populations. These procedures may or may not rely on the use of instrumental approaches and computerized analysis. To begin, you examine the oral peripheral mechanism and note the following with particular interest:

Symmetry, configuration, color, and general appearance of the face, jaw, lips, tongue, teeth, and hard and soft palate at rest

* Movement of the jaw, lips, tongue, and soft palate
* Range, force, speed, and direction of the jaw, lips, and tongue during movement

You also need to either directly (using instrumental and computerized methods) or indirectly (during non speech tasks or perceptual speech production tasks) determine the following:

* Lung capacity, respiratory driving pressure, and control during speech production
* Phonatory initiation, maintenance, and cessPitch and pitch variability
* Loudness and loudness variability
* Volitional pitch–loudness variations
* Velopharyngeal function

For adults who may have acquired apraxia of speech, the following speech production tasks will help in differential diagnosis:

* Imitation of single words of varying lengths
* Sentence imitation
* Reading aloud
* Spontaneous speech
* Rapid repetition of “puh,” “tuh,” “kuh,” and “puh- tuh- kuh” (or “buttercup”)

Note that these tasks are repetitive and imitative. Recall that in apraxia of speech, performance will likely vary with repeated performance, and thus errors will be inconsistent. Modes of stimulus presentation are also important because the person with apraxia responds better to auditory-​visual stimuli than to either auditory or visual stimuli alone.

**5.4 Treatment of Motor Speech Disorders**

****Some basic principles underlie treatment of motor speech disorders in children and adults. These include

1. Restoring lost function,

2. Using compensatory strategies, and

3. Making adjustments for lost function (Duffy, cited in Ownes, et al., 2015).

For adults with acquired motor speech disorders such as dysarthria or apraxia, a full recovery is quite possible, particularly in mild cases of stroke, for instance. But generally speaking, residual motor speech deficits persist for long periods of time in many individuals with acquired disorders, and especially in those with congenital disorders such as cerebral palsy. Therefore, compensation for inadequate functioning of the motor speech system will be necessary. For degenerative diseases such as amyotrophic lateral sclerosis (ALS) or Parkinson disease that are progressive, ongoing adaption to lost function will be necessary, and compensatory strategies and the use of prosthetic devices may be effective throughout the course of the disease.

Because dysarthria affects all aspects of speech production, management must address a client’s difficulties with respiration, phonation, resonation, articulation, and prosody. Specific intervention techniques to target increased respiratory drive for purposes of speech breathing might include speech practice production using a pausing/ phrasing strategy. In this way, clients (both adults and children, when appropriate) learn to pause more often, using shorter phrases as a means to take in more air and start their speech utterances at a higher lung volume.

As a result, speech utterances will be louder (although shorter in length) and, often, more clear. If respiratory muscle weakness impedes the use of such a strategy, as in the case of ALS or in some children with spastic cerebral palsy, the use of an abdominal binder is an effective prosthetic for increasing respiratory drive and, therefore, improving loudness and voice quality. Patients with severe respiratory weakness and significantly reduced loudness levels may also use voice amplifiers.

**5.4.1 Intervention for Voice Disorders Associated with Vocal misuse or Abuse**

****Treatment of any voice disorder may involve behavioral voice intervention, surgical intervention, psychological or psychiatric counseling, drug treatments, or various combinations of these. Treatment protocol decisions are based on the specific needs of the individual and the established clinical efficacy of the treatment (Ramig, as cited in Owens et al.). Voice intervention is frequently the clinical method of choice for voice disorders that have resulted from vocal misuse or abuse.

? What are the treatment techniques of Voice disorder?

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Can you recall what has been stated in the above paragraph? Well!!

When voice intervention is the primary treatment method, an SLP works toward several goals:

1. Restore the vocal fold tissue to a healthy condition,

2. Regain clear and full vocal function,

3. Identify and eliminate behaviors that are abusive to the voice, and

4. Establish improved vocal habits (Colton & Casper as cited in Wowens, et al., 2015).

An SLP uses a number of therapeutic techniques in an effort to reach the goals just outlined: breathing and relaxation exercises, soft glottal attacks (initiation of voice with a whisper), reduction of vocal loudness, and a variety of other techniques that facilitate healthy use of the voice. The therapeutic process may also involve discussions regarding personal concerns, and it is important that the SLP listen in a nonjudgmental fashion. It is also essential that the SLP provide support and encouragement to help the individual accept a changed or restored voice ( Colton & Casper, 1996 ).

