Tutorial

Developmental Language Disorder: Applications for Advocacy, Research, and Clinical Service

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Purpose: The CATALISE group (Bishop, Snowling, Thompson, Greenhalgh, & CATALISE Consortium, 2016; Bishop, Snowling, Thompson, Greenhalgh, & CATALISE-2 Consortium, 2017) recommended that the term *developmental language disorder* (DLD) be used to refer to neurodevelopmental language deficit. In this tutorial, we explain the appropriate application of the term and present advantages in adhering to the CATALISE recommendations.
Conclusion: Both specific language impairment and DLD refer to a neurodevelopmental condition that impairs spoken language, is long-standing and, is not associated with any known causal condition. The applications of the terms *specific language impairment* and *DLD* differ in breadth and the extent to which identification depends upon functional impact. Use of the term *DLD* would link advocacy efforts in the United States to those in other English-speaking countries. The criteria for identifying DLD presented in the CATALISE consensus offer opportunities for scientific progress while aligning well with practice in U.S. public schools.

In this tutorial, we describe the appropriate application of the term *developmental language disorder* (DLD) and explain our reasons for preferring it over the term *specific language impairment* (SLI). We recognize from the outset that no single term can perfectly capture a category that is complex and of interest to stakeholders with diverse perspectives and goals. *DLD* is the term recommended by the CATALISE group (Bishop, Snowling, Thompson, Greenhalgh, & CATALISE Consortium, 2016; Bishop, Snowling, Thompson, Greenhalgh, & CATALISE-2 Consortium, 2017). This group of 59 experts—most, but not all, of whom were speech-language pathologists—from six different English-speaking countries (29 from the United Kingdom, seven from the United States, eight from Canada, six from Australia, four from New Zealand, and three from Ireland) participated in a consensus-building exercise aimed at identification criteria and terminology. The majority of the participants in the CATALISE project agreed that the term *DLD* and its associated definition, a language problem that endures into middle childhood and beyond and that has a significant impact on social or educational function, capture the nature of the problem and maximize effective communication about the problem better than the alternatives under consideration, including SLI.

In the remainder of this tutorial, when we are referring to the language problem itself, we use a neutral, descriptive phrase *neurodevelopmental language deficit*. When we are referring to the particular way that people conceptualize the language problem under the traditional definition of SLI or the new definition of DLD, we use the precise labels *SLI* and *DLD*. We begin by comparing the fundamental

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aspects of the most widely applied definition of SLI in the research literature to the recently proposed definition of DLD.

Defining SLI

The MIT Encyclopedia of Communication Disorders defines SLI as a term that refers to "…children who show a significant deficit in their spoken language ability with no obvious accompanying problems…. This type of language disorder is regarded as developmental in nature because affected children exhibit language learning problems from the outset" (Leonard, 2004, p. 402). Although evident in childhood, there is extreme variability in the early trajectories of language development, and most late talkers do not go on to present with a neurodevelopmental language deficit (Rescorla, 2011). Researchers in the SLI tradition tacitly acknowledge this early variability. It would be unusual to see the term *SLI* applied to children younger than 3 years of age in the research literature; instead, *late talking* or *language delay* would be more typical.

Scientists identify children with SLI for research studies using both inclusionary and exclusionary criteria. The inclusionary criterion is impairment in the comprehension or expression of language, relative to age-matched peers. One typically identifies the impairment by low scores on one or more standardized tests of language, but what cutoff constitutes "low" varies widely (Spaulding, Plante, & Farinella, 2006). As for exclusionary criteria, most typically, researchers administer a pure-tone audiometric screening and a nonverbal IQ test to rule out hearing impairment and intellectual disability and collect a case history to rule out other clinical conditions that might account for the language problem, such as autism spectrum disorder (ASD). In essence, these steps are meant to ensure that participants have a *specific* impairment in language, not a broader condition. When describing children with SLI, Leonard (1998) noted, "[the] only thing clearly abnormal about these children is that they don't learn language rapidly and effortlessly" (p. 3). If so, then, presumably, case histories or diagnostic protocols are also used to rule out other biomedical conditions that limit attention, motor function, behavior, and emotional health, but these are rarely mentioned explicitly in papers on SLI unless the purpose of the paper is to investigate suspected comorbidities. These conditions are seldom directly assessed in language research laboratories, although there are often readily available screeners (e.g., for ASD, motor function).

