INDIVIDUALS WITH LANGUAGE AND SPEECH DIFFICULTIES

"Guidebook for Families"

Özel Eğitim ve
Rehberlik Hizmetleri
Genel Müdürlüğü

INDIVIDUALS WITH LANGUAGE AND SPEECH DIFFICULTIES "GUIDEBOOK FOR FAMILIES"

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INTRODUCTION

Hello dear parents - dear students,

Life becomes even more meaningful for us as we get to know virtuous, talented and conscious students like you and their parents. However, we are making an intense effort with all our friends in order to contribute to you and your parents. Contributing to education for you and your parents and collecting the fruits of these contributions is a source of joy for us.

In this respect, we have prepared a series of educational support book in order to serve as a guide for our esteemed parents, whose intense efforts we have always witnessed. Our aim is to enable the parents of our beloved students who need special education to support our students more consciously, to enable our students to recognize their inadequacies more closely, to know the characteristics of the situations they live in, and to learn the possible problems and solutions they may experience with the help of guidebooks containing basic information.

First of all, I would like to thank UNICEF for their support to the Strengthening the Capacity of Guidance and Research Centers to Provide Inclusive Education Services (RAMKEG), our esteemed academicians and valuable teachers who contributed to the preparation of the books in the light of scientific knowledge. I would also like to thank our parents and other student relatives who will support our students by using these guidebooks.

I hope that these guidebooks, prepared according to the types of disability of our students who need special education, will contribute to our students and you, our valuable parents, in providing a more qualified education life.

We are honored to be with our special students and their families at anytime, anywhere and in any situation.

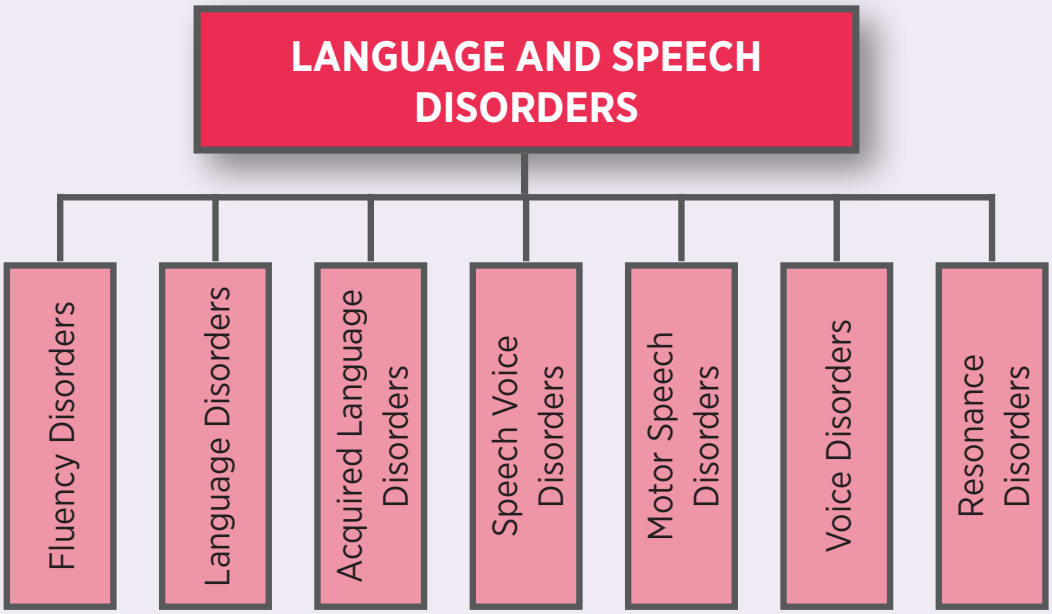
Stay in good health and well-being.

Mehmet Nezir GÜL
Director General of
Special Education and Guidance Services

Introduction

Although language and speech tend to be used interchangeably, they are quite different concepts from each other. Language is a common system of rules that people use to share their feelings and thoughts. When "language" is mentioned, only verbal language (speech) should not come to mind; the use of writing and signs is also a language. Speech is the system in which our mental representations, including our feelings and thoughts, are physically produced with the help of the necessary organs within the framework of certain rules. A child may have the grammar necessary to convey his feelings and thoughts, but when his speech organs (tongue, lips, etc.) cannot function properly, the child may not be able to speak. On the other hand, another child may not be able to speak due to language development problems, even though his speech organs function perfectly, or both cases can be seen at the same time [1]. This condition is called as Language and Speech Disorders. According to data from Turkey Statistical Institute (TSI) dated 2011, while 6.9% of the total population of Turkey is disabled, 0.7% of the population is constituted by individuals with speech disorders [2]. Language and speech disorders are classified according to their cause of occurrence, time of occurrence or symptoms they show.

In this guidebook, language and speech disorders will be classified on the basis of the modules in the support education program for individuals with language and speech difficulties prepared by the Ministry of National Education (MEB). The classification is as follows :



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FLUENCY DISORDERS

Definition

For a fluent speech, it is necessary to produce a certain amount of sound at a certain time without any extraordinary effort and there should be no inappropriate pauses during this production. Fluency disorders are divided into two, as stuttering and rapid-distorted speech (tachyphemia).

YEL-YEL-LOW!

Stuttering is a fluency disorder in which sound/syllable repetitions, prolongations and/or blocks are seen in speech. Rapid-distorted speech is also a fluency disorder like stuttering, but it is different from stuttering. The speech of those with rapid-distorted speech contains extremely rapid, disorganized, often unrelated words or expressions. Rapid-distorted speech and stuttering may be observed together [3], [4].

WEB

For detailed information on fluency disorders, please visit Anadolu University Education, Research and Practice Center for Language and Speech Disorders (DİLKOM) web page (https://dilkom.anadolu.edu.tr/sayfa/akıcılık-bozuklukları-kekemelik-ve-hızlı-bozuk-konuşma)
For detailed information on fluency disorders you can visit the Stuttering Therapy Resources web page (https://www.stutteringtherapyresources.com)
For detailed information on fluency disorders you can visit the Stuttering Foundation web page (https://www.stutteringhelp.org)

Causes

Although the cause of fluency disorders is not completely clear yet, it is known that genetic, motor, cognitive, linguistic, psychological and social factors play a role in its emergence, increase, decrease, continuation or spontaneous recovery. [5].

Characteristics

Repetitions, prolongations, and blocks that disrupt speech fluency in stuttering are called primary behaviors. Repetition is more than two repetitions of sounds, syllables, and monosyllabic words (i.e., do do door). Prolongation is pronouncing vowel and consonant sounds prolonged (i.e.: yyyyellow). Block occurs after repetition and prolongation, and it requires more effort than repetition and prolongation. Block is to stop the vocal cords and speech organs (tongue, lips, teeth, etc.) for a while. The behaviors that children show in order not to stutter after their awareness of their stuttering/sticking develops are called secondary behaviors. The acts such as tapping the feet on the ground, blinking, throwing the head forward, etc.to be able to say the word in order to get rid of stuck, or using some words such as iiii, eee, well, so etc. in order not to use the word to stuck when he/she foresees that he/she will be stuck, waiting, using the synonym of the word are examples of secondary behaviors.

