

Language Disorders in Children: A Brief Outlook

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Abstract

Speech - Language Pathologists (SLPs) have shown keen interest in childhood language disorders for more than 40 years. It has become a common scenario today to find that children experience pressure during language development. In addition, a rapid increase in the number of communication disorders in children during the recent times is threatening. Although this condition has gained popularity and understanding in the west, it is yet to attain complete awareness in the Indian context. The aim of this article is to facilitate understanding of these disorders among the health professionals and public to favor early identification and intervention of these children in Indian conditions.

Keywords: Childhood Language Disorders; Early Identification and Intervention ; SLPs.

Introduction

Communication is the very essence of humanity and this unique ability to communicate via language separate them from other species. Acquisition of this natural "language" is an effortless process. Though language disorders is not uncommon in children there is an overall lack of awareness about it amongst the parents, teachers and even among health care professionals. There is a crying need for early identification and intervention of these children. The current article is aimed to provide basic knowledge about language disorders in children, thereby, helping them to make appropriate referral and treatment decisions.

Definition

As the term implies, childhood language disorder refers to a difficulty in understanding and use of a spoken or written system in children. The disorder may involve the form of language (phonology,

syntax, and morphology), its content or meaning (semantics), or its use (pragmatics), in any combination [4]. In general, a child is said to have a language disorder when his or her language skills do not develop according to fairly well-defined milestones. When there is any communication difficulty due to diverse culture, regional or social dialects, it is not considered as language disorder.

Prevalence & Incidence

Prevalence rates for language delay in children differ widely across the globe. Various studies conducted in the USA reported that prevalence rates ranged from 2.3% to 19% for children under 5 years [24, 12, 14]. A study conducted in the U.K points out that the untreated speech and language delay can lead to persistent language disorders in 40-60% of preschool children [17]. In the Indian context, speech and language delay was found to be 16.27% in children and the male to female ratio to be 2.76:1 [22]. In a door to door survey in rural India [15], the prevalence of speech-language disorder was 9.42%.

They were most commonly found to have childhood language disorders and reading/writing difficulties.

Etiology

Speech and language disorders can be either congenital or acquired. Congenital factors include family history of language disorders, premature birth, low birth-weight, anatomical abnormalities, hearing loss, intellectual disabilities, genetic syndromes like Down syndrome, neurologic impairments [21]. Any illness (meningitis), injury (brain insult) and environmental deprivation (inadequate language stimulation) may cause acquired language disorders.

Classification

Language disorders in children can be classified based on etiology, language aspect that is impaired (form, content and use), whether receptive or expressive language or both are affected and severity of language disorder [6].

Based on the etiology, they can be further classified as primary language impairment such as a language difficulty without any other associated disability (Specific Language Impairment) [3, 18], language impairment secondary to other conditions such as low IQ, Genetic disorders (like Down syndrome), Hearing Impairment etc. These disorders can also be classified as either Developmental (present from birth like Autism, Attention Deficit Hyperactivity Disorder) or Acquired (sometime after birth, result of injury or brain insult).

Disorder Characteristics

Children with Specific Language Impairment (SLI) fail to develop age-appropriate language despite being normal in all other areas [6]. They exhibit slow vocabulary development and word finding difficulty. There is a wide gap between their comprehensive and expressive language age. These children have problem in grammatical production and comprehension, especially verbs. They also exhibit poor social skills, behavior and attention.

Children with Intellectual Disability [2] exhibit problems in language, cognition, social and adaptive behaviors and activities of daily living. There are four levels of Intellectual Disability that range from mild/moderate to severe/profound.

Children with Autistic Spectrum Disorder (ASD) [2] exhibit varieties of conditions characterized by difficulties in social relationships, communication, repetitive behaviors and overly restricted interests.

They have severe problems with social and communication. These problems must exist from early childhood.

Children with Attention Deficit Hyperactive Disorder (ADHD) [2] are one of the most common childhood disorders. Symptoms include difficulty staying focused and paying attention, difficulty controlling behavior and hyperactivity. These symptoms must be present prior to the age of 12 years.

Acquired childhood aphasia occurs due to cerebral insult after birth when the language development has already begun [13]. It can result from etiologies such as head trauma, brain tumors, infections, cerebro-vascular accidents, epilepsy [19]. Until the onset of this illness, these children would have gained age-appropriate language skills. Traditional description [1] supports non-fluent symptoms (mutism, lack of spontaneity in speech, non-fluent speech output, telegraphic speech) in these children. However, there are recent claims of fluent aphasia like characteristics (neologism, jargon etc) similar to adult aphasia [26]. Acquired brain insult compromises not only language but also cognition, executive and behavioral functions in these children [11].