A nonverbal IQ score that excludes intellectual disability is considered essential to the diagnosis of SLI. Researchers who study SLI will often exclude children from their research who have normal but below-average nonverbal IQs as well. However, in the literature on SLI, there is no uniform standard for exclusion. Cutoff scores vary more than a full standard deviation, from laboratories who exclude anyone with a nonverbal standard score below 70 to laboratories who exclude anyone with a nonverbal standard score below 90 (Gallinat & Spaulding, 2014).

Similarities in the Extension of the Terms *DLD* and *SLI*

The term *DLD*, like the term *SLI*, applies to significant problems in the development of receptive or expressive language. Like the term *SLI*, one would not typically apply the term *DLD* to toddlers because, according to the CATALISE statements, DLD refers to problems that are likely to be long-standing and unresponsive to general educational practices. In other words, poor prognosis is part of the definition of DLD. Also, in exact accord with boundaries on the application of the term *SLI*, the term *DLD* would not apply to language problems that are part of a broader developmental disorder such as ASD, sensorineural hearing loss, or Down syndrome. The CATALISE documents refer to these as "differentiating conditions" and recommend the phrase "language disorder associated with," as in "language disorder associated with Down syndrome," when referring to the language difficulties that are part of these complex disorders. The logic here is threefold: Language problems are characteristic of these conditions, the cause of the language problems in these conditions is likely different from the cause of DLD, and the breadth of treatments might differ as well. Nonetheless, many of the treatments may overlap. The phrase "language disorder associated with X condition," is useful in the sense that it can remind us that common intervention strategies—such as recasting, robust vocabulary instruction, and milieu teaching—can be employed effectively across populations with language concerns.

Differences in the Extension of the Terms *DLD* and *SLI*

Unlike SLI, the term *DLD* can apply to the language problems of individuals who have co-occurring conditions that impair cognitive, sensorimotor, or behavioral functioning but whose causal relation to language disorder is unknown. So, for example, a child can be diagnosed with DLD and attention-deficit/hyperactivity disorder (ADHD), or DLD and developmental coordination disorder. Notably, potential co-occurring conditions are rarely assessed in language research labs, including some of our own. When they are, we often find them, and this holds even for children who meet traditional SLI criteria (e.g., Bishop & Edmundson, 1987; Hill, 2001; Vuolo, Goffman, & Zelaznik, 2017). For example, in her review of five studies that included relevant motor assessments of children identified as having SLI, Hill (2001) found that 40%–90% of the children also met criteria for developmental coordination disorder.

Theoretically, application of the terms *SLI* and *DLD* differs with regard to below average (but not clinically significant) nonverbal IQ, though recall that, in practice, the term *SLI* has been applied to children with IQs as low as 70 (Gallinat & Spaulding, 2014). Under the application of DLD criteria, children with below-average nonverbal IQ scores are not excluded either in theory or in practice unless

those scores are so low as to merit the diagnosis of intellectual disability.

Finally, there are differences in how one determines the significance of the neurodevelopmental language deficit in the SLI and DLD approaches. Although the CATALISE statements do not rule out the use of standardized tests for identification of DLD, they place greater emphasis upon its impact on social and academic functions than on a low language score cutoffs, and this stands in contrast to most research practice in the SLI tradition. It is tempting to look to inclusion on a clinical caseload as the primary evidence of functional deficits, yet DLD is often misdiagnosed or undiagnosed (Bishop & McDonald, 2009; Hendricks, Adlof, Alonzo, Fox, & Hogan, 2019; Tomblin et al., 1997) and receipt of services is subject to substantial bias (Morgan et al., 2016; Wittke & Spaulding, 2018). The need for new, unbiased measures that capture the social and academic challenges faced by individuals with DLD across the life span is urgent if we are to adhere faithfully to the CATALISE recommendations (see Adlof & Hogan, 2019).