Breaks in the normal flow of speech are seen at rapid distorted speech, and this is accompanied by excessive rapid speech, irregular rhythm, incorrect/incomplete words, difficulties in organizing and planning the expression, being unsure of what to say, and low awareness level.

Diagnostic Processes

a- Medical Diagnosis

The doctor frequently referred for the diagnosis of fluency disorder is a child and adolescent psychiatrist. Apart from the child and adolescent psychiatrist, pediatricians, neurologists, pediatric neurologists and otolaryngologists are other doctors consulted. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST), and to the relevant guidance and research center for educational evaluation and diagnosis.

To find field expert Speech and Language Therapists in your area you can visit the Language and Speech Therapists Association web page (https://www.dktd.org/)

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnostic process may also start with the family's consulting with a LST as a result of their concerns about their child's fluency. The evaluation phase is very important for the intervention process to be effective to be carried out for fluency disorders. Genetic, motor, cognitive, linguistic, psychological and social factors affecting stuttering should be questioned in detail. Taking the family and health history of the child, obtaining information about the child's developmental stages, evaluating the child's cognitive skills (attention, memory, succession,

planning etc.), oral-motor planning skills, language skills, stuttering types (repetition, block, prolongation), and the severity of stuttering are pretty important. Psychological (temperament traits, etc.) and environmental (family members' speaking speed, ability to take turns during conversation) factors that are effective in increasing and decreasing the severity of stuttering must also be evaluated.

If your child has the following characteristics, the stuttering is less likely to recover spontaneously:

- Being a boy (it is 3 to 4 times more common in boys than girls)
- Having a family member with any language or speech disorders (especially stuttering)
- Persons with still going on language and speech disorder in the family
- The stuttering started before the age of 3,5
- Temperament traits (timid, shy, angry, furious, harpy, etc.)
- The period with stuttering lasts longer than 6 months
- The number of stuttering is more than 3
- Other language and speech disorders in addition to stuttering with the child

The factors mentioned above play an important role in the permanency of fluency of your child.

In the assessment of the child with rapid distorted speech, reports of other experts (teachers, psychologists, etc.) who have seen him before may be required, other accompanying language and speech disorders, academic performance (reading, writing, mathematics), and whether the people around him understand him are questioned.

Education-Training Treatment Processes

In the intervention of fluency disorders, the word "therapy" is preferred instead of "treatment". While treatment means the complete elimination of the intervention situation; therapy refers to the work carried out to change the intervention situation in the desired direction.

In the intervention of fluency disorders, it is aimed to control the variables that negatively affect fluency rather than completely eliminating the current fluency.

In the intervention to stuttering, it should first be decided whether the child's fluency disorder type is normal or the stuttering type fluency disorder. Especially after the age of 2, expressions that are prolonged with the development of language skills and the effort to express complex thoughts may negatively affect the child's fluency. In the stuttering type fluency disorder, the child gets stuck more than 3 times and puts forward a more effortful speech performance. If the child's fluency disorder is normal, no intervention is required and the family is informed. If the child's fluency disorder type is stuttering, it is decided whether the intervention method will be direct, indirect or both indirect and direct. In indirect intervention methods, the child is not directly intervened. Parents are informed about psychological and environmental factors that are effective in increase or decrease of stuttering. In order to reduce the stuttering of the child, a more fluent-friendly environmental arrangement is prepared. The study is carried out with the child in direct intervention methods. Various methods and techniques are taught in order to control the fluency of the child's speech. The two most commonly used methods in direct interventions are; fluency shaping and stuttering modification. Especially if there is another language and speech problem accompanying the existing stuttering of the child, both indirect and direct intervention methods are used together. For example, while parents learn how to create a fluency-friendly environment with indirect intervention; with direct intervention, studies are carried out on language and speaking skills of the child that should be supported.

In the intervention of rapid distorted speech, it is aimed to reduce the speed of speech, raise awareness of the child on his/her speech speed and low understanding, reduce the level of fluency disorder, and increase speech understanding and expression skills. In order for the intervention to be effective, the child must have a high motivation, be aware of the current problem, be convinced by the people around and trust his therapist.

Recommendations

Time pressure must be removed. Not to speak fast. How?

- Be a correct model for the child by speaking slowly. Mom, dad, therapist, and the child all go to slow speech. Slow down the speed of speech when chatting with the child. In this way, the things said will be clearer.
- The best way to reduce the speed of speech is to pause and continue while speaking as we stop at punctuation marks (such as a dot, comma) in the article.

Not to ask open-ended and too many questions.

- Too many questions directed at the child cause the child to speak more against his will. This may increase the anxiety level of the child and cause him to get stuck more.
- Open-ended questions directed to the child (what, how, why, for what) cause the child to think of "what to say" in addition to "what if I get stuck". Both the increased cognitive load and the anxiety caused by this load may increase the child's sticks.

Speaking in an order. How?

- While speaking, the child should be listened to the end without interrupting.
- The wrong practice such as "the one who gets more loud takes turns, speaks" should be ended. Taking turns and the rules about it can be discussed at a time when everyone is together (for example, sitting after dinner, sitting at the dinner table). Questions such as "What did we do today, what have we experienced? Shall we talk?" may be asked. Whoever wants to tell can raise a finger first. Then he/she takes the floor and start speaking slowly.

The language and speech content used should be simplified. How?

- Instead of complex sentences exceeding the child's language and speaking skills, simple, short, concise and understandable sentences should be used. Long sentences should not be made. Hard, figurative sentences should not be made.
- Since our primary goal will be to take control of their stuttering, we will have to ignore the pronunciation errors (voices such as r or l that they cannot say) for a while. Notation errors should not be corrected within this period. The warnings such as "It's not like that, we say that." should not be made.

The following recommendations should not be made.

- Slow down,
- Be comfortable, think before you speak,
- Take a deep breath,
- Stop and say it again.

Parents should not show their concerns or worries.

- Parents should not make their children feel anxious about their child being stuck with neither words nor body language. An anxious look, even a frown can increase the child's anxiety level, it should not be forgotten.

Focus should be on what the child says, not how he/she says it We should make him/her feel that we are interested in him/her in every way. How?

- You should establish eye contact.
- You should reach to child's eye level and make him/her feel that you listen to him/her.

Parents should calm their children down when they are anxious, when they become aware of them being stuck, when they get angry because they cannot speak. How?

- Stuck-ups should neither be completely ignored nor the situation must be exaggerated. "Anyone can have difficulty with some issues. Me, you, your brother and your father too. We all encounter difficulties sometimes in life." It should be explained that being stuck is not a negative thing, everyone can stutter from time to time and have difficulty talking. Moreover, you may stutter intentionally while talking, and you may say that you had difficulty too. You should create the thought that "It's not a bad thing, it happens to everyone."

