Arch Psychiatry. 2025;3(1):30-34.

The Archives of Psychiatry | Commentary

Language Disorders in People with Profound Intellectual and Multiple Disabilities

Michel Bourin[1,*]

[1]Neurobiology of Anxiety and Mood Disorders, Nantes University, 98, rue Joseph Blanchart, 44100 Nantes and MAS, 11100 Montredon des Corbiéres, France

[*]Correspondence should be addressed to Michel Bourin, michel.bourin@univ-nantes.fr

Received date: April 08, 2025, **Accepted date:** June 09, 2025

Citation: Bourin M. Language Disorders in People with Profound Intellectual and Multiple Disabilities. Arch Psychiatry. 2025;3(1):30-34.

Abstract

People with profound intellectual and multiple disabilities present significant challenges to those who care for them, and those who commission and manage the services they receive. Childhood disabilities are a cause of major concern causing significant handicap to the affected children. At least one in ten children are born with or acquire a physical, mental or sensory impairment. In normal development, distributional cues (input patterns) are linked to language acquisition processes. In children with intellectual disabilities, much less is known about the extent to which distributional cues are exploited in language learning mechanisms.

Keywords: Intellectual disability, Global developmental delay, Language disorder, Early intervention, Multidisciplinary care

Introduction

Language disorders in people with profound intellectual and multiple disabilities (PIMD) present one of the most complex and under-addressed challenges in the field of communication sciences and disability support. Reflecting critically on this issue reveals a landscape where the intersection of cognitive, sensory, and motor impairments creates profound barriers—not only to language acquisition but to meaningful human connection itself.

In people with profound intellectual and multiple disabilities, language disorders are the norm and are often a gateway to diagnosis [1]. In the DSM-5, language disorders are classified as communication disorders. Language disorders are one of the four disorders classified under communication disorders [2]. The other three are speech disorders, central auditory processing disorders and hearing disorders. Communication includes all verbal and nonverbal input used to convey information between individuals, including language and speech [3]. Speech is the oral production of language. A speech delay may therefore reflect speech and/or communication disorders. Historically, language disorders have been referred to by a variety of terms, including developmental language disorder and specific language impairment.

Estimates of the prevalence of language disorders generally range from 3% to 8% in the general population [4]. Language disorders are inherited and generally appear to be polygenic, although some specific genetic factors, including the FOXP2 gene and linkage markers on chromosomes 3, 6, and 19, have been identified [5]. Language disorders can also be acquired as a result of infection, brain injury [6], neglect, and alcohol abuse, for example.

Early language difficulties are a risk factor for impaired reading, memory, and nonverbal abilities, although individual patterns of strengths and weaknesses in distinct aspects of language may vary over time [7]. In some cases, an "illusory recovery" occurs, where a child's language appears to normalize, but deficits resurface. Furthermore, language may plateau in early adolescence, widening the gap between children with and without language disorders. Receptive language disorders have worse prognoses than expressive language impairments. Comprehension deficits are less responsive to therapy and do not resolve spontaneously; they are linked to social difficulties, struggles with nonverbal reasoning, and psychiatric disorders [8].

Language Delay and Late Talkers vs. Language Disorder

It is often argued that traditional language frameworks inadequately capture the communicative realities of individuals with PIMD. Standardized assessments and interventions tend to focus on verbal language milestones, sidelining the nuanced, non-verbal, and multimodal communication strategies these individuals employ. This narrow focus reflects a broader societal tendency to valorize spoken language as the pinnacle of communication, inadvertently marginalizing those whose expressive capacities do not fit this mold. Such an approach risks overlooking the rich communicative potential that exists beyond speech, thereby limiting opportunities for genuine inclusion.

The natural variability of language acquisition can complicate the assessment of early delays and distinguish them from language disorders, which involve more persistent symptoms. The prevalence of late language emergence in 2-year-olds ranges from 10% to 20%, and boys are three times more likely to be affected than girls [9]. The majority of these children ultimately do not have language disorders. This group of "late talkers" may have only a few words at age 2, but by age 3 have the same expressive language skills as their peers. Because only some children with late language emergence will have language disorders, the assessment and management of this group has been studied [10]. Compared to those who develop language disorders, late talkers use more communicative gestures, are less likely to have receptive language delays, and demonstrate better sentence recall on standardized tests. However, toddlers and preschoolers with delayed language emergence should be referred to a speech-language pathologist because they may later develop language and literacy difficulties [11]. If there are associated risk factors for language, such as autism spectrum disorder (ASD), global developmental delay, or hearing impairment, screening should be conducted [12]. For low-risk children, monitoring is recommended, along with parental guidance on providing indirect language stimulation. If persistent delays or additional developmental problems arise, a comprehensive assessment and direct intervention may be warranted.