In summary, both SLI and DLD refer to a neurodevelopmental condition that impairs spoken language that is long-standing and that is not associated with any known causal condition. The applications of the terms *SLI* and *DLD* differ in breadth and the extent to which identification depends upon functional impact. In the remainder of the tutorial, we consider the advantages of embracing a broader conception of neurodevelopmental language deficit and of emphasizing functional impact during diagnosis as they apply to three domains, advocacy, research, and clinical service.

Advantages of the Term *DLD* and Its Application

DLD and Advocacy

Despite calls to action (Schuele & Hadley, 1999), the term *SLI* has never been widely embraced by clinical speech-language pathologists or the families they serve. A cacophony of terms have been used instead (Bishop, 2014; Kamhi, 2007), and without a doubt, this is one reason why your cousin, neighbor, pediatrician, and state senator are unaware that millions of people in the United States struggle to learn and use their native language. Unfortunately, the lack of awareness among the general population translates into limited resources for addressing the problem. People with neurodevelopmental language deficit are underserved (Norbury et al., 2016; Tomblin et al., 1997), and this may be especially true if those people are not male, White, or wealthy (Morgan et al., 2016), or from well-educated families (Wittke & Spaulding, 2018). Also, relative to its prevalence and potential impact, the condition does not attract ample research efforts (Bishop, 2010). Thus, the lack of awareness of DLD not only results in inadequate service delivery in the current day but also affects future generations, by limiting the number of research studies or the number of participants recruited for research studies.

In 2012, Raising Awareness of Developmental Language Disorder (RADLD, n.d.), an organization of concerned clinicians and researchers in the United Kingdom, launched a series of awareness efforts including the production of informational videos and the staging of DLD Awareness Day. In 2018, those efforts became international. Impressions for the 2018 International DLD Awareness Day numbered 569,479 on Facebook and 258,700 on Twitter, although participation from the United States was meager. Recently, participation in the United States has increased through a North American awareness campaign (DLD and Me, 2020). In 2019, Raising Awareness of Developmental Language Disorder published translations of DLD awareness materials into languages other than English to enable a more effective worldwide reach. These languages include Albanian, Arabic, Catalan, Croatian, Danish, Dutch, Farsi, Finnish, French, Gaelic, Georgian, German, Greek, Hindi, Hungarian, Icelandic, Italian, Latvian, Malay, Maltese, Mandarin, Norwegian, Odia, Panjabi, Portuguese, Spanish, Swedish, Turkish, and Welsh.

In the meantime, the CATALISE recommendations are gaining traction. For example, the term *DLD* and the identification procedures recommended in CATALISE were adopted in 2017 by the Irish Association of Speech-Language Therapists and in 2018 by Speech Pathology Australia. Both emphasized the costs to the child and family, and society as a whole, when DLD goes undiagnosed. Both Australian and Irish groups seek to use the CATALISE consensus, not only to ensure that their members are unified in their actions on behalf of people with DLD but also to call for a change in national policies that limit the services these people receive. In introducing the policy document, the co-chairperson of the Irish Association of Speech-Language Therapists wrote:

> As Speech and Language Therapists we are aware that Developmental Language Disorder is highly prevalent and that it may be a lifelong condition. In practice, children and adolescents may act out in frustration due to not understanding or not being understood by others. They may have difficulty joining in play and social activities due to misunderstanding of the rules of games and conversation. These experiences may result in reduced self-esteem. The challenges may be further compounded by those around the child or young person with DLD not recognising the underlying language difficulties. We have a growing knowledge of the benefits of interventions and wider support that can be provided. The use of consistent terminology can only help make the conversation about DLD more accessible. –Niamh Davis (IASLT Working Group, 2017, p. 5).

