

# ÇOCUKLARDA DİL VE KONUŞMA PROBLEMLERİ VE EĞİTİMİN ÖNEMİ: DERLEME

## LANGUAGE AND SPEECH PROBLEMS IN CHILDREN AND IMPORTANCE OF EDUCATION: A REVIEW

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### DERLEME

#### ÖZET

Alıcı ve ifade edici dil, konuşmayı dinleme yoluyla öğrenilir. Dinlediğimizi anlamak için, dil ve konuşma oluşturulmuştur. Bu anlayış ve konuşma fonksiyonu ile, cümle içindeki kelimeleri; kelimeler arasındaki boşlukları; ve her kelimeye üretilen konuşma seslerinin süre, şiddet, frekans ve sırasını ayırt edebiliriz. Tüm gelişme bölgeleri normal fonksiyon gösterirse, duyduğumuz kelimelerin anlamı ve nasıl kullanılacağı; nerede ve ne zaman kullanılacağı öğrenilir. Bu şekilde, belirli dil ve konuşma becerileri belirli yaşlarda elde edilir. Ancak, bazı çocuklarda, herhangi bir nedenle akranlarına göre dil ve konuşma gelişiminde gecikme olmaktadır. Her ne kadar çocuğun görünür sorunları dilde gecikme ise de, dil gecikmesinin nedenleri farklıdır. Önemli olan dilde gecikme nedenlerini bulmak ve bozuklukları doğru sınıflandırmaktır. Eğer sadece çocuğun dil gecikmesini kriter olarak alırsak ve dil ve konuşma eğitimi sağlarsak, eğitimde başarılı olamayız. Dil ve konuşma eğitiminde başarı, dil gecikmesinin sebebinin bulunmasına bağlıdır.

**Anahtar kelimeler:** Dil gelişimi, değerlendirme, konuşma sesleri, dinleme, alıcı dil, ifade edici dil, çocuklar

### INDRODUCTION

Language is divided into receptive and expressive language. By receptive language, we understand what others speak. By expressive language, we express our feelings and thoughts. Speaking is expression of message by sounds. Different language and speech skills are gained at different ages. If the child has gained

### REVIEW

#### ABSTRACT

Receptive and expressive language are won by hearing is learned through listening speak. To understand listening generates language and speak. This understanding and speech function shows that we can distinguish the words within sentences, spaces between words; order, frequency, loudness and duration of speech sounds which generates every words. If all development regions have normal function, the meaning of the words we heard and how to use, where and when use them are learned. In this way, certain language and speech skills are gained in certain ages. However, some children have language and speech development delay for any reason, according to coevals. Although every child's visible problems are language delay, the reasons for language delay are different. The important thing is to find what causes language delay; and to classify the disorders correctly. If we only take the child's language delay as criterion, and provide training in language and speech, we can not be successful in education. Success in language and speech training depends on to find the reason for language delay.

**Key words:** Language development, assessment, speech sounds, listening, receptive language, expressive language, children

language skills, language development is normal. In language development tests, language skills has been identified for a particular ages.

Key features of normal language acquisition are summarized as below (1):

- 1 to 6 months: Coos in response to voice
- 6 to 9 months: Babbling

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- 10 to 11 months: Imitation of sounds; says “mama/dada” without meaning
- 12 months: Says “mama/dada” with meaning; often imitates two- and three-syllable words
- 13 to 15 months: Vocabulary of four to seven words in addition to jargon; <20% of speech understood by strangers
- 16 to 18 months: Vocabulary of 10 words; some echolalia and extensive jargon; 20% to 25% of speech understood by strangers
- 19 to 21 months: Vocabulary of 20 words; 50% of speech understood by strangers
- 22 to 24 months: Vocabulary >50 words; two-word phrases; dropping out of jargon; 60% to 70% of speech understood by strangers
- 2 to 2 1/2 years: Vocabulary of 400 words, including names; two- to three-word phrases; use of pronouns; diminishing echolalia; 75% of speech understood by strangers
- 2 1/2 to 3 years: Use of plurals and past tense; knows age and sex; counts three objects correctly; three to five words per sentence; 80% to 90% of speech understood by strangers
- 3 to 4 years: Three to six words per sentence; asks questions, converses, relates experiences, tells stories; almost all speech understood by strangers
- 4 to 5 years: Six to eight words per sentence; names four colors; counts 10 pennies correctly