Assessment

The history should review not only language development and milestones, but also any other delays, such as challenging behavior, mood and anxiety disorders, and trauma that may lead to developmental disorders [13]. In language disorders, progress is generally slow from the beginning, and regression is rare, unlike in ASD [14]. Although language delays occur frequently, they are not a hallmark. Receptive and expressive language disorders occur frequently, and comprehension difficulties, in particular, are a red flag for chronic difficulties [15]. The mental status examination should include:

- form, function, and use of language, including articulation,
- fluency and tone, comprehension,
- frequency and complexity of verbal communication, vocabulary,
- social reciprocity,
- use of and responsiveness to nonverbal communication, such as gestures, body language, and facial expression.

Care should also be taken to screen for abnormal social development, given the association between language delay and ASD. The medical assessment first involves ruling out hearing impairments and referring the child to an audiologist [16]. An oral-motor assessment should be considered if there are phonological problems, or if the child has difficulty feeding or drooling [17]. Genetic testing is not routine, as there are no common genetic markers strongly associated with language disorders, but a genetics practitioner should be consulted to evaluate any features suggesting a genetic syndrome [18]. In cases of regression or fear of seizures, prompt referral to a neurologist is necessary.

Differential Diagnosis

Several conditions can present with communication difficulties in early childhood; in some cases, these may be comorbid with language disorders, so speech/language testing remains indicated [19]:

- Hearing impairment: As mentioned above, this possibility should be considered early in the assessment. For children with language impairment, there is a risk of hearing decline over time, and hearing should therefore be monitored [20].
- Intellectual disability (ID): Language delays frequently occur in ID, although only a subset of individuals with ID ultimately exhibits impairments consistent with a language disorder. Marked language problems in individuals with ID should be evaluated and treated [21].
- ASD: Language delays and disorders are common in children with ASD, even when they encounter pragmatic language issues, which are universal. Pragmatic competence facilitates social interactions. Pragmatic competence is used to accomplish various social communications, such as requesting, narrating, clarifying, or assisting. Considering ASD is important given the strong benefit of early intervention for children with ASD [22].
- Attention-deficit hyperkinetic disorder (ADHD): Inattention and impulsivity can hinder opportunities to learn and promote language skills, particularly those related to pragmatics. Children with ADHD also have higher rates of language impairment [23].

- Selective mutism: In this condition, poor language performance manifests in environments, such as school, but not at home. Selective mutism is conceptualized as an anxiety disorder, although speech and language problems often coexist [24].

Challenging Behaviors and Comorbidities

Like children with ID, children with language disorders are at increased risk for challenging behaviors and psychiatric comorbidities. Among children with language disorders, 40–75% exhibit challenging behaviors and 30–50% have psychiatric disorders, most commonly ADHD, anxiety disorders, conduct disorders, and mood disorders [25]. Conversely, research suggests that 40% of children with psychiatric diagnoses also have a language disorder. Studies have shown that the increase in psychiatric diagnoses continues into early adulthood, and that a decrease in psychiatric disorders and comorbidity was associated with special education [26]. Common challenging behaviors include both internalizing and externalizing symptoms. Hyperactivity and attention difficulties are frequently observed, as are shyness, social withdrawal, and low self-esteem. Socioemotional deficits may also be present, including difficulty inferring emotional reactions and regulating emotions. As children grow, they may struggle to form and maintain close relationships and are more likely to be victims of bullying and sexual abuse [27].

Management

Psychiatrists play an important role in managing psychiatric comorbidities, as well as monitoring progress and coordinating care. In addition to drawing on speech-language pathology expertise, they can assist families in obtaining an evaluation and advocating for other services or educational accommodations [28]. Because psychiatrists are able to correlate language function with psychiatric symptoms, they can provide contextual information about the relationship between a child's language function and associated behavioral problems [29]. This information can lead to structured and targeted behavioral interventions and reduce misinterpretations of behavior.

Language Interventions: Principles, Approaches, and Modalities

The principles of effective intervention include facilitating language within the context of communication; dynamic and generalizable interventions; regular response assessment; and adapting treatment goals and strategies based on individual learning style, progress, and needs. Language interventions are structured strategies and practices aimed at improving language skills in individuals with language impairments or delays. These interventions can target various aspects of language, including receptive language (understanding), expressive language (use of language), pragmatics (social language), and phonology, among others. Early intervention is recommended because accelerated language growth tends to occur earlier. Language interventions encompass a variety of approaches, treatment types, and modalities [30]. Therapy should be based on the child's specific needs and learning style, identified through standardized testing, parent concerns, and teacher feedback. Targets are identified and learned through practice, repetition, and follow-up reporting. For preschoolers, goals will include increasing vocabulary, conceptual understanding, and sentence variety and complexity. Associated communication goals may involve improving intelligibility and phonological awareness, as well as conversational and narrative skills. Social skills should also be assessed, given the known interrelationship between social function and language [31]. For preschoolers with emerging language skills, parent-mediated interventions are often implemented. There has been some concern that augmentative forms of communication may replace speech entirely and thus restrict a child's communicative development, but for people with multiple disabilities this may be a solution [32].