LANGUAGE DISORDERS

Definition

The difficulty a child experiences in understanding what others say (receptive language) or conveying his/her feelings and thoughts adequately in verbal (expressive language) is called language disorder.

Causes

While there may be a developmental language disorder (specific language disorder) that does not arise from a known cause; there may also be language disorders that develop due to a specific cause such as mental difficulties, neurological problems and hearing disability. In this section, we will talk about developmental language disorder (DLD) without a specific cause.

Characteristics

It is known that children with DLD have more difficulty understanding language, executing commands, and use less gestures than their peers with typical development in the preverbal period (0-12 months). Children with DLD have less than 50 meaningful word at the age of 2, they cannot make binary combinations (eg come mom, give food) while speaking. When children with DLD reach the age of 3, they cannot form sentences with 3-5 words, and cannot add proper derivational and inflectional suffixes to the words. When they reach the age of 4, they cannot simply answer "why, how, what for" questions, tell a short story they listen to, or execute complex commands. In addition to these features in language skills, the current situation also affects the social skills of children with DLD. These children communicate with their teachers more than their peers; and it is observed that they have difficulties in following and participating in the games.

Diagnostic Processes

a- Medical Diagnosis

The doctor frequently referred for the diagnosis of language disorder is a child and adolescent psychiatrist. Apart from the child and adolescent psychiatrist, pediatricians, neurologists, pediatric neurologists and otolaryngologists are other doctors consulted. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST) for educational arrangements, and to the relevant guidance and research center for educational evaluation and diagnosis.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnosis process can also start with the family's consulting with a LST as a result of their concerns about their child's language development. The diagnostic process begins with the evaluation of exclusion criteria. As mentioned earlier, developmental language disability is not caused by any particular cause. LST should request reports from pediatric neurology and psychiatry stating that the child does not have any neurodevelopmental problems; the audiology report stating that the child has no hearing problem, and test results showing that the child's non-verbal intelligence score is normal (at least +85). The child who meets all the exclusion criteria is diagnosed with a developmental language disorder. During the evaluation process, the family and health history of the child and detailed information about the child's developmental stages must be obtained, the child's general development must be evaluated, and the child's cognitive skills (attention, memory, succession, planning, etc.), oral-motor skills must be evaluated in detail. LST should use standard tests (Turkish Early Language Development Test (TEDİL) [6], Turkish School Age Language Development Test (TODİL) [7], Turkish Expressive and Recipient Language Test (TİFALDİ) [8]) in the assessment of language skills and natural language sample analysis must be performed. Additional assessment tools can also be used if needed. For early diagnosis, parents should closely monitor their children's progress.

For detailed information about developmental areas between 0-36 months you can visit the Developmental Support Program web page (https://www.gedep.org/gelisimsel-alanlar)

Education-Training Treatment Processes

If your child is between the ages of 3-5 and has the following characteristics, he/she may be at risk for Developmental Language Disorder:

- Start talking late
- Difficulty understanding what is being said
- Making short or grammatically incorrect sentences
- Difficulty executing commands
- Having trouble finding the necessary words to express their thoughts

Purpose of intervention for developmental language disorders; is to ensure that children can strengthen their vocabulary and use these words in the correct contexts, acquire the grammar rules they cannot acquire so far, develop their expressive skills and gain social communicative skills. Intervention approaches are divided into three as child-centered, clinician-centered and mixed (child + clinician) approaches. Each approach has its own procedures. LST chooses the approach that best suits the child's individual characteristics, needs and family dynamics. Family participation in the intervention process is very important.

Recommendations

It is common for parents that they force their children with language disorders to speak. Parents' demands are beyond the child's capacity. In this case, the anxiety level of the child increases, he/she gets angry and displays an aggressive attitude, or becomes sad and displays a timid attitude. Therefore, children should not be forced to speak.

Studies show that parents who have children with any language problems speak less with their children than parents who have children with no language problems. Therefore;

- Speak with your child constantly appropriate to your child's language level.
- Do not neglect to react to the sounds he/she makes.
- Play with him/her from the earliest days.
- Play the game he/she wants and don't be persistent.
- When he/she communicates, turn to him/her and wait 5-10 seconds if necessary for him to answer a question you ask.
- Tell him/her about what you did, feel, and experience during the day.
- Read to him/her stories and encourage him/her to tell you back.
- Expand his/her words, for example, if he/she says "pict" for "picture" answer "yes this is a picture".
- Do not criticize grammar mistakes, just be the right model.

To support your child's language skills you can visit the Natural Education Project web page (https://www.dogalogretimprojesi.com)

ACQUIRED LANGUAGE DISORDERS

Definition

Inherited or non-congenital difficulties, characterized by loss of one or more of the language, communication, and cognitive skills acquired for various reasons, are called acquired language disorders (ALD). ALD is classified as follows according to the causes and affected brain areas; Aphasia and Cognitive Communicative Disorders.

Causes

ALD occurs due to reasons such as stroke, head trauma (vehicle accidents, falls, gun injury, physical assault, sports injuries), tumor, infection (meningitis, etc.), and lack of oxygen in the brain.

Characteristics

ALD causes mild to moderate damage in cognition, language-speech, memory, attention-concentration, reasoning, abstract thinking, physical functions, psycho-social functions, and information processing.

For detailed information on acquired language disorders, please visit Anadolu University Education, Research and Application Center for Language and Speech Disorders (DİLKOM) web pages https://dilkom.anadolu.edu.tr/sayfa/edinilmiş-dil-bozukluğu-afazi, https://dilkom.anadolu.edu.tr/sayfa/travmatik-beyin-hasarı)

Diagnostic Processes

a- Medical Diagnosis

ALD is often first noticed by the doctor (neurologist) treating the person with a brain injury. If the doctor suspects acquired language disorder after a short bedside assessment, he/she directs it to LST for a more detailed evaluation of communication skills.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

DKT evaluates in detail the linguistic skills of the case such as "spontaneous (natural) speaking, auditory comprehension, repetition, naming and reading-writing, use of language in context". In addition to the language skills of people with ALD, their motor speech skills and swallowing performances should be evaluated in order to detect a possible weakness in these areas. Cognitive assessment should also be performed, as various deficiencies may occur in cognitive skills such as memory, attention, reasoning, and information processing. In addition, the individual's ability to use alternative and supportive communication systems should be evaluated in order to create a therapy program suitable for the individual's personal characteristics and needs. Standardized tests used in the assessment of people with ALD in Turkey are as follows: Gülhane Aphasia Test (GAT) [9] Gulhane Aphasia Test-2 (GAT-2) [10], Aegean Aphasia Test (EAT) [11], Aphasia Language Assessment Test (ADD) [12].

