

## SCOPE OF SPEECH LANGUAGE THERAPY

The Torah [Exodus 4:10], describes Prophet Moses' (AS) reluctance to accept prophet-hood due to his speech impediment, which has been analyzed to be either a stutter or an inability to articulate the tongue tip sounds of /s/, /z/, /dz/, /tʃ/, /f/. A similar narrative is also found in Ayaat 25-32 of Surah Taha in the Holy Quran, when Prophet Moses (AS) beseeches Allah almighty for help and support because of his speech impediment.

The King's Speech, a movie based upon a speech disorder commonly known as stuttering/stammering, took the world by storm in 2010, winning twelve nominations and four Oscars. The above information stands testimony to awareness about speech disorders over two thousand years ago. They also highlight the fact that a speech disorder can be quite debilitating to a person's well-being as it poses an obstacle to success in social and professional life.

The consistent indulgence of the developed world in neurological research, during the post second world war era, led to several discoveries and subsequently the laying down of several theories about socio-communicative behaviors in human beings. The areas of the brain responsible for the functions of speech and language were studied further, providing an insight to the role of the brain in cognitive skills of attention, recall, memory, analytical and inferential skills, as well as judgment, necessary during verbal and nonverbal communication. Information about cerebral dominance for language, which lies in the left hemisphere for a larger majority of people; led to establishing the role of the right hemisphere for the supra-segmental features of language, or the meaning of spoken utterances carried by the rhythm in our speech. Thus 'aphasiology' emerged as the 'study of aphasia' which is an acquired language disorder that results from an insult to the brain, mostly in adults who have used language in the best possible way through their lives; but may also be seen in children known as 'childhood aphasia.' The period and pattern of recovery from aphasia varied greatly in adults and children, which led to establishing the theory of 'critical period' for language development, shedding more light on the miraculous development and functioning of the human neurological system since birth, for language. Knowledge about the rapid development of the human brain in the early years of life led to the essential concept of 'early intervention' of children having any communicative or physical challenges.

Today pediatric neurologists and speech language therapists, along with occupational therapists and psychologists work in a team with several children having disorders of communication as seen in children having autism, Down's syndrome, global developmental delay and specific language impairment. Consequently, this amounts to having a much larger child population visiting the speech language therapy clinic, which may be self-referred, or are sent by school teachers, apart from those referred by general practitioners, neurologists, ENTs, pediatricians and other doctors.

Yet, the realm of speech - language therapy still needs to be understood by people at large in Pakistan. Invariably it is thought that the speech language therapists treat people who

stutter or those children who have some form of disability. Adult patients with aphasia are seldom seen at the speech language therapy clinic, not because they are not referred by doctors, but because the care givers usually do not believe that speech language therapy can

help alleviate a communicative impediment in their loved ones and also teach the family strategies of effective communication that would bridge many challenges. Right hemisphere syndrome is even lesser understood wherein the executive functions are impaired but the patient is seen to communicate verbally. She/he may be banished for an inability to understand a situation which requires a certain degree of inferential or analytical skills. There is negligible insight about the cognitive functions necessary for establishing holistic communication among individuals that may be impaired in patients with aphasia, and even dementia, who along with their families and care givers can be helped by a speech language therapist.

Speech disorders can also have a neurogenic origin, such as seen in apraxia where motor programming of articulators required for speaking is impaired or as seen in dysarthria where the motor co-ordination is impaired. Both conditions may exist in children and adults who may warrant different methods in assessment and treatment. These disorders may exist concomitantly with aphasia or maybe seen in degenerative conditions as in dementias, such as in Parkinson's disease or Alzheimer's disease. Additionally, voice disorders such as unilateral or bilateral vocal cord palsy or paresis as well as spasmodic dysphonia also fall under the realm of speech therapy.

Furthermore, adult patients who have suffered an insult to the brain or have a degenerative condition, may also present with a partial or total inability to eat and swallow food and drinks, which can be serious and even life threatening. The silver lining here is that even feeding and swallowing disorders can be treated successfully when intervention is provided early; with patient specific guidelines provided to the care givers teaching and helping them to cope with the condition.

Another realm that the speech language therapist may work in is the use of Alternative and Augmentative Communicative Devices (AAC) with adult and child patients having impoverished verbal expression. Research has proved that early use of AAC devices facilitates and enhances the production of verbal expression or speech.

The audiology and speech language therapy clinic at the Dr. Ziauddin Hospital, is well equipped with qualified personnel to assess and treat all hearing, speech and language impediments in adults and children, and is the only clinic in the country that provides neuromuscular electrical stimulation through Vital Stim for the treatment of feeding and swallowing disorders; and the Lee Silverman Voice Treatment for patients with Parkinson's Disease and Voice Disorders.

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