Clinical Case: Carima, 24 Years Old

Medical and Developmental profile

Carima is a young adult with partial trisomy 13, drug-resistant epilepsy, spastic quadriplegia, severe visual impairment, and profound intellectual disability. She does not speak or walk, and her communication is very limited. She lives in an institution.

Observed communication patterns

Carima makes some nonverbal vocalizations (moans, cries, laughter), reacts to certain sound stimuli (familiar voices), and sometimes seems to express preferences (music, soft textures). She uses some involuntary motor gestures that are interpreted by caregivers as signs of acceptance or refusal.

Speech therapy intervention

The work focused on identifying and consolidating nonverbal communication methods:

- Use of a reference object (soft fabric to announce care, bell for music).
- Reinforcement of signs of agreement/refusal (extended pause, observation of facial tone).
- Multidisciplinary work with educators to coherently interpret behavior.
- Introduction of a limited-choice communication system (present two objects and observe the body's or vocal response).

Future Directions

Language disorders and developmental disability management involves a multidisciplinary approach to understanding, diagnosing, and treating language impairments that occur in individuals with developmental disabilities. Although early childhood mental health and neurodevelopmental disorders are increasingly well understood, diagnostic delays remain a concern. The development of screening programs and expanded training for child psychiatrists in neurodevelopmental disorders are public health considerations to promote problem identification and management. Translational research in genetics and neuroscience will be important to elucidate how the mechanisms of cognitive disorders interact with the risk of psychopathology, thereby improving diagnostic accuracy, treatment, and prevention.

Conclusion

Individuals with PIMD often have severe limitations in cognitive, motor, sensory, and communication abilities, making traditional language use challenging. Language impairments can include difficulties in understanding, expressing, and using language appropriately, often compounded by sensory and motor difficulties. Augmentative and Alternative Communication (AAC) strategies, such as picture exchange systems, communication boards, and assistive technology, are crucial for facilitating communication. Assessment must be tailored to the individual's unique abilities and needs, involving multidisciplinary teams to develop personalized communication goals. Early intervention and continuous support improve communication outcomes and enhance quality of life. Training and involving families and caregivers are vital for consistent communication support across environments.

Effective communication support for people with profound intellectual and multiple disabilities requires personalized, multi-faceted approaches that incorporate alternative communication methods and involve families and professionals collaboratively. Prioritizing early assessment and intervention can significantly enhance their ability to interact, express needs, and participate socially, ultimately improving their quality of life.

References

1. Marrus N, Hall L. Intellectual Disability and Language Disorder. Child Adolesc Psychiatr Clin N Am. 2017 Jul;26(3):539-54.
2. Amoretti MC, Lalumera E, Serpico D. The DSM-5 introduction of the Social (Pragmatic) Communication Disorder as a new mental disorder: a philosophical review. Hist Philos Life Sci. 2021 Sep 24;43(4):108.
3. Drosos K, Papanicolaou A, Voniati L, Panayidou K, Thodi C. Auditory Processing and Speech-Sound Disorders. Brain Sci. 2024 Mar 19;14(3):291.
4. Shriberg LD, Kwiatkowski J, Mabie HL. Estimates of the prevalence of motor speech disorders in children with idiopathic speech delay. Clin Linguist Phon. 2019;33(8):679-706.
5. Mountford HS, Braden R, Newbury DF, Morgan AT. The Genetic and Molecular Basis of Developmental Language Disorder: A Review. Children (Basel). 2022 Apr 20;9(5):586.
6. Dennis M. Language disorders in children with central nervous system injury. J Clin Exp Neuropsychol. 2010 Apr;32(4):417-32.
7. Snowling MJ, Moll K, Hulme C. Language difficulties are a shared risk factor for both reading disorder and mathematics disorder. J Exp Child Psychol. 2021 Feb;202:105009.
8. Rinaldi S, Caselli MC, Cofelice V, D'Amico S, De Cagno AG, Della Corte G, et al. Efficacy of the Treatment of Developmental Language Disorder: A Systematic Review. Brain Sci. 2021 Mar 23;11(3):407.
9. Nouraey P, Ayatollahi MA, Moghadas M. Late Language Emergence: A literature review. Sultan Qaboos Univ Med J. 2021 May;21(2):e182-90.
10. Hawa VV, Spanoudis G. Toddlers with delayed expressive language: an overview of the characteristics, risk factors and language outcomes. Res Dev Disabil. 2014 Feb;35(2):400-7.
11. Roos EM, Weismer SE. Language Outcomes of Late Talking Toddlers at Preschool and Beyond. Perspect Lang Learn Educ. 2008 Oct;15(3):119-26.
12. Tager-Flusberg H. Risk Factors Associated With Language in Autism Spectrum Disorder: Clues to Underlying Mechanisms. J Speech Lang Hear Res. 2016 Feb;59(1):143-54.
13. Aldosari AN, Aldosari TS. Comprehensive evaluation of the child with global developmental delays or intellectual disability. Clin Exp Pediatr. 2024 Sep;67(9):435-46.
14. Clarke KA. A review of language regression in autism spectrum disorder and the role of language theories: Towards explanation. Autism Dev Lang Impair. 2019 Nov;4:2396941519889227.
15. Conti-Ramsden G, Durkin K. Language development and assessment in the preschool period. Neuropsychol Rev. 2012 Dec;22(4):384-401.
16. McFayden TC, Culbertson S, DeRamus M, Kramer C, Roush J, Mankowski J. Assessing Autism in Deaf/Hard-of-Hearing Youths: Interdisciplinary Teams, COVID Considerations, and Future Directions. Perspect Psychol Sci. 2023 Nov;18(6):1492-507.
17. Lee AS, Gibbon FE. Non-speech oral motor treatment for children with developmental speech sound disorders. Cochrane Database Syst Rev. 2015 Mar 25;2015(3):CD009383.
18. Savatt JM, Myers SM. Genetic Testing in Neurodevelopmental Disorders. Front Pediatr. 2021 Feb 19;9:526779.
19. Pennington BF, Bishop DV. Relations among speech, language, and reading disorders. Annu Rev Psychol. 2009;60:283-306.