In summary, limitations in awareness, service, and research feed one another, and ultimately, people living with a neurodevelopmental language deficit pay the price. A major point of consensus in the CATALISE documents is the need for consistent terminology. As other English-speaking countries are ahead of us in use of the term to

facilitate advocacy and advance policy, it would behoove us to join with them. We endorse the use of the term *DLD* to engage families, professionals, and policymakers in conversations about the impact of neurodevelopmental language deficit. We now turn to the advantages and opportunities that the CATALISE consensus presents to scientists who study neurodevelopmental language deficit.

DLD and Research

In this section, we highlight two fundamental differences between the construct of neurodevelopmental language deficit as captured by DLD and the traditional definition of SLI and discuss the implications of these differences for research. We introduce each with a quote from the CATALISE documents.

CATALISE Quote 1

> "Language impairment frequently co-occurs with other neurodevelopmental difficulties, including attentional problems, motor impairments, reading difficulties, social impairment and behaviour problems." (Bishop et al., 2016, p. 14)
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> "…the boundaries between DLD and other neurodevelopmental disorders are not clear cut (Bishop & Rutter, 2008)." (Bishop et al., 2017, p. 1077)

Initially, the word *specific* was central to the construct of SLI. The hypothesized specificity has origins in theories that posited the language faculty as independent of other cognitive modules. Nevertheless, the specificity of SLI has long been questioned. Leonard (1987), for example, summarized evidence of deficits in nonlinguistic auditory processing, symbolic play, and mental imagery among children with SLI. Several influential papers by Rice and colleagues document social problems among children with SLI (Redmond & Rice, 1998; Rice, 1993; Rice, Sell, & Hadley, 1991). Today, we know that people with neurodevelopmental language deficits may present with a vast array of subclinical problems in areas such as executive function (e.g., Kapa & Plante, 2015), social cognition (e.g., Marton, Abramoff, & Rosenzweig, 2005), perception (e.g., Ferguson, Hall, Riley, & Moore, 2011), and motor control (e.g., Brumbach, & Goffman, 2014; Hill, 2001). They are also at heightened risk for clinically diagnosable problems such as dyscalculia (Young et al., 2002), ADHD (Tirosh & Cohen, 1998), dyslexia (Catts, Adlof, Hogan, & Weismer, 2005), poor reading comprehension (Nation, Clarke, Marshall, & Durand, 2004), and anxiety and depression (Clegg, Hollis, Mawhood, & Rutter, 2005; Conti-Ramsden & Botting, 2008). In the CATALISE consensus on DLD, but not in traditional applications of SLI, dual diagnoses are allowed.

Dual diagnoses and causality. If we exclude participants from our studies who have, say, a neurodevelopmental language deficit and ADHD, then, we risk missing potentially useful clues about causal factors. It is possible that a condition that frequently co-occurs with neurodevelopmental language deficit heightens the risk of neurodevelopmental language deficit (or vice versa), that the co-occurring condition causes the neurodevelopmental language deficit, or that some common factor causes the co-occurring condition and the neurodevelopmental language deficit. Tomblin and Mueller (2012) explain these possibilities and present a rational argument for examining samples that include co-occurring diagnoses.

More radical still is the notion of sampling for common traits (e.g., poor statistical learning, atypical hemispheric asymmetries) and ignoring diagnoses completely when pursuing causal questions (Levy & Ebstein, 2009). In other words, instead of enhancing the homogeneity of samples by excluding people with co-occurring conditions, one seeks a sample that is homogeneous for a given trait, while allowing the diagnoses to vary. In doing so, researchers are open to the possibility that the common trait rather than the referring diagnosis is the critical information needed for concluding the biological basis of atypical skills or behaviors. Insel and Cuthbert (2015) advocate the same approach as a way to tailor treatments more precisely to individual needs. An example to consider from our field is deficient working memory, a trait that characterizes many, but not all, children with dyslexia, DLD, or dyslexia + DLD and typical children (Gray et al., 2019). One could pursue deficient working memory as a cognitive level of description, in an effort to understand the mapping of complex behavior to cognitive functions and, ultimately, cognitive functions to neural functions and neural functions to genes (Levy & Ebstein, 2009).