If a child has not gained language skills in expected age range, there is delay in language development. A delay in language and speech development may be a symptom of many disorders. Such as, mental retardation, hearing loss, an expressive language disorder, psychosocial deprivation, autism, attention disorders, disorder of listening, speaking, distinctive voice disorders, etc. A delay in speech development may be not a symptom. Child's hearing, intelligence and development may be normal. However, either only the receptive and/or expressive language can be found as delayed.

The purpose of evaluating language and speech and success in education are to determine the correct language development level; and if any delay is present, to find the reason what causes language delay. The causes of language delay are written below:

### Maturation Delay

Maturation delay (developmental language delay) accounts for a considerable percentage of late talkers. In this condition, a delay occurs in the maturation of the central neurologic process required to produce speech. The condition is more common in boys, and

a family history of “late bloomers” is often present (2). The prognosis for these children is excellent, however; they usually have normal speech development by the age of school entry (3). Maturation delay, however, is a much more common cause of speech delay than is expressive language disorder, which accounts for only a small percentage of cases. A child with expressive language disorder is at risk for language-based learning disabilities (dyslexia). Because this disorder is not self-correcting, active intervention is necessary.

### Developmental speech delay

The authors followed 38 children with delayed speech development approximately two to four years after initial diagnosis, assessing and comparing their subsequent speech and language, and over-all development. Nearly all of the children had appropriate language levels for their general development. Just over half had less articulation competence than expected for their age, but this was not related to language achievement or age. It appears that the prognosis for future language development is favorable for these children. The results suggest that articulation might be a developmentally related process with a good prognosis, but further follow-up is necessary to determine ultimate competence of children in whom this is delayed (3).

[Prognosis of three-year-old children with developmental speech delay: reading and writing abilities at eight years of age] Their results showed that reading or writing skill was delayed in many of them, especially in those with behavioral disorders, such as hyperkinetic behavior and poor personal relationship at 3 years (4).

### Delay and disorder

Many clinicians make a distinction between language delay and language disorder. The term ‘disorder’ implies an abnormal pattern of development not normally seen in normal language acquisition. This is contrasted to delay, which is regarded as language acquisition proceeding along normal lines but more slowly than expected. The distinction has proved very difficult to define in practice and children often show both. Severe delays may result in uneven progressions which resembles ‘disorder’. Some researchers have proposed that disorders are extremes of patterns found in normal development, e.g. very late talkers.

### **Expressive Language Delay or Disorder**

Children with an expressive language disorder (developmental expressive aphasia) fail to develop the use of speech at the usual age. These children have normal intelligence, normal hearing, good emotional relationships and normal articulation skills. The primary deficit appears to be a brain dysfunction that results in an inability to translate ideas into speech. Comprehension of speech is appropriate to the age of the child. These children may use gestures to supplement their limited verbal expression. While a late bloomer will eventually develop normal speech, the child with an expressive language disorder will not do so without intervention (2). It is sometimes difficult, if not impossible, to distinguish at an early age a late bloomer from a child with an expressive language disorder.

The notion of expressive language disorder has been formalized in classification systems and is implicit if not suggests that deficits in language expression are typically accompanied by limitations in language knowledge or difficulties processing language input. For this reason, the diagnostic category of expressive language disorder should be used with considerable caution. This view has implications for both research and clinical practice (6).