Education-Training Treatment Processes

After a detailed evaluation, LST creates a personalized therapy program by choosing the effective therapy approach for the language areas that the person needs. Most healthcare professionals believe that the most effective treatment should begin early in the healing process. If there is LST in the hospital where the person is being treated, therapies can be started while the person is in the hospital. In the early period, therapies focus on alertness and attention. Skills that are essential for communication such as recognizing the people around, noticing the place and time, getting to know what is told to them can be studied. Individual therapies created according to the language areas affected by ALD and the severity of the damage focus on the functional needs of the person. The aim of therapy is to improve the

communication skills of people with ALD by recreating their language skills as much as possible, making up for language problems, teaching the other communication methods, motivating them to use existing language skills. If the person has problems with speech intelligibility or swallowing oral-motor exercises and swallowing therapy should be performed. In addition, if there is a deficiency in cognitive skills, LST should include studies that support cognitive skills in the intervention process. Factors affecting the recovery process of the person are as follows: The damaged brain area, the extent of the damage, the person's age, health status, motivation, dominant hand use, education level. Family participation in therapies is also an important component that affects the course of the intervention process. Therefore, the relatives of the person should be included in the intervention process after training.

Prposals

If you have a relative with acquired language disorder;

- Before you start talking, make sure the person with ALD pays attention to you.

- Minimize or eliminate the background noise (TV, radio, other people).
- Unless the person with ALD says otherwise, keep your voice at a normal level.
- Simplify the structure of your sentences and slow down your speaking speed.
- Highlight the important words.
- Do not complete the sentences of the person with ALD immediately, do not immediately remind words that he/she cannot find.
- In addition to speaking, communicate with drawings, gestures, writing and facial expressions.
- Praise all attempts to speak of your relative with ALD and reduce their mistakes as a model.
- Do not insist that every word is produced perfectly.
- Do not exclude people with ALD from family or ignore them in group chats.
- On the contrary, try to involve them in family decision-making as much as possible.
- Let them know about events, but avoid being overwhelmed by daily details.
- Encourage their independence and avoid being overprotective.

SPEECH VOICE DISORDERS

Definition

Speech Voice Disorders (SVD) is the impairment of speech intelligibility as a result of difficulties in producing, perceiving the speech voices and/or difficulties in using language in accordance with the rules of speech. SVD is classified according to its causes and charecterictis. In this guide, we will mention about the subtitles of SVD, which are articulation disorder, phonological disorder and childhood speech apraxis.

Articulation disorder is a SVD caused by the erroneous production of the place, form, speed, timing and pressure of speech sounds. Phonological disorder is a SVD caused by failing to comply with the rules that determine the distribution of sounds within the language.

Childhood era speech apraxia (CESA) is a developmental SVD due to the inability of motor planning and programming of sequential movements required for speech production of speech organs, although there is no problem in the muscular structure of the speech organs (tongue, lips, palate, etc.)

Causes

As the functional SVD may occur due to unknown causes; SVD may also occur due to a specific reasons such as motor/neurological, structural (lip and cleft palate, etc.), sensory/perceptual (hearing impairment).

Characteristics

Auditory discrimination skills of children with articulation disorders are better than children with phonological disorders. Children with articulation and phonological disorders produce vowel sounds correctly, while producing consonant sounds incorrectly, when the adult becomes a model for the incorrectly produced sound, the child approaches the correct production in each imitation attempt or the faulty production remains constant, and the emphasis and intonation in these children's speech is normal. Children with CESA may produce both vowel and consonant sounds incorrect, when the adult is a model for the wrongly produced voice, the child with CESA moves away from the correct production in every imitation attempt, he/she may sometimes produce the incorrectly produced sounds correct, their incorrect production may be inconsistent, and the emphasis and intonation in these children's speech are distorted.

Diagnostic Processes

a- Medical Diagnosis

Child and adolescent psychiatrists are the doctors most frequently referred to for the diagnosis of speech voice disorder.

Apart from the child and adolescent psychiatrist, pediatricians and otolaryngologists are other doctors consulted. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST) for educational arrangements, and to the relevant guidance and research center for educational evaluation and diagnosis.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnosis process can also start with the family's consulting with a LST as a result of their concerns about their child's language development. Since the intervention program will be shaped depending on the cause of SVD, the evaluation process starts with the detailed family and health history of the child. Information on the child's developmental stages is obtained, the child's general development and oral-motor skills are evaluated in detail. LSR should use the following standard tests in the assessment of language skills: Turkish Pronunciation and Phonology Test (SST) [13], Ankara Articulation Test (AAT) [14]. Additional assessment tools can also be used if needed. Since low speech intelligibility may negatively affect the child's communication with peers and other people, psychosocial factors should also be evaluated.

The SVD intervention should be decided taking into account the child's age,

Education-Training Treatment Processes

comprehensibility level, error types and patterns, motor planning and programming skills, developmental status, etc. The methods that can be used in SVD therapy are quite diverse. After a detailed evaluation, the therapy method that best suits the needs of the child is decided according to the reason and type of SVD. In therapies, speech sounds that the child produces incorrectly or cannot produce at all can be handled one by one; while the sound groups and the types of errors to be studied can be targeted by considering the patterns in the mistakes he/she makes. The main goal of the intervention process is to increase speech intelligibility by reducing errors in speech sounds and to enable the individual to transfer speech sounds that can be produced correctly in therapies to daily life.

In addition, it should not be forgotten that SVD, which is not intervened in the early period, may cause problems in the transition to literacy education.

Prposals

If your child has SVD;

- Be a correct model for your child by correctly expressing the word that he/she produced incorrectly (For example, when your child says “puyple bayo-on”, you should repeat as “Yes, purple balloon. The purple balloon is flying.”)
- Do not interrupt your child’s speech or do not constantly correct it,
- Your child’s vocal mistakes should not be ridiculed either by you or your friends, or these vocal mistakes should not be reinforced by being found cute.

MOTOR SPEECH DISORDERS

Definition

Speech is a complex and dynamic motor activity that; air coming from the lungs through the throat, mouth and nose gets formed, and then it turns into sounds, and perceived by the listener. Speech consists of five components: “breathing, phonation (sound production), articulation (forming the sound into speech sound), resonance and prosody”. Neuromotor problems that occur when one or more of the motor planning or speech components that occur in the process of speech processing depending on the disease and damage are called motor speech disorder (MSD). MSD is divided into two, as dysarthria and acquired apraxia.

Dysarthria is an MSD, in which, as a result of paralysis characterized by abnormal muscle control and coordination disorder that controls the speech mechanism due to damage to the central nervous system and/or peripheral nervous system or both systems, that the breathing, phonation (sound production), articulation (forming of the sound into the speech sound), resonance and prosody components of speech are affected, thus limiting intelligibility.

Acquired verbal apraxia is MSD caused by problems observed in planning movements requiring skill, except for any weakness, abnormal tone or posture, impaired cognitive functions, and decreased understanding.

Causes

It is frequently observed with together with neurogenic diseases such as cerebrovascular events, stroke, traumatic brain injury, tumors, cerebral palsy, dementia, and Parkinson's.

Characteristics

Different lesion locations in the nervous system create different types of dysarthria. Types of dysarthria are: spastic dysarthria, fluxid dysarthria, ataxic dysarthria, hypokinetic dysarthria, basal ganglia lesions.