Dual diagnoses and phenotype. Including co-occurring conditions in our research studies might lead to a greater understanding of the nature of neurodevelopmental language deficit. If we impose arbitrary boundaries to define clinical categories that are dimensional, we are apt to misconstrue presentations that do not fit as comorbidities (Kaplan, Dewey, Crawford, & Wilson, 2001; Kraemer, Noda, & O'Hara, 2004). Our perspective is that we are likely mischaracterizing the phenotype, or observable presentation, of DLD by excluding children who have co-occurring but potentially noncausal conditions. The very fact that these so frequently co-occur with neurodevelopmental language deficit suggests that a broader phenotype might be more valid and that the narrower one is somewhat artificial.

There is evidence to prompt consideration of a broader phenotype. Consider one example, the high co-occurrence of neurodevelopmental language deficit and motor dysfunction. Vuolo et al. (2017) found that children classically defined as having SLI performed more poorly than age mates on gross and fine motor tasks and one third of them presented with a clinically significant motor impairment. Relative to typical age mates, the children with SLI had significant difficulties in bimanual sequencing and coordination, but not in unimanual timing. This pattern of strengths and weaknesses is reminiscent of the language profiles that are typical of children with SLI; namely, complex, sequenced procedures (such as grammar) are particularly compromised. These data suggest that broader manifestations of neurodevelopmental language deficit are not always sequela

orrandom co-occurrences; rather, common factors at the genetic, neural, or cognitive level may limit language and motor function in specific ways (Botting & Marshall, 2017). Examining the full breadth of presentation is an essential line of inquiry for establishing an accurate phenotype, a line of inquiry that would be closed off if we continue to apply the traditional definition of SLI by, in this case, excluding children who also present with developmental coordination disorder. Importantly, including people with broader phenotypes in research studies does not exclude children who have been identified by traditional definitions of SLI.

CATALISE Quote 2

> "A child with a language disorder may have a low level of nonverbal ability. This does not preclude a diagnosis of DLD." (Bishop et al., 2017, p. 1072)

Logically, one could be convinced that many children with neurodevelopmental language deficit may present with a phenotype that is broader than language but still maintain that children who have a very "clean" presentation—significant language problems but average or high nonverbal IQ and no significant problems in other domains—constitute a subgroup of children with DLD whose problems may have different causes and may require a different approach to clinical management. We do not deny that there could be legitimate reasons to study these cases; however, a growing body of evidence suggests that SLI is not a scientifically meaningful subgroup of DLD.

One example is the work of Lancaster and Camarata (2019) who used cluster analyses to examine the latent structure of scores on verbal and nonverbal tests among kindergarteners with DLD in the EpiSLI database (Tomblin, 2010), both those who met traditional criteria for SLI (nonverbal IQ standard scores above 85) and those who had nonverbal IQ standard scores between 70 and 85. The investigators found no evidence of subgroups defined by nonverbal IQ scores, or any other scores. They concluded that SLI is not a separate category or subgroup within the broader DLD population and that DLD itself is accurately characterized as a spectrum disorder, such as autism, for example.

We advocate including children from across the DLD spectrum in research studies. If we exclude children with low normal nonverbal IQ from our research, we risk losing an opportunity to learn more about the association between nonverbal and verbal cognition in affected children. Dethorne and Watkins (2006) found that nonverbal IQ accounted for approximately 20% of the variation in language abilities in a group of 4- to 6-year-old children with DLD. Even in studies of SLI (studies that have excluded children with low normal nonverbal IQ), we still find this association. In a meta-analysis of 131 studies, participants with SLI scored .69 *SD* lower on nonverbal IQ tests than their age mates after adjusting for differences in tests used, cutoff scores used, and matching of socioeconomic status (Gallinat & Spaulding, 2014). To understand neurodevelopmental language deficit fully, we must allow both verbal and nonverbal abilities to vary rather than artificially limit chances for observing the extent of their association.