20. Choe G, Park SK, Kim BJ. Hearing loss in neonates and infants. Clin Exp Pediatr. 2023 Sep;66(9):369-76.

21. Jacob US, Olisaemeka AN, Edozie IS. Developmental and Communication Disorders in Children with Intellectual Disability: The Place Early Intervention for Effective Inclusion. Journal of Education and Practice. 2015;6(36):42-6.

22. Georgiou N, Spanoudis G. Developmental Language Disorder and Autism: Commonalities and Differences on Language. Brain Sci. 2021 Apr 30;11(5):589.

23. Parks KMA, Cardy JEO, Woynaroski TG, Sehl CG, Stevenson RA. Investigating the Role of Inattention and/or Hyperactivity/impulsivity in Language and Social Functioning Using a Dimensional Approach. J Commun Disord. 2021 Jan-Feb;89:106036.

24. Manassis K, Fung D, Tannock R, Sloman L, Fiksenbaum L, McInnes A. Characterizing selective mutism: is it more than social anxiety? Depress Anxiety. 2003;18(3):153-61.

25. Ogundele MO. Behavioural and emotional disorders in childhood: A brief overview for paediatricians. World J Clin Pediatr. 2018 Feb 8;7(1):9-26.

26. Whitehouse AJ, Watt HJ, Line EA, Bishop DV. Adult psychosocial outcomes of children with specific language impairment, pragmatic language impairment and autism. Int J Lang Commun Disord. 2009 Jul-Aug;44(4):511-28.

27. Paulus FW, Ohmann S, Möhler E, Plener P, Popow C. Emotional Dysregulation in Children and Adolescents With Psychiatric Disorders. A Narrative Review. Front Psychiatry. 2021 Oct 25;12:628252.

28. Stein DJ, Shoptaw SJ, Vigo DV, Lund C, Cuijpers P, Bantjes J, et al. Psychiatric diagnosis and treatment in the 21st century: paradigm shifts versus incremental integration. World Psychiatry. 2022 Oct;21(3):393-414.

29. Kishimoto T, Nakamura H, Kano Y, Eguchi Y, Kitazawa M, Liang KC, et al. Understanding psychiatric illness through natural language processing (UNDERPIN): Rationale, design, and methodology. Front Psychiatry. 2022 Dec 1;13:954703.

30. Martin KC, Ketchabaw WT, Turkeltaub PE. Plasticity of the language system in children and adults. Handb Clin Neurol. 2022;184:397-414.

31. Ramsook KA, Welsh JA, Bierman KL. What you say, and how you say it: Preschoolers' growth in vocabulary and communication skills differentially predict kindergarten academic achievement and self-regulation. Soc Dev. 2020 Aug;29(3):783-800.

32. Thomas-Stonell N, Robertson B, Oddson B, Rosenbaum P. Communicative participation changes in pre-school children receiving augmentative and alternative communication intervention. Int J Speech Lang Pathol. 2016 Feb;18(1):32-40.