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COMMUNICATION DISORDERS ESSENTIALS FOR PARENTS

Between September and December 2023, Babylonia collected questions from parents regarding their children's language development. This article aims to answer the following questions:

- **What are some red flags (signs) for potential communication disorder?**
- **How can I differentiate between language difficulties and learning disabilities?**
- **How can I foster strong communication skills in children with communication disorders?**
- **What resources or therapies are there for children with language delays?**

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Introduction

Communication disorders encompass a wide range of disorders negatively impacting children's communication skills, most of which manifest as speech and language disorders. High-risk factors for communicative disorder include (list incomplete):

- preterm birth or traumatic birth (e.g., physical trauma, oxygen deprivation, and/or infection)
- low birth weight
- adverse early childhood experiences (poverty, parental stress, abuse)
- diagnosis of one of the following: cleft lip/palate, craniofacial anomalies, dental malocclusion, oral-motor dysfunction
- genetic or neurological disorders (such as autism, Down syndrome)
- lasting health concerns (such as weak lungs)
- hearing loss/deafness
- environmental hazards (e.g., lead exposure).

Note that a bilingual environment is NOT a risk factor.

Speech and language disorders come in different forms and exhibit specific characteristics with one in four (!) children younger than 5 being at moderate to high risk. Developmental language disorder and speech sound disorder are major categories, and may first show up (and/or persist) as a language delay.

A delayed language onset has been linked to persisting language and speech difficulties which may carry over into written language skills and academic performance later in life. Speech and language disorders are risk factors for behavioral and emotional issues such as irritability, sudden mood changes, excessive fear, and social withdrawal, as well as for learning difficulties, like dyslexia or dysgraphia, as described further below.

What are some red flags (signs) for potential communication disorder?

Red flags for potential communication disorder

Even though young children develop at their own pace, there are known growth and developmental indicators (milestones) for typically developing children regarding their language, motor, cognitive, emotional, and/or social/behavioral skills. The fact that a child has failed to meet particular speech and language milestones, and thus shows a delay, is a red flag for a potential communication disorder. Such red flags differ depending on the type of underlying disorder.

Developmental milestones identified at ages 2, 4, 6, 9, 12, 15, 18, 24, 30 months, and 3, 4, and 5 years of age help differentiate typical from atypical development. They are divided into social/emotional, language/communication, cognitive (learning/thinking/problem-solving), and movement/physical development. You can find comprehensive information on these milestones on the CDC (n.d.) website.

These milestones also hold for bilingual children, but bilinguals' language skills in each language separately are not directly comparable to those of respective monolingual peers. Bilingual children's ability to understand and use two languages is to a large extent determined by the type and amount of exposure to and use of their languages; these typically vary between children, whether they are bilingual or monolingual. Bilingualism does not cause communication disorder; bilinguals diagnosed with a communication disorder have comparable language skills as their peers with the same disorder. If you suspect your bilingual child has a language delay or disorder, difficulties will be observed in both languages. The recommendation is that you identify a professional who is trained in bilingual assessment and intervention for clinical service provision (see further in this volume the article by De Houwer on Language Development Milestones for Bilingual and Monolingual Children).

Regular parental/caregiver monitoring during a child's first five years supports early identification of red flags, that is, possible signs.

Signs of language delay or disorder

What follows is a selection of "red flags" that could be a sign of language delay or disorder in children up until around age 8.

Some red flags are already noticeable in the second half of the first year. A child should be able to react to someone's speech and respond when they hear their name by age 7 to 12 months so if children are not able to do so this would be a red flag. By 8 or 9 months, children should be babbling, and their babbling should include consonants like b, d, m, and n, alongside vowels, and become gradually richer and more complex. Reduced babbling might indicate a speech sound or hearing disorder.

Two-year-olds who use fewer than 50 words and whose utterances lack multi-word combinations are considered "late talkers". This language delay usually involves the inability to comprehend spoken language and produce speech that is intelligible to caregivers and others. This greatly challenges meaningful social interaction. If late talkers are in fact developing typically, that is, if the early delay is not caused by a language disorder, they will have caught up with age- and language-matched peers by age 3, by which time their speech is also 75 % intelligible. Frequent misunderstandings and an inability to follow directions in the preschool years may indicate problems with auditory processing.

How can I differentiate between language difficulties and learning disabilities?

Children are normally able to speak increasingly more accurately by age 4. Speaking little, leaving out words or replacing them with '*thing*', and stalling while speaking can be indicators of language delay in preschoolers. Sure-tell signs are very simple and typically short utterances, limited vocabulary, many grammatical errors, unintelligible speech, and a continuing tendency to avoid or withdraw from social interaction. A child with persisting speech and language difficulties by age 4 is more likely to be diagnosed with a disorder rather than "just" a delay.