In summary, the CATALISE consensus is that neurodevelopmental language deficit is not specific to language. By recognizing that neurodevelopmental language deficits can present alongside low-average nonverbal IQ and co-occurring conditions, the consensus guidelines suggest opportunities for the discovery of causation, documentation of phenotypes, and understanding of the association between verbal and nonverbal abilities among those who are affected. We turn now to some advantages that the CATALISE consensus holds for clinical practitioners.

DLD and Clinical Practice

In U.S. public schools, when children with a neurodevelopmental language deficit qualify for services, they typically do so under the categories *developmental delay* (reserved for those who are aged 3–9 years), *speech or language impairment*, or *specific learning disability* (Individuals with Disabilities Education Act, 2004). The typical International Classification of Diseases (ICD-10) billing codes are F80.1 *Expressive language disorder* or F80.2 *Expressive and receptive language disorder*. We recognize these mandated terms as constraints on the adoption of the term *DLD* (or the term *SLI*, for that matter). However, the construct of DLD holds advantages for clinical speech-language pathologists, even when they must use other terms for verification and billing tasks. Below, we explore three of these.

CATALISE emphasizes function. Whether and how children with SLI are differentiated from children with average language abilities has long been a matter of debate (Johnston, 1991; Leonard, 1991). The CATALISE statements take a stand. Neurodevelopmental language deficit is not a natural, distinct category apart from typical language ability but is, instead, dimensional. Dimensions are continuous distributions of characteristics that reflect individual differences across an entire population. To borrow an example from clinical psychology, consider a continuum of social ease ranging from comfort in all social interactions to distress in all social interactions. The point along this continuum that would constitute social anxiety is not immediately apparent (Kotov et al., 2017).

Recent evidence of the dimensionality of SLI is the work of Rudolph, Dollaghan, and Crotteau (2019; see also Dollaghan, 2004, 2011). Rudolph and colleagues analyzed 676 conversational samples from a community sample. Children who did not pass a pure-tone audiometric screening or who scored lower than 77 on a cognitive measure were excluded in accord with traditional guidelines for identifying SLI. The children were not selected on the basis of language ability; thus, the sample included children with typical language development and those with SLI. The key finding was that finite verb morphology composites did not cordon off children with SLI from typical peers in a categorical way. The finite verb morphology composite is a measure of the use of tense and agreement morphemes, most often the regular third-person singular *–s*, as in "she

plays," regular past *–ed*, and copula and auxiliary forms of *is*, *are*, and *am*. The study by Rudolph et al. (2019) yields particularly strong evidence of SLI as dimensional given that, in other studies relying on a clinical rather than a community sample, tense and agreement use were sensitive and specific markers of SLI (e.g., Goffman & Leonard, 2000; Rice, Wexler, & Hershberger, 1998; Souto, Leonard, & Deevy, 2014). The finite verb morphology would be likely to reveal the categorical nature of SLI, if it were categorical.

The clinician might ask what the dimensional structure of neurodevelopmental language deficit means for practice. After all, there is the need to create categories even when no clear natural divisions exist: Someone has social anxiety or not, someone has DLD or not, and someone qualifies for services or not. These are categorical decisions. The recommended solution is to emphasize the severity of the functional impact over arbitrary cutoffs on standardized tests. Consideration of symptom severity is essential when diagnosing conditions that do not show clear categorical distinctions (Kamphuis & Noordhof, 2009). A person has DLD if his or her language abilities are so limited as to prevent adequate function in social, familial, educational, occupational, or community settings. In practice, application of this definition involves a series of steps that may include screening for DLD, verifying a diagnosis based on standardized tests and functional outcomes, and then determining treatment goals that have functional and educational impact (Adlof & Hogan, 2019).