### **Receptive Language Delay or Disorder**

Auditory Linguistic Processing problems are associated with poor auditory memory, poor vocabulary and grammar, speech sound problems, One distinction which seems reasonably robust is between auditory processing/linguistic system problems, resulting in difficulties at the sound system (phonological) and grammar (syntactic) level (the forms of language) and the language problems of 'context and use', i.e. establishing meaning (semantics) at either word (lexical) or sentence level. Neuro-anatomical models would predict that children, who have specific reading disorder which is not associated with movement or attention difficulties, would have lower receptive language skills than expressive. This study investigates the difference between expressive and receptive language skills in a sample of 17 children with specific reading difficulty aged between 7 and 12 years. They were administered a battery of two receptive and two expressive language measures. The results showed that as the neuro-anatomical model would predict, the children scored significantly lower on tests of receptive than on tests of expressive language skills (7)

### **Speech sound disorders (SSD)**

It is very important to understand this disorder. Because, even for this reason, attention disorder, listening and receptive language disorders; and later reading disorders occur. If the nature of the problem is not known, the child may have been mis-diagnosed and may receive wrong training. First, the problems in distinguishing speech sounds may be because of frequency, intensity and duration problems; in particular, in similar sounds. For example, / r / and / l / sound may be mixable when heard. Due to the difficulty of distinguishing speech sounds, child may not be able to develop receptive language. For example, if the child can not distinguish speech sounds in speech, he can not understand the speech. If he distinguishes the sounds, he can understand. There is no problem in learning to speak. However, many people think that the child does not understand the speech. Whereas, he can not distinguish voices in the ongoing conversation, he can not understand speech. Besides specific phonological and linguistic processing problems it is postulated that efficient automatic motor programming is delayed.

Disorders of articulation or speech-sound disorders (SSD) are common in early childhood. Children with these disorders may be at risk for reading difficulties because they may have poor auditory, phonologic, and verbal memory skills.

A study compared parents with histories of speech sound disorders (SSD) to parents without known histories on measures of speech sound production, phonological processing, language, reading, and spelling. Familial aggregation for speech and language disorders was also examined. The results documented both residual effects in adulthood of childhood SSD and familial aggregation for SSD. These residual difficulties do not appear to affect educational and occupational (8). Other study, subjects were 125 children aged 3 to 6 years with moderate to severe SSD; 53% had co morbid language impairment (LI). Early reading and writing scores were significantly lower for children with co morbid LI but were not related to SSD severity once language status was taken into account. Below average language skills in preschool place a child at risk for deficits in preliteracy skills, which may have implications for the later development of reading disability. Preschool children with SSD and LI may benefit from instruction in preliteracy skills in addition to language therapy (9).

## Language impairments (LI)

It is defined as difficulty in learning language. A generalised mild clumsiness may be associated particularly with expressive and speech delay. The most important influence on the rate of language acquisition is that of general (cognition) learning. Children with general learning difficulties have delayed language to varying degrees. Many of the children with language impairment have subtle difficulties in high level problem-solving and thinking and it is difficult to know whether it is these problems rather the language impairment per se which might be responsible for some of the later deficits in educational skills. Children with language impairments are likely to display reading deficits in word decoding and reading comprehension. It is not clear what role early literacy interventions play in the amelioration of reading difficulties in these populations (10).

### A 'specific' language problem?

The specific language impairment (SLI). SLI is a developmental language disorder in the absence of frank neurological, sensori-motor, non-verbal cognitive or social emotional deficits. One of the hallmarks of SLI is a delay or deficit in the use of function morphemes (e.g., the, a, is) and other grammatical morphology (e.g., plural -s, past tense -ed). They omit function morphemes from their speech long after age-matched children with typical language development show consistent production of these elements (11). These children have a deficit in processing brief and/or rapidly-changing auditory information, and/or in remembering the temporal order of auditory information. For example, Paula Tallal has found that some children with SLI have difficulty reported the order of two sounds when these sounds are brief in duration and presented rapidly (12)

### Language-learning impaired children

Language-based learning skills are comprised of three broad areas, including auditory processing, oral language, and reading and writing. Children with language-based learning impairments (LLIs) have major deficits in their recognition of some rapidly (timing cues) successive phonetic elements and nonspeech sound stimuli (13). Timing cues present in the acoustic waveform of speech provide critical information for the recognition and segmentation of the ongoing speech signal. Research has demonstrated that deficient temporal perception rates, that have been shown

to specifically disrupt acoustic processing of speech, are related to specific language-based learning impairments (LLI) (14).