Spastic dysarthria is caused by spasticity in the larynx muscles, slowness, weakness and coordination problems. Among the main features of speech, a deep, hard sound tone, and strained, low-pitched, muffled phonation and nasal speech (hypernasality) can be observed.

At flaxid dysarthria, reduced respiratory support, breathing difficulty, pale voice in bilateral lesions, audible breathing, decreased pitch and intensity level, aphonia, hypernasality and nasal emission, clearly inexplicable consonant production or failure to produce consonants, prosodic insufficiency, monotonous speech can be observed.

At ataxic dysarthria, low-breath speech, excessive variability in normal phonation or loudness, sudden bursts, crack, ear-splitting sound, unclear consonant production, monotonous, vowel production distortions, slow but exaggerated emphasis on each syllable, prolonged syllables, a speech with a pause after each syllable can be observed.

Hypokinetic dysarthria causes basal ganglia lesions, Parkinson's, myoclonus, and Tourette syndrome. In Parkinson's, decreased respiratory support, breathlessness while speaking, stiffness, tremor, decrease in voice intensity, in some cases hypernasality, monotonous speech, short interrupted speech can be observed. In myoclonus and tourette syndrome, regular shaking in pitch and volume, single pitch and pitch breaks, phrases at long intervals, and monotonous speech can be observed.

In verbal apraxia, problems are observed in the production of vowel and consonant sounds, in phonation and in regulating the prosodic properties of language. Patients are aware of their erroneous production, as they try to improve their production, and as the length of verbal expression prolonges, intelligibility decreases further. While frequently used expressions (hello, bless you etc.) are produced comfortably and accurately, it is observed that the same vowel and consonant sounds are produced incorrectly during speech.

Diagnostic Processes

a- Medical Diagnosis

The doctor frequently referred for the diagnosis of motor speech disorder is neurologist and pediatric neurologist. Apart from the neurologist and pediatric neurologist, child and adolescent psychiatrist, pediatricians, and otolaryngologists are other doctors consulted. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST) for educational arrangements, and to the relevant guidance and research center for educational evaluation and diagnosis.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnosis process of MSD performed by LSTs requires a series of assessment processes. While assessing the breathing, phonation (sound production), articulation (forming of the voice into the speech sound), resonance and prosody components of speech, the patient's muscle control, muscle tone, strength, speed of movements shall be examined during listening and in motion. Oral-motor examination shall be performed. Swallowing disorder and salivation findings that may accompany shall also be examined. During the assessment process, the information shall be obtained on the assessment of speech sounds through acoustic-sound analysis programs regarding the structure and functions of the vocal cords using instrumental methods such as videostroboscopic and endoscopic.

Educational Evaluation and Diagnosis

The intervention process begins with functional profiling of the damaged and preserved areas and the creation of an individual therapy plan specific to the person's needs. The aim of therapy is to increase the communication skills of the person and to ensure their active participation in life activities. In order to increase communication skills, studies are carried out to improve the language development, language use, speech intelligibility, speed, duration, naturalness and prosodic features of the person. Facilitating techniques in the intervention process include compensatory techniques and environmental regulation. Facilitating techniques are techniques designed to reduce the effects of damage to the brain or to improve basic physiological functions. Compensatory techniques are techniques to support the use of person's kept/preserved functions. Environmental regulation is the regulations made to reduce social barriers and to ensure the participation of the person in daily life.

Prposals

If you have a relative with Motoe Speech Disorder;

- Before you start talking, make sure the person with MSD pays attention to you.
- Minimize or eliminate the background noise (TV, radio, other people).
- Unless the person with MSD says otherwise, keep your voice at a normal level.
- Simplify the structure of your sentences and slow down your speaking speed.

- Emphasize the important words.
- Do not complete the sentences of the person with MSD immediately, do not immediately remind words that he/she cannot find.
- In addition to speaking, communicate with drawings, gestures, writing and facial expressions.
- Praise all attempts to speak of your relative with MSD and reduce their mistakes as a model.
- Do not insist that every word is produced perfectly.
- Do not exclude people with MSD from family or ignore them in group chats.
- On the contrary, try to involve them in family decision-making as much as possible.
- Let them know about events, but avoid being overwhelmed by daily details.
- Encourage their independence and avoid being overprotective.

VOICE DISORDERS

Definition

Normal voice means that the person's voice is appropriate for his/her age, gender and physical appearance in terms of quality, pitch and height. Disturbances in one or more of these features are called voice disorders.

Causes

Misusing voice (excessive and intense use of voices, loud talking, shouting, frequent throat cleansing, etc.), chronic diseases (respiratory problems, hormonal problems, stomach problems, allergies, etc.), habits (irregular breathing, alcohol use, smoking), medical reasons (masses on the vocal cords, removal of the

larynx, thyroid surgery, intubation, heart surgery, etc.) or some neurological disorders are the causes of voice disorders.

Characteristics

The voice of the person with the voice disorder is generally or sometimes hoarse, breathing, feels deeply sound, the pitch and intensity of the voice is irregular and hyperfunction/tense and hypofunction/loose can be observed during the production of the voice. In cases of hyperfunction, tense muscle movements are also observed in the larynx where the vocal cords are located.

Diagnostic Processes

a- Medical Diagnosis

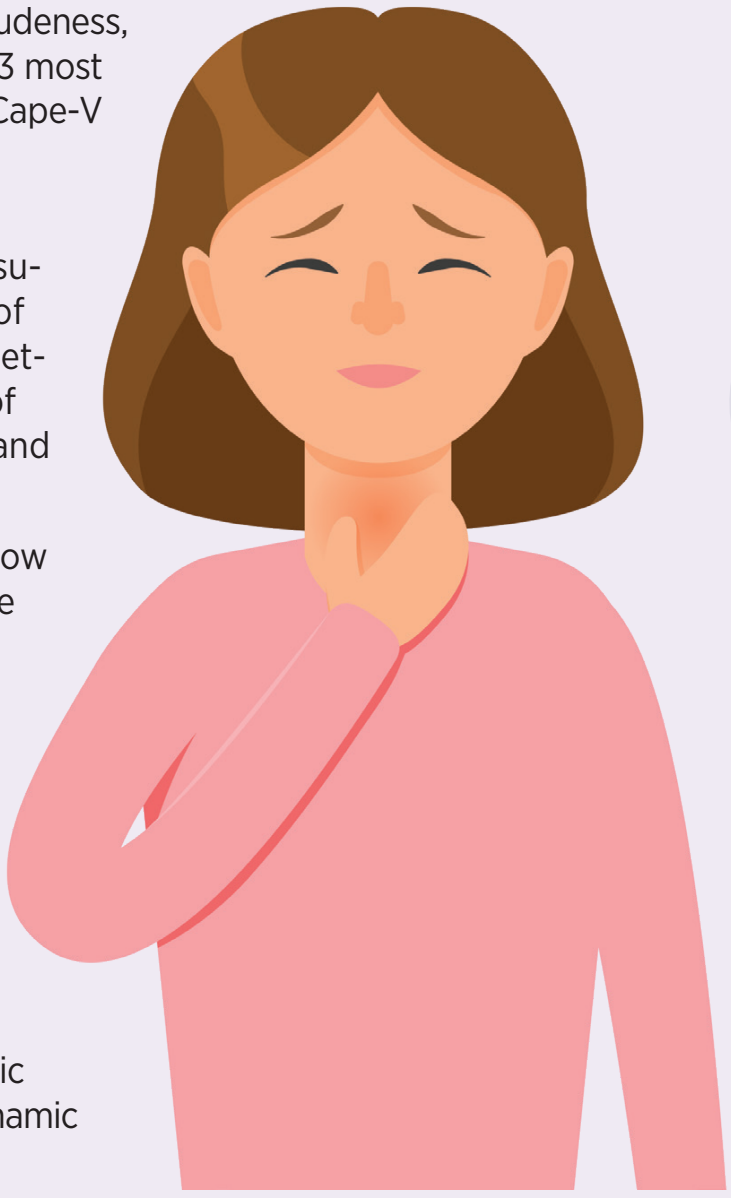
After experiencing hoarseness and discomfort in the throat for more than fifteen days, the person shall apply to an Otorhinolaryngologist. The Otorhinolaryngologist shall decide whether the voice problem can be corrected by surgery or sound therapy. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST) for educational arrangements, and to the relevant guidance and research center for educational evaluation and diagnosis.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnosis process may also start with the consulting of the person to an LST as a result of the person's concerns about his vocal health. In the assessment process, LST assesses the characteristics of the sound, the structure and functions of the organs involved in sound production, and the effect of this change in sound health on the life of the person.