When voice intervention is a secondary treatment method, as after the surgical removal of vocal nodules or polyps, the SLP works toward these goals:

 1. Restore healthy vocal function,

 2. Help the individual discover the “best” voice of which he or she is capable, and

 3. Make environmental changes as necessary (Colton & Casper, as cited in Ownes et al 2015).

**5.3.2 Intervention for Voice Disorders Associated with Medical or Physical Conditions**

****Treatment of voice disorders associated with disease processes does not focus on elimination of the disorder (e.g., reducing the size of a nodule) or on precipitating conditions (e.g., frequent yelling at sporting events) but rather on assisting the individual achieve the best voice possible or on establishing alternative manners to produce voice. For example, voice disorders associated with neurological problems are usually not the primary disability. Therefore, direct treatment of voice disorders associated with certain types of neurological disease may be a secondary concern to the SLP’s treatment of related disabilities, such as apraxia, aphasia, or dysphagia (Colton & Casper, 1996).

If voice intervention is indicated, the overriding therapeutic goal is to assist the individual to produce the best voice possible to remain communicatively functional in vocational and social settings. In addition, the SLP can be helpful in assessing the effects of medications or surgery on voice production. Some of the specific techniques that the SLP uses to establish the best voice possible include increasing respiratory function for speech, changing speaking rate, and changing the overall prosody of speech. It is essential that the SLP recognize the limitations of voice intervention for certain medical or physical conditions and help the individual to achieve the best possible means of communication (Colton & Casper, 1996).

Some suggestions given for good **vocal hygiene** that an SLP might recommend during a counseling session are:

* Drink plenty of fluids, especially water.
* Limit the intake of caffeine.
* Limit the intake of alcoholic beverages.
* Avoid tobacco products.
* Avoid yelling and screaming.
* Speak at a comfortable loudness level; don’t “push” your voice.
* Avoid loud, dry, or smoky environments.
* Do not use “unnatural” voices, such as imitating cartoon characters.
* Practice vocal rest.
* Avoid excessive throat clearing and coughing.

**5.3.3 Intervention for Voice Disorders Associated with Psychological or Stress Conditions**

? Which technique is appropriate intervention for psychological disorder voice?

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Did you try? Compare your answer with next parageraph!!

****Treatment of voice disorders associated with psychological or stress conditions can be effective if an SLP succeeds in convincing the individual that there is nothing wrong physically with his or her voice. Individuals who have recognized conditions of stress or emotional conflict in their life and the relationship of that stress to their voice problem are the best candidates for voice intervention. These individuals want the ability to use their voice again, and the SLP can help them see how their psychosocial history may have contributed to the voice problem

(Duffy, cited Owens et al., 2015).

A recommended therapeutic technique for voice disorders associated with psychological or stress conditions (conversion aphonia) begins by having the individual initiate voice from a grunt to a sigh to a prolonged sound, then to a syllable or word (e.g., *uh‑huh*). Such techniques provide solid evidence to the individual that he or she is physically capable of normal voice production (Boone & McFarlane, 2000; Duffy, 2013).

For many individuals with conversion aphonia or dysphonia, voice can return to normal in minutes or over several sessions with the help of an SLP. For these individuals, in fact, psychiatric referral is often not needed after successful treatment by an SLP (c.f. Duffy, 2013).

* 1. **Treatment/Intervention for Children with Cluttering and Stuttering**

****Clutterers have poor awareness of their disorder they may be indifferent or even hostile to speech-language therapists. Intervention for cluttering usually takes longer than stuttering intervention. Delayed Auditory Feedback (DAF) is usually used to produce a more deliberate, exaggerated oral- motor response pattern. Other intervention components include improving narrative structure with story-telling, picture books, turn-taking practice, pausing practice, and language therapy.