### An auditory processing disorders (APD)

An auditory processing disorder (APD) is defined as difficulties in hearing and understanding speech in the presence of normal peripheral hearing. Children with APD appear to be uncertain about what they hear, and have difficulties listening in background noise, following oral instructions, and understanding rapid or degraded speech. Suspect behaviors include: "not listening," "unable to follow direction," or "unable to learn from information they hear". The diagnosis of APD is presently complicated because other types of childhood disorders may exhibit similar behaviors. Some children who perform poorly on an APD assessment battery have no evidence of speech or language problems. Conversely, some children with APD child have significant speech or language difficulties (15). Approximately 2-3% of children are thought to be affected by handicapping disorders known as APD, with a 2:1 ratio between boys and girls (16). Auditory processing problems can affect both comprehension and expressive language. For example, a problem in phonemic segmentation (dividing up words into different component sounds) can result in difficulty in acquiring vocabulary, inconsistent speech and poor phonological awareness (knowledge of sounds linking to written symbols) which is linked to reading problems. The ability to work out meaning from the relationships of words within a sentence depends upon the speed and efficiency with which a child can process that information.

### Listening Disorders

Listening to speech requires the recognition of speech duration (17). There are the words in speeches and the duration of the spaces between words. When child can distinguish the frequency, loudness and duration in speech, he can listen to the speech. Speech sounds can be distinguished. Listening skill is important to gain the language. Listening disorders cause language and speech delay. For example, children can not listen when they talk, talk to people who can not take care of the entire speech. Therefore, attention will create a mess. This is different as children are observed in the behavioral. Like, attention disorders, such as listening is observed due to disorganization. For example, when children can not listen to talk, he can not notice

on entire speech. Therefore, attention problem will occur. This is observed as different behavioral pattern in children. Listening problems is observed as if it is a result of attention disorders. Whereas, attention disorders occur due to listening problems. Because children can not listen to speech, he lose interest in listening to talk. Listening Disorder cause delay in receptive and expressive language. Additionally, children with listening problems often hear speech sounds as distorted. Disorder may not be occur in in a quiet environment or one-to-one talk. Therefore, disorder can be overlooked. Disturbance may not occur in the quiet environment; and may occur in noisy environment. Disorders may not occur in simple, one-to-one (single-talker) speech. Disorder can be seen clearly in listening ongoing and complex speech with conjunctions. In multiple-talker conditions, the childs can not continue mutual conversation. Therefore, to assess whether there are listening problems in children, quiet-noisy, simple-complex conversation, a dialogue-to-one talking skills should be assessed.

### **Intelligence Delay: Down Syndrome and Other Common Disorders of Development**

The childs with intelligence delay or Doen Syndrome, experience difficulties in leqarning language and speech. Training of both groups should be focused on development. There are a lot of type of common developmental disorders: Autistic disorder and atypical autism; Rett Syndrome, Heller's Syndrome / Disintegrative Disorder; Asperger's syndrome; common developmental disorder not otherwise named. Common problem areas are disorders of social interaction, language, speech and non-verbal communication impairment, repetitive behaviors and limited interest fields.

Training is more focused on behavior, attention, and listening.

### **Cerebral palsy**

Cerebral Palsy is a name of disorder groups which affect body movement and muscles' compatible use. If there is not delay in intelligence, receptive language delay is not normally observed. There are also delay in expressive language and articulation of speech sounds. Education programme consists of thin and rough motor movements.

### **Epidemiology**

Exact figures that would document the prevalence of speech delay in children are difficult to obtain because of confused terminology, differences in diagnostic criteria, unreliability of unconfirmed parental observations, lack of reliable diagnostic procedures and methodologic problems in sampling and data retrieval. It can be said, however, that speech delay is a common childhood problem that affects 3 to 10 percent of children (18, 19) The disorder is three to four times more common in boys than in girls (20,21).