Auditory perceptual analysis: It is the analysis of a person's pitch, sound intensity, the nature of sound quality and sound suitability using auditory perceptual analysis system. The most commonly used perceptual analysis protocols are GRBAS (General level, R/rudeness, B/breathlessness, A/weakness, S/strain 3 most advanced distortion between 0-3) and Cape-V (Consensual Auditory Perceptual Sound Assessment).



Laryngoscopic assessment: It is the visualization of the structure and function of the vocal cords in order to evaluate whether there is a change in the condition of the vocal cords both in the evaluation and in the later stages of the voice therapy.

Assessment of psychosocial effects: How much does the voice disorder affect the patient's social life, quality of life, and daily activities? This is the assessment performed to answer these questions. The most commonly used psychosocial assessment tool is Handicap Index and Voice Related Quality of Life Scale (V-RWOL).

Some other additional analyzes are used to support performed measurements, which are not used for diagnostic purposes: Acoustic Analysis and Aerodynamic Analysis:

Acoustic Analysis: This is an objective, non-invasive assessment used to provide information about sound, larynx and airway, provide basic measurements of sound and vocal function, monitor the progress of therapy, in order to distinguish between normal and pathological.

Aerodynamic Analysis: It is the measurement of air pressure and air flow to assist in interpreting laryngeal activity, the structure and function of the vocal cords. Changes in airflow reflect changes in the articulation of consonant and vowel sounds. Assessing the air flow provides understanding of the distortions and deficiencies in the speech or sound system.

Education-Training Treatment Processes

Voice therapy is a program; aiming to teach patients how to produce the best possible sound using sound systems, how to recover from harm or illness, and how to protect, and promoting the balance of the physiology of sound production, assisting breath coordination, including exercises to ensure proper pitch, height and sound quality required for sound production and health of vocal cords. It is a preventive approach as part of the rehabilitation program to reduce or eliminate environmental impacts and behaviors that may harm the sound, as well as to provide the necessary use and care to keep the sound healthy. The therapy techniques applied vary according to the disease and its symptoms.

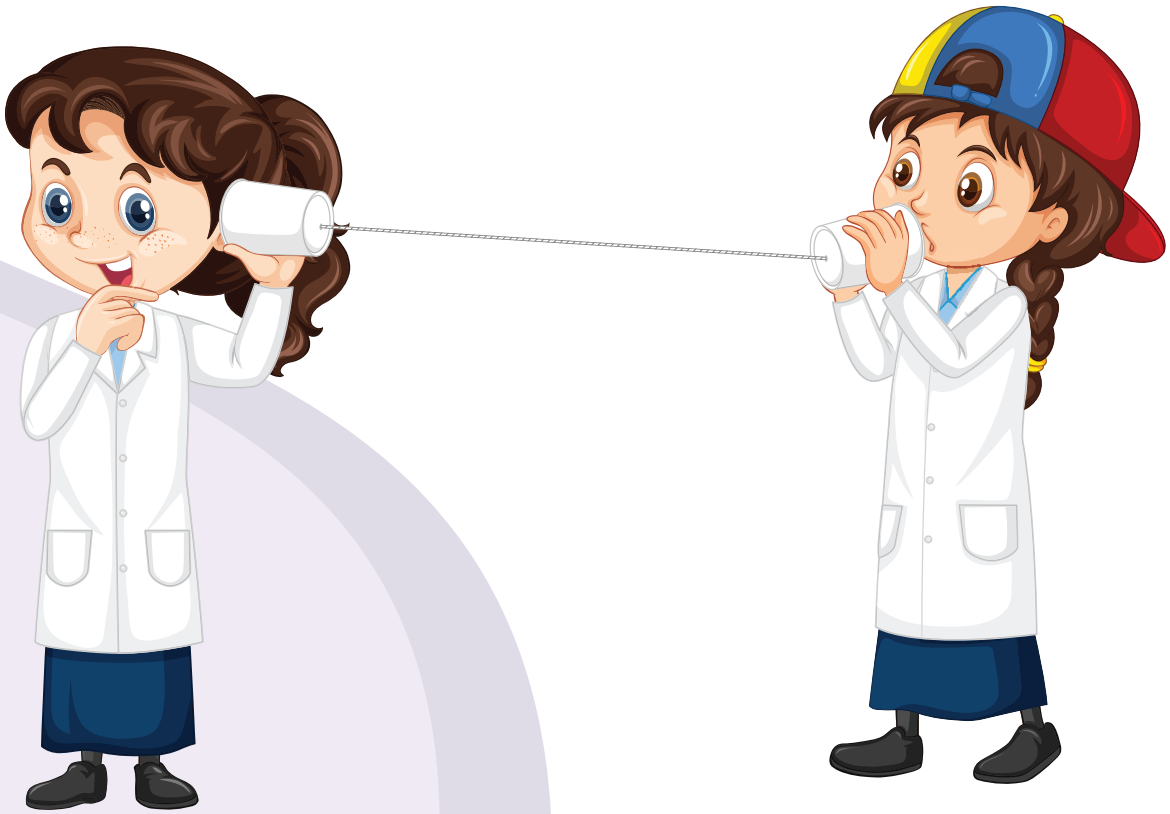
Recommendations

All behaviors aimed at protecting the sound system are called vocal hygiene. The issues that need attention in vocal hygiene are as follows:

- It is important to breathe correctly so that the vocal cords vibrate without damage. The correct breathing for speaking is diaphragmatic breathing. In order to use diaphragmatic breathing, it is important to maintain the correct posture, ie to stand upright. Make sure the person with the voice disorder stands upright while speaking.