The systemic therapy of PWS starts from a wide range of suggestions which is then narrowed and adjusted to the specific nature of stuttering and focused on building interdisciplinary links. It is not multifaceted but systemic. The integration of different therapeutic methods is difficult but it is possible. Combining speech therapy with pharmacotherapy, herbal medicine, hydrotherapy and communication in one’s natural environment is the easiest method that has been practised for a long time. However, combining speech therapy with psychotherapy is more challenging. Although it may seem to be the natural solution for the PWS to consult both a speech pathologist and a psychotherapist and to have treatments from both of them, this does not happen often because psychotherapists regard PWS as problematic and are unwilling to meet with them. Even if a psychotherapist does agree to conduct the therapy, he/she usually does not deal with speech disfluency and the stuttering then becomes a communication barrier which hinders psychotherapy. In addition to this, persons with stuttering are not keen to begin speech therapy when they believe that their problem is with speech and not mental or psychological issues (Tarkowski, 2017).

**5.4 The Educational Implications of Communication Disorders**

****Many speech problems are developmental rather than physiological, and as such they respond to remedial instruction. Language experiences are central to a young child's development. In the past, children with communication disorders were routinely removed from the regular class for individual speech and language therapy. This is still the case in severe instances, but the trend is toward keeping the child in the mainstream as much as possible.

**?** What is the difference between developmental speech impairment and psychological impairment?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Interesting!

In order to accomplish this goal, teamwork among the teacher, speech and language therapist, audiologist, and parents is essential. Speech improvement and correction are blended into the regular classroom curriculum and the child's natural environment.

As play skills develop, language skills also grow.  When children play in the housekeeping area of the classroom, they must learn to plan a situation, explain to other children, and cooperate to successfully create an imaginary scene.

As these skills change, language changes too.  Vocabulary grows, sentences become longer and more complex and language becomes intertwined with social growth, forming basic skills that will serve the child throughout a lifetime. However, some children in a classroom are at a disadvantage in these peer interactions.

A child with a developmental delay, language delay or speech delay may not have the ability to be understood when he/she interacts with other children.

In the classroom, this child has plenty of motivation to grow and change.  He doesn’t want to be left out! What kinds of interactions with other children will your preschool child have the opportunity to experience?

**We can expect a decrease in:**

* Random, uninvolved behavior
* Play by himself, either with toys and tools or in dramatic play
* Parallel play, where she plays next to other children with the same materials but does not interact

We can expect an increase in:

* Mature, parallel constructive play
* Cooperative group play

**Kinds of language skills expected to develop**

* We want children to learn to be more cooperative and assertive:
* Getting a teacher or peer’s attention
* Being the leader in an activity
* Imitating a peer
* Expressing affection for a peer
* Expressing anger toward a peer
* Following or refusing to follow a peer’s request
* Negotiating a solution to a problem
* Playing in a group of children for a longer time
* Making comments or observations about play activity
* Relating a play situation to another real world experience

**Teachers’ way of reaction with preschool children to encourage speech and language development has its own impact.** Teachers understand that there are things that they can do to get to know children better and to encourage them to grow. They start with:

* Observing
* Waiting
* Listening

**?** What are the possible educational intervention techniques of children with language impairments?

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* Observing means paying close attention to children so we know what each is interested in and what each is trying to tell us.
* Waiting can be hard to do!  But we know when we wait for a child to initiate a conversation we are giving him the time he needs to communicate.  Then we know what it is he is interested in.
* Listening means paying close attention to what the child says so that we can respond appropriately.

When we listen well, we give the child the message that what is said is important to us.

This gives him/her a good reason to continue the conversation.

**We know that we can be good models for children when we**:

* Play face-to-face
* Respond with interest
* Join in and play
* Recognize the child’s feelings

*1.* **Word Wizard**

1. This person selects “special” words to share and discuss. These can be new words, strange words and important words.
2. The word(s) are written on a piece of paper to share with the class at a later group time, and then to display or “publish” on the Literature Bulletin Board

2. Investigator

1. This person helps the teacher brainstorm questions about the story for the group to discuss at group later.
2. Write the question(s) and “publish” on the Bulletin Board after the group has discussed them.