Speech and language issues may also be indicated by voice quality differences (e.g., hoarse, scratchy, breathy voice, or nasalized speech), many speech flow disruptions such as pauses, repetitions, and fillers (e.g., overusing 'huh' 'ehm'), and by gestures replacing speech (e.g., a lot of pointing at objects without talking).

Young children typically use what is called "phonological processes", such as substituting, omitting and repeating sounds in words, but by age 4 or 5 there are normally a lot fewer of these. A somewhat older child with phonological (speech sound) delay sounds younger than their actual age and may say *pid* for 'pig' or *jemon for 'lemon'*, while one with an articulation disorder will have considerable trouble coordinating the tongue, teeth, lips, and/or the roof of the mouth, thus heavily distorting or omitting speech sounds; a few distortions of speech sounds are considered typical, however, even at ages 5-7, depending on the language and word contexts.

A phonological delay may in fact be due to a phonological disorder (also called speech sound disorder), which consists of an inability to learn predictable rules that determine sequences of speech sounds in a child's language(s), thus affecting speech production. An example of speech in inconsistent deviant phonological disorder would show word variation and inconsistency during repetitions, e.g., 'spider' may be said as *pider, fider, sider, thider,* and *ider*.

Speech sound disorders may show up across a spectrum of disorders with overlapping characteristics. For instance, in Childhood Apraxia of Speech (CAS) children have an expressive language delay, use inconsistent speech sound mismatches, voicing errors, and frequent inappropriate stress patterns in words and phrases, show a lengthened or disrupted ability in articulating sequences of speech sounds, and have challenges with social aspects of language use.

Children with neurological disorders often show up with speech and language disorders. For instance, you might find indications of Down syndrome in a child's limited speaking skills and unintelligibility that result from disturbances in articulation, fluency, voice, resonance (amplification of speech), and prosody (patterns of stress, intonation, and rhythm in speech). Clear evidence of such influences can also be observed in children's limited social language skills in everyday interactions. In another example, children with autism spectrum disorder talk very little, if at all. Their speech tends to be singsong-like or robotic and is mostly unintelligible. They also struggle to understand and use gestures, words, express feelings, follow directions, and engage in tasks in which the child needs to take turns with an adult

Language disability				**Learning disability**
Speech		*Language*		*Learning*
Speech Sound Disorder		Language Delay	Developmental Language Disorder	Specific Learning Disability
organic (known causes)	functional (unknown causes)			dyslexia; written expression disorder; dyscalculia; dysgraphia
problems with movement, anatomical deficits, hearing/ sensory impairment	atypical voice quality/pitch, excessive or persistent dysfluency	delay compared to same-aged peers	prevalent and persistent difficulties understanding others and in speaking	persistent difficulties with reading, writing, translating thoughts into written words, spelling, and/or doing mathematical calculations

Table 1
Characteristics of language and learning disabilities

or a peer during play and conversation. (for instance, in taking turns to stacking blocks or rolling a ball back and forth). As a result, these children exhibit challenging behavioral patterns as a means to communicate, such as being overly aggressive, emotional, scared, loud, or excessively reticent and depressed.

Signs of language difficulty and related learning disabilities in somewhat older children may show up as challenges with reading, writing, counting, and/or planning, impulsive behavior, hyperactivity, lack of eye-hand coordination, difficulty telling time, difficulty telling left from right, problem-solving problems, short attention span, and poor memory. This is further discussed in the next section.

Language difficulties or learning disabilities?

This section describes the main characteristics of language- and learning-related disability to facilitate better differentiation of language difficulties that are not pathological. The types of language- and learning-related disability are summarized in Table 1 and explained below.

Speech sound disorders (another umbrella term for 'phonological disorders') refers to difficulties children have with perceiving and producing speech sounds. Organic speech sound disorder is related to physiology. It is caused by underlying neurological causes, problems with movement (as in dysarthria and childhood apraxia of speech), structural causes (cleft/lip palate, orofacial anomalies, etc.), or sensory/perceptual causes (hearing impairments). When the cause is unknown or not directly linked to a physiological cause, we speak of a functional speech sound disorder. Children with speech sound disorders form a heterogeneous group. They may simultaneously present with several other disorder types, such as disorders affecting voice quality or pitch, or speech fluency (stuttering).