Children with comprehension language deficit [3] may have trouble in understanding what gestures mean, following directions, answering questions, identifying objects and pictures, and turn taking during conversation. Children with expressive language disorder [3] may have trouble in asking questions, naming objects, using gestures, putting words together into sentences, learning songs and rhymes, using correct pronouns, like "he" or "they", narration and grammar usage. When both comprehension and expression of language are affected with respect to form, content and use, it is labeled as Mixed Receptive and Expressive Language Disorder (MRELD) [3].

All of the above mentioned disorders can vary in their severity. While a child with mild language difficulty will have lesser problem in functioning at his or her home or school, a child with profound language impairment would have minimal or no language skills to participate at home, school or in the community.

Assessment

A comprehensive speech and language assessment in children would ideally integrate all the gathered information via case-history, family interview, sensory, motor and cognitive assessment, ecologically valid and culturally sensitive

standardized and non-standardized measures of speech and language (spoken and non-spoken) and cognition, identification of candidacy for suitable intervention programs and follow-up services to monitor communication and cognitive status to ensure appropriate intervention and support for these individuals with speech, language and cognitive impairment [5]. Speech - Language Pathologists (SLPs) use a variety of language assessment tools in order to determine whether a language disorder is present in a child or not. Some of the most popularly used language tools include Clinical Evaluation of Language Fundamentals - Fifth Edition (CELF - 5) [10], Preschool Language Scale (PLS -5) [27], Peabody Picture Vocabulary Test - 4 (PPVT - 4) [9] etc. There are various tests available which are disorder specific like Autism Behavior Checklist (ABC) [16], Children's Acquired Aphasia Screening Test (CAAST) [26].

In Indian scenario there are few published test materials used for assessing specific language components. Some of them are Linguistic Profile Test to evaluate the phonology, semantics and syntax components of language [23], Language Evaluation Scale Trivandrum (covers language development milestones from 0 to 3 years) for children aged 0-3 years (LEST (0-3) [20].

The diagnostic criteria for speech-language impairments are defined by the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition [2], which specifies the criteria for communication disorders. Both receptive and expressive language domains are separately assessed to identify language skills at specific age levels such as infants, preschoolers, and school age children.

In addition to the formal assessment tools, SLPs incorporate informal language assessments, screening checklists, parental questionnaires and parent child interactions. Above all, direct interaction with the parents & observation of the child's language behaviour in a natural setting is the key for the appropriate referral which in turn facilitates early identification & intervention. Further, wide range of these language disorders require input from a multi-disciplinary team to clearly understand what the condition is and what can be further done.

Intervention

The complex nature of language disorder demands the intervention to be both structured and eclectic. For an effective childhood language intervention program, team approach guarantees the maximum

benefit. The team may include SLPs, Occupational Therapists, Physiotherapists, Audiologists, Clinical Psychologists, Social Workers, Parents, Special Educationists etc.

There are a variety of language intervention approaches available for specific deficit in language areas. The therapeutic approaches can be either developmental or structured, both aim to facilitate a child's communication ability. The goals selected for these children during therapy are individual specific and based on the language symptoms manifested by these children. In the developmental approach, the clinician compares the child's current level of language functioning with the typical language milestones. The target language behaviors are then selected based on the age at which the child fails developmental milestones. SLPs work to enhance functional communication in this well-integrated functional language intervention. In this approach, day to-day language features used in home/classroom are adapted to reinforce language learning in a natural environment.

Therapy possibly focus on increasing child's understanding and use of language, training caregivers, family members, and teachers ways to communicate with the child, helping the child use other ways to communicate when needed. This is essential as it helps the child to generalize what he or she has learnt during therapy to outside situations (school, friends). Targets may include simple gestures, picture boards, or computers that say words out loud. This is also called Augmentative and Alternative Communication, or AAC.

One of the common intervention strategies is modeling that provides focused stimulation on the speech or language targets selected for an individual child. Cueing is another frequently used technique which uses direct and indirect verbal cues (eg, asking a child to imitate a sound, word, or utterance) or nonverbal cues (eg, giving a child a box with a desired item that can't be opened without help).

As children undergo therapy, a periodical re-evaluation is necessary in order to find the child's progress through intervention. *Individualized Family Service Plan* (IFSP) for infants and toddlers and *Individualized Education Plan* (IEP) for preschool and school aged children can be adapted to provide a structured therapy program for parents of children with language disorders .

Reviews on childhood language interventions practices from 21 studies revealed that clinicians have some assurance in specific language intervention practices [8]. Imitation, modeling and

evoked production showed larger effects in children with expressive language difficulties. The outcomes of long term goals depend on the type and severity of language disorder.

Children with language disorders are at a high risk for social, behavioral, emotional, and cognitive problems in their later years [7]. Thus, it is important to screen toddlers for language delay and enroll them in early intervention programs to improve their language performance. Those children who reach age adequate language by early school age are less likely to have reading and writing issues than those whose language disorder persist into school years. Thus early identification and treatment are essential for all children with language disorders as acquisition of adequate language skills also promotes learning, behavior, self-esteem, and social skills in them.

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