3. Book Builder

1. With the teacher’s help, the B.B. finds connections between the book and the real world or another “extension” story that has been read.
2. Print responses for group discussion and “publishing” on the Bulletin Board

4. Page Picker (PP)

1. The PP, chooses a part of the story that he/she wants to have read aloud to the group.
2. The child should be responsible for helping, so it can be “published” on the Bulletin Board.

5. Illustrator

1. The child draws/paints/constructs a picture that is inspired by the story.
2. The picture is presented to the group, and then it is “published” by displaying it on the Bulletin Board.

This is an exciting time for parents - in this stage, your baby seems to be making real progress toward communicating. Babies will recognize Mommy and Daddy, laugh, squeal, and smile spontaneously. baby's personality begins to become evident, and he or she becomes a more active and alert member of your family.

**** The two main types of motor speech disorders are dysarthria and apraxia of speech. Dysarthria is a group of speech impairments that affect the speed, range, direction, strength, and timing of motor movement as a result of paralysis, weakness, or discoordination of the speech muscles. Five distinct types are flaccid, spastic, ataxic, hyperkinetic, and hypokinetic dysarthria.

 Disorders affecting multiple motor systems may yield a mixed dysarthria. Dysarthria can be acquired in adulthood as a result of neurological disease such as Parkinson disease, or it can be congenital, as in the case of children with cerebral palsy (CP). CP is characterized as a group of developmental, non-​progressive neurological difficulties resulting from brain injury that occurs very early in fetal or infant development, and affects motor movement, communication, cognition, growth and development, learning, and sensation. The three main types of CP are spastic, athetoid, and ataxic result in very different motor patterns and speech difficulties.

Apraxia is an acquired disorder in voluntary motor planning and programming of movement gestures for speech that is unrelated to muscle weakness, slowness, or paralysis. Acquired apraxia of speech often results from a lesion in the central programming area for speech in the left frontal lobe that details and plans the coordination of sequenced motor movements for speech.

Motor speech disorders, both congenital and acquired, offer a special challenge to the affected individual, family, friends, and speech-​language pathologist. Many clients are in the very frustrating position of being able to formulate a message but unable to produce it intelligibly.

Intervention methods differ greatly. A child with CP may learn to communicate using an augmentative and alternative communication (AAC) device. Meanwhile, an older adult with motor speech deficits may relearn or retrieve previously learned speech patterns. Finally, an individual with a progressive degenerative disease, such as Parkinson disease or amyotrophic lateral sclerosis (ALS), may attempt to maintain the level of effective communication that was previously possible or may explore additional methods of communication. Changing intervention techniques and promising new surgical procedures and medical management continue to offer hope to individuals with motor speech disorders of neurogenic origin.

The human larynx is a versatile (flexible) instrument that, in addition to its primary biological function of protecting the lower airways from invasion of foreign substances, serves as the primary sound generator for spoken communication. The human voice reflects one’s personality, general state of health and age, and emotional condition. The human vocal tract, made up of the pharyngeal, oral, and nasal cavities, acts as a filter, changing in size and shape to alter the sound generated by the larynx, thus contributing to the resonance, or quality, of the voice.

Speech language pathologies play a pivotal role in the treatment of voice and resonance disorders, but effective and ethical management requires a team approach. In many instances, surgical intervention followed by behavioral treatment is the standard protocol. In other instances, medical intervention alone, as in the case of a nasal blockage, or behavioral treatment alone, as is sometimes the case for individuals with vocal nodules, is sufficient. Dealing effectively with individuals with voice and resonance disorders requires detailed and specific knowledge about normal and abnormal function of the laryngeal and velopharyngeal mechanisms. Many voice and resonance disorders respond well to techniques used by SLPs, and working with such disorders can be a rewarding and exciting clinical endeavor.

**Self check Exercises**

**True or False Item questions**

* 1. During intervention **speech-language pathologist is the only** professional person needed.
	2. Children wit**h** Cluttering have poor awareness of their disorder**.**
	3. Incidental learning one of the clinical intervention techniques speech impairment
	4. Restore the vocal fold tissue to a healthy condition is one of the interventions of voice disorder.
	5. Listening is one important educational intervention for children with speech-language impairments.

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