- As frequent and severe throat clearing and frequent and severe coughing will irritate the vocal cords, ensure that the person with the voice impairment avoids these behaviors,
- Hydration of the vocal cords, keeping them moist, and avoiding irritants are important. Consume at least two liters of decaffeinated and theine-free fluids a day. Caffeine, theine (tea, coffee, cola), alcohol, dairy products cause damage to the vocal cords as they dry up the water inside the cell and cause sputum increase. Therefore, try to consume tea, coffee, alcohol and dairy products as little as possible.
- Do not speak, shout, or scream excessively, as talking loudly will irritate the vocal cords. Instead of sending your voice away, go there.
- Make sure that the person with the voice disorder shall not speak in dry, dusty, smoky, air-conditioned and noisy places unless they have to.
- Do not smoke as smoking irritates the vocal cords.

- The beginning of the esophagus is located just behind our vocal cords. As the stomach acid rising from the esophagus will irritate our vocal cords, Reflux treatment is important. If you have reflux, get treatment.
- Diuretic drugs may cause to dry at the vocal cords. Use these medicines under doctor's supervision.
- As many herbal teas also have diuretic effects, drink herbal teas limited.
- If you have allergies, sinusitis, pharyngitis, otitis, nasal obstruction and lung disease, be sure to have it treated. All kinds of faults and problems in your body will affect your voice negatively; so solve all your health problems.
- Make sure you get enough sleep every day.
- Vocal cords are also muscles. In order for these muscles to work strong and regularly, do the vocal exercises recommended by the Speech and Language Therapist regularly.
- You feel the need to shout constantly if you have a hearing loss. If you have a hearing loss, get it treated.
- While some hormones may cause permanent deepening in your voice, birth control pills also narrow the dynamic range of your voice. Always consult an otorhinolaryngologist before using drugs with hormonal effects.



RESONANCE DISORDERS

Definition

Changes in the structure and function of the vocal cords and articulators determine the resonance of speech. For example; For /b/ and /m/ sounds, our vocal cords vibrate in the same way, we touch our lips to each other to produce both sounds. However, we only use the oral cavity for the /b/ sound, while we use the nasal cavity in addition to the oral cavity when producing the /m/ sound. Our perception of two sounds differently is due to the difference in the resonance frequencies of these sounds. The mechanism that separates the nose and oral cavity from each other is called the velopharyngeal mechanism. The velopharyngeal mechanism is associated with the function of the velopharyngeal.

Usually, the back and side walls of the pharynx and the soft palate, the area that directs the air coming from the lungs correctly for the speech sounds that should come out of the mouth or nose, and at the same time, prevents food from entering the nasal cavity during swallowing, is called the velopharynx. When there is a disorder in the function of the velopharyngeal mechanism, it does not close completely and correctly during the production of sounds that should come out of the mouth. In this case, the person's speech can be perceived as nasal. Resonance disorders are impaired speech resonance of a person due to impaired function of the velopharyngeal mechanism. Resonance disorders are divided into two as phonic-specific nasal leakage and compensatory articulation due to hypernasality. Hypernasality occurs when a person's entire speech is excessively nasal. A phonetic-specific nasal leak (phoneme-specific nasal emission) is the nasal production of certain speech sounds

Causes

Resonance disorders is caused by improper learning or structural (cleft lip and palate, facial anomalies) reasons.

Characteristics

Compensatory articulation due to hypernasality is the erroneous reproduction of speech sounds in order to reduce the effect of nasal speech caused by hypernasality. In the phonetic-specific nasal leak, the person produces high-pressure sounds (s, z, sh, j, ch, c) nasally.

Diagnostic Processes

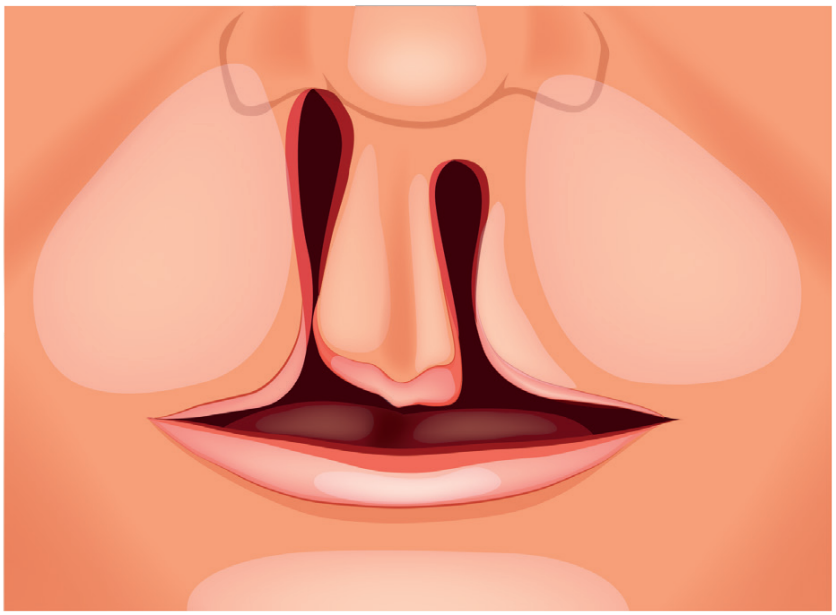
a- Medical Diagnosis

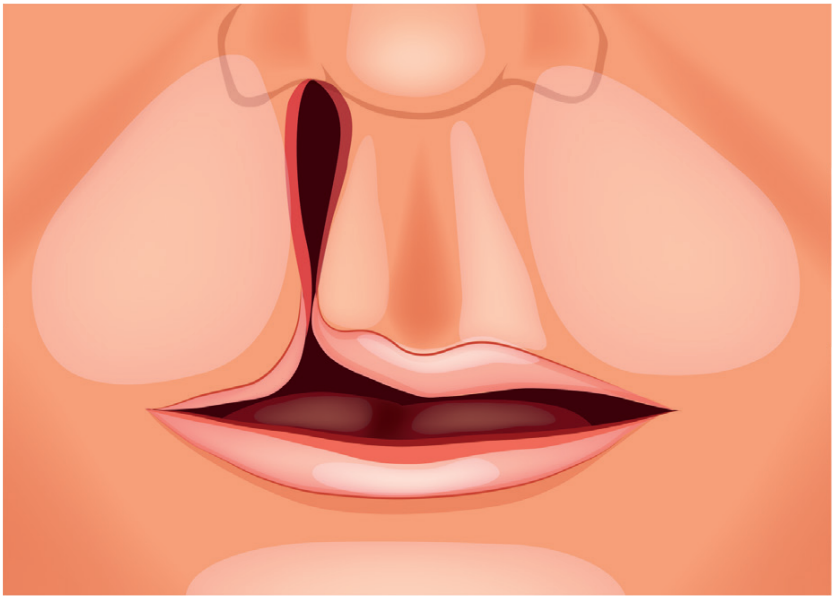
Otolaryngologists are the doctors most frequently referred to for the diagnosis of resonance disorder. Apart from the otolaryngologists child and adolescent psychiatrist, pediatricians, neurologist and pediatric neurologist are other doctors consulted. By the doctors who make the medical diagnosis, the individuals are directed to the language and speech therapist (LST) for educational arrangements, and to the relevant guidance and research center for educational evaluation and diagnosis.

b- Educational Evaluation and Diagnosis

Educational evaluation and diagnosis are carried out by special education evaluation boards established in guidance and research centers that provide services in provinces and districts affiliated to the Ministry of National Education. As a result of the educational evaluation and diagnosis, the individual is directed to the appropriate educational environments and the status of benefiting from the support education programs is decided.