### **GENERAL TESTS**

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#### **Physical Examination**

A precise measurement of the child's height, weight and head circumference is necessary. A review of the appropriate parameter on the growth chart also can help in early identification of some types of speech delay. Any dysmorphic features or abnormal physical findings should be noted. A complete neurologic examination should be performed and should include vision and hearing evaluations.

#### **Development Test**

A comprehensive developmental assessment is essential, because a delay in speech development is the most common early manifestation of global intellectual impairment. The Denver Developmental Screening Test is the most popular test in clinical use for infants and young children (22, 23).

### **DEFINING SPEECH AND LANGUAGE PROBLEMS**

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#### **Audiological Test**

All children with speech delay should be referred for audiometry, regardless of how well the child seems to hear in an office setting and regardless of whether other disabilities seem to account for the speech delay (24). Special earphones that shut out background noise may improve the study result. Tympanometry is a useful diagnostic tool. When coupled with results from pure-tone audiometry, measurement of eardrum compliance by means of a tympanometer helps to identify a potential conductive component (e.g., middle ear effusion) that might otherwise be missed. An auditory brain-stem response provides a definitive and quantita-

tive physiologic means of ruling out peripheral hearing loss. It is especially useful in infants and uncooperative children (25).

## Language Test

The goal of language tests' implementing in children is to assess whether the receptive and expressive language of children are proper to their chronological ages. Receptive and expressive language of children should be assessed with a standard language test. according to the results of language test, it is determined whether the child's language levels are the same as his chronological age. Delay may occur only in receptive language; expressive language; or both.

If the child's language level is not suitable to the chronological age, there may be pathological condition, causing language and speech development delay. Because language is general indicators of child's overall development. Any of the disorders affects language development. As the language is affected, other skills are also affected. Early diagnosed children can earn regular language when they received language and speech training. Therefore early diagnose of language and speech delays in children are very important.

## EDUCATION

According to language development test results, detection of the type and nature of child's language and speech problems is important. Such as, in children with hearing loss, such measures as hearing aids, auditory training. Such as, children with expressive phonological and expressive vocabulary difficulties. A speech-language pathologist plays an essential role in the formulation of treatment plans and target goals. The management of a child with speech delay should be individualized.

For example, the child with difficulty in distinguishing speech sounds, loses interest and attention in listening talk because of not distinguishing talk. In this condition, child can not notice to distinguish one sound from another; and disorder of distinguishing speech sounds occur.

As the child can not distinguish sounds clearly, he hears sounds in spoken speech as distorted. He can not understand the talk and receptive language disorder occurs. As he say like he heard; in other words, he will express distorted heard sounds as distorted; his speech can not be intelligible. He says many sounds as distorted. If this child is given language training, it will not be successful. He should be given education to distinguish

speech sounds; so that, he can distinguish speech by hearing and learn byself.

The primary goal of language remediation (speech and language therapy interventions for children with primary speech and language delay or disorder) is to teach the child strategies for comprehending spoken language and producing appropriate linguistic or communicative behavior. The speech-language pathologist can help parents learn ways of encouraging and enhancing the child's communicative skills (26, 27). Psychotherapy is also recommended when the speech delay is accompanied by undue anxiety or depression.

Parents and caregivers who work with children with speech delay should be made aware of the need to adjust their speech to the level of the particular child. Teachers should consider the use of small group instruction for children with speech delay (25)

Anyone interested in child must attent to child's education. What they do together, and how they reach the goal, should be learned.

After training, by language tests, development of child's receptive and expressive language; and it's eligibility to child's chronological age are assessed in certain intervals. This will evaluate the success of education. If the child's language does not show significant levels of improvement despite training; and there is still language delay; it is necessary to determine the nature of disorder again. It is important to find child's language development level by evaluation education results to plan of the language and speech training.

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