A language delay that does not resolve by age three may persist into adulthood. It may run in the family. It is a disability in its own right, but it is also diagnosed as an additional type of disorder in children with autism spectrum disorder, Down syndrome, sensory impairment, or traumatic brain injury.

Developmental Language Disorder is a neurodevelopmental disorder affecting the comprehension or production of spoken language across different levels (e.g., sentence structure, word structure, and using language in communicative ways). It can be observed early.

Specific learning disability is a communication disorder that affects the capacity to think, speak, write, spell, and do mathematical calculations. Five to fifteen percent of children are affected. The psychological processes associated with learning disability relate to challenges in taking up language input (auditory and visual perception), integrating that input (sequencing, abstraction, and organization), using memory (working, short-, long-term), using output (expression), and using motor skills (fine/gross). Specific learning disability does not result from visual, hearing, motor, emotional, or intellectual disabilities or economic, environmental, or cultural disadvantages. Specific types of learning disability are dyslexia (affecting reading comprehension, word recognition, spelling, speaking, and writing; read more about dyslexia in Witko's article in this volume), written expression disorder (challenges with expressing thoughts in writing), dyscalculia (difficulty with numbers/mathematics as, for instance, when a child has difficulty with counting, keeping track of items, or recognizing even small quantities without counting), and dysgraphia (a neurological disorder affecting fine motor skills and handwriting as, for instance, when a child cannot stay between lines when writing or when writing/drawing is slow, difficult to read, and even painful).

How can I foster strong communication skills in children with communication disorders?

Resources, therapies, and fostering strong communication skills

Caregivers play an instrumental role in supporting children's development, in identifying language and communication difficulties early on, and in seeking formal screening and assessment by speech/language pathologists. Early signs of potential communication disorders may not actually indicate disorders. However, early identification, and disorder diagnosis, are of fundamental importance for facilitating likely long-term positive outcomes of therapy. Intervention practices depend on the type of disorder and are determined by professionals, but caregivers and families are often integral to the process. Parental strategies that facilitate a family environment where children are respected, loved, and positively encouraged to grow and learn are crucial for fostering strong communication skills and a growth mindset in children with communication disorders. Kind, safe, trusting, and supportive surroundings that help sustain meaningful relationships with parents/caregivers, siblings, peers and others, together with proper nutrition, play, exercise, and rest are fundamental primary considerations, as is the case for all children. Positive parenting strategies are age-, context-, and culture-specific (CDC, n.d.). Children seen as having a growth mindset (as opposed to lacking the ability to learn and grow) will show progress and keep learning despite challenges.

Speech and language professionals have developed specific concepts and procedures that can be integrated as practices into children's daily activities. At a basic level, these procedures start with creating predictable spaces and routines, respecting children's interests, diverting children's attention to appropriate behavior, creating opportunities for moving and exploring, helping children be independent and cooperate with requests, and seeking to optimize and uncover their learning potential. Specific strategies may involve:

i) social object play (using objects to encourage interaction),
ii) practicing joint attention (e.g., taking turns in activities),
iii) following children's leads, such as joining children when you see them engaging in their favorite activity, or allowing children to open the door and walk in first,
iv) visual cues to encourage children's choice-making rather than directing them,
v) sharing books (linking pictures/words to events),
vi) peer-mediated support to teach social skills (e.g., giving compliment/praise),
vii) narrating on-going action to improve language experience (using high-pitch and intonation, being detailed and specific, counting, talking about shapes, sizes, past/future events, and thoughts/feeling),
viii) exchanges of appreciation that foster social awareness and relationship skills, and
ix) encouraging children to express thoughts/feelings.

Lastly, a consistent effort to increase people's awareness, sensitivity, and support beyond the family is also important. This means that community programs, resources, and services should be supportive of parents' and families' attempts to become better informed and to allow the respectful and smooth integration of children with communicative disorders in public activities. To this end, several free online resources are available (see references).

Conclusion

This article has outlined the essentials of child communication disorders for parents. It has responded to questions related to red flags for potential communication disorders and common signs of language delay or disorder, and it has provided guidelines that help differentiate between language and learning difficulties, as well as advice on how to foster strong

communication skills in children with communication disorders, and resources/therapies for children with language delays. While communication disorders comprise several types of disorders, the ability to identify risk factors and early signs is very significant for early diagnosis by professionals that can lead to appropriate treatments. While the article has aimed to be informative, there has been no intention to alarm parents and caregivers. Several signs that may appear as indicative of communicative disorder may be false alarms. Caregivers and parents are instrumental in fostering optimal communication practices, learning opportunities, and positive family environments for their children, however, for children with communication disorders, formal diagnoses and therapy lie in the hands of trained professionals.

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