The diagnosis process may also start with the family's consulting with a LST as a result of their concerns about their child's language development. The assessment and educational diagnosis process of resonance disorders are similar to SVD. Since the intervention program will be shaped depending on the cause of the resonance disorder, the assessment process starts with the detailed family and health history of the child. Information on the child's developmental stages shall be obtained, the child's general development and oral-motor skills shall be assessed in detail. LST, should use standard tests SST [13], AAT [14] in the assessment of language skills. Additional assessment tools can be used if needed. Since low speech intelligibility may negatively affect the child's communication with peers and other people, psychosocial factors should also be evaluated.





Education-Training Treatment Processes

The intervention process of resonance disorders is similar to SVD. The intervention of resonance disorders should be decided taking into account the child's age, intelligibility, error types and patterns, motor planning and programming skills, developmental status, etc. It is decided by taking into consideration. The methods that can be used in the therapy of resonance disorders are quite diverse. After a

detailed assessment, the most appropriate therapy method for the needs of the child shall be decided according to the cause and type of the child's resonance disorder. In therapies, speech sounds that the child produces incorrectly or cannot produce at all can be handled one by one, while the sound groups to be studied and the types of errors can be targeted by considering the patterns in the mistakes he/she makes. The main goal of the intervention process is to increase speech intelligibility by reducing errors in speech sounds and to enable the individual to transfer speech sounds that can be produced correctly in therapies to daily life.

Prposals

If your child has Resonance Disorder;

- Be a correct model for your child by correctly expressing the word that he/she produced incorrectly (For example, when your child says "puyple bayoon", you should repeat as "Yes, purple balloon. The purple balloon is flying.")
- Do not interrupt your child's speech or do not constantly correct it,
- Your child's vocal mistakes should not be ridiculed either by you or your friends, or these vocal mistakes should not be reinforced by being found cute.

LEGAL RIGHTS

There are many national and international legal rights, particularly defined by the United Nations Convention on the Rights of Persons with Disabilities for individuals with special education needs, the Constitution of Turkey and Law on the Disabled People. Legislative arrangements prepared by various institutions and organizations for individuals with special education needs are based on these legal rights.

Who is entitled to benefit from the legal rights?

To benefit from these rights in our country; the individual must prove that he/she has at least 40% disability by a report received from a hospital authorized by the Ministry of Health to issue a disabled health committee report, or as per the Regulation on Special Needs Assessment for Children (ÇÖZGER) published on February 20, 2019, the disability rate is not written in the reports of children, but a statement such as “special requirement exists (ÖGV)” must be included in the report.

Educational Rights

Education rights of individuals with special education needs cannot be prevented on any grounds. The compulsory education age of individuals who are determined to have special education needs starts from 36 months. Considering the development and characteristics of the children, the education period can be extended in the pre-school period. Although it is essential for individuals with special education needs to continue their education through harmonization/integration of all types and levels throughout the compulsory education period, they can also benefit from special education schools or special education classes opened for these individuals. Moreover;

- Early childhood education service for 0-36 months children with special education needs,
- Homeschooling service for students at the age of compulsory education who certify that they cannot benefit from formal education institutions for at least twelve weeks due to health problems or that they will pose a risk to their health if they do,
- Education service in classrooms opened within hospitals for students who are in need of special education at the age of compulsory education and who receive inpatient treatment in health institutions due to health problems,
- In order to equip individuals with special education needs with knowledge and skills in professional, technical, social or cultural fields, to bring them to life and to turn them into productive individuals, non-formal education services can be provided to these individuals by public education centers.

Free school shuttle

Individuals with special education needs, who study in official special education schools, special education classes and non-formal education institutions, are provided free of charge transportation to educational environments.

Lesson exemption

Among the individuals with special education needs; Students with hearing impairment, intellectual disability or autism may be exempted from foreign language lessons of all types and levels, and students with motor impairments can be exempted from practical parts of lessons that require motor skills.

Support training room
For the students who continue their education through full-time inclusion/integration in schools providing education at pre-school, primary and secondary education levels, support education room is established by Provincial or sub-provincial directorates of national education. These students can receive training in support training rooms up to 40% of the total weekly course hours with the decision of the Individualized Education Plan (BEP) Development Unit established within the schools.

Supplementary education
Supplementary education activities can be organized for 2 lesson hours per week, except for formal education hours, for students with special education needs studying in official special education schools.

Exam measure services
At the central system exams, which the individuals with special education needs will take, exam measures suitable for the disabilities of the individuals can be taken by counseling and research centers.

University exam application
In order to make arrangements such as additional time, reader, marker support for students suitable with their disability status, students are required to submit their disabled health board reports to Student Selection and Placement Center registration offices at the application stage.

In addition to the education rights of individuals with special education needs; they also have rights in areas such as public services, health, tax exemption and deduction, employment, working life, social security, social assistance, employees with disabled children/relatives. You can use the following web addresses and contact numbers to get detailed information about the rights in question:

- -https://khgmcalisanhaklaridb.saglik.gov.tr/TR,54457/engelli-haklari-rehberi.html
- -https://www.ailevecalisma.gov.tr/tr-tr/sss/engelli-ve-yasli-hizmetleri-genel-mudurlugu/
- -https://ailevecalisma.gov.tr/media/19199/engelli-bilgilendirme.pdf
- -Social Services ALO 183
- -Social Benefits ALO 144
- -Ministry of National Education ALO MEBİM 444 0632

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INDIVIDUALS WITH LANGUAGE AND SPEECH DIFFICULTIES

"Guidebook for Families"

Language and speech disorders available in this book are classified based on the diagnosis used in the Guidance Research Centers affiliated with the Ministry of National Education. The disorders in the book are as below: Fluency Disorders, Language Disorders, Acquired Language Disorders, Speech Voice Disorders, Motor Speech Disorders, Voice Disorders, and Resonance Disorders.

This book contains information on the definition, causes, characteristics, medical and educational diagnosis processes, education, training and treatment processes of each language and speech disorder. In addition, recommendations were made to the families and themselves of children with language and speech disorders.

Özel Eğitim ve
Rehberlik Hizmetleri
Genel Müdürlüğü