Clinicians will note that an emphasis on functional impact is consistent with the requirement outlined in Individuals with Disabilities Education Act (2004) and the goals of the Every Student Succeeds Act (2015), namely, that children should receive special education supports when their disabilities adversely affect academic performance. Tools that hold promise in helping to evaluate functional impact on social interaction and participation include the Children's Assessment of Participation and the companion tool, the Enjoyment and the Preferences for Activities of Children (King et al., 2007), both of which are appropriate for children aged 6–21 years. The Test of Integrated Language and Literacy Skills Student Language Scale (Nelson, Howes, & Anderson, 2016) is a screener that can provide insights on the functional impact of DLD on language use in the classroom (Nelson et al., 2016). For preschoolers, the Focus on the Outcomes of Communication Under Six is useful for assessing gains in communication in the community, school, and home environments (Thomas-Stonell, Oddson, Robertson, & Rosenbaum, 2010).

CATALISE eschews cognitive referencing. The CATALISE documents make the case that cognitive referencing is an ineffective means of verifying the need for language services. The clinical presentations of children with DLD who have higher and lower nonverbal IQs are similar, on average. Norbury et al. (2016) compared children with DLD who had nonverbal IQs above 85 to those with nonverbal IQs between 70 and 85 and found no significant differences in the severity of language deficits, speech production abilities, social–emotional development, or educational achievement. Nor did they differ in referral rates for speech and language therapy, percentage of school supports, or special education need. Also, response to language intervention is as strong among children with low normal nonverbal IQ as those with average or higher nonverbal IQ (Cole, Coggins, & Vanderstoep, 1999). These data support the inclusion of all children with DLD on clinical caseloads, not just those who present with a gap between their verbal and nonverbal abilities.

This stance is consistent with U.S. federal law, in that children are not required to demonstrate a discrepancy between verbal and nonverbal abilities to qualify for speech-language services. It is also consistent with the scope of practice of speech-language pathologists. Although not qualified to administer IQ tests, they are qualified to diagnose language disorders (American Speech-Language-Hearing Association, 2016).

Because cognitive referencing is not required, the caseload of the school-based speech-language pathologist will likely include children representing the full range of presentation, not just children who have poor language in the face of strong nonverbal cognition. Thus, in this case as well, clinicians will recognize the fit between the CATALISE recommendations and their practices. If researchers apply DLD terminology and its associated definition, research samples will better align with clinical caseloads, and we will be more likely to provide school-based clinicians with information about children who resemble the students they treat.

What about the term itself? One could agree that the definition of DLD fits well with clinical practice in the United States but still reject the actual term *DLD*. Particularly in the U.S. context, speech-language pathologists express concerns that the term *developmental* will lead parents, policymakers, and insurance companies to dismiss the problem as something that a child will outgrow. According to anecdotal reports, these stakeholders do indeed sometimes misunderstand the term, and as a result, they ignore the problem.

By joining with other countries in adopting the term, we would benefit from a robust, cohesive, shared platform for education and advocacy. Via this platform, it will be critical to convey to stakeholders that the term *developmental,* as it applies to DLD and **all** neurodevelopmental disorders—intellectual disabilities, stuttering, ADHD, ASD, specific learning disorders, developmental coordination disorder, dyslexia, childhood apraxia of speech, tic disorders, among others— refers to problems with onset during early development (American Psychiatric Association, 2013). *Developmental* does not mean that the child who has the condition will grow out of it by adulthood. We know that, if a child enters kindergarten with a neurodevelopmental language deficit, he or she is unlikely ever to catch up to peers (Tomblin, Zhang, Buckwalter, & O'Brien, 2003).

Developmental is useful for emphasizing the changing nature of neurodevelopmental disorders over the life span. Symptomology will change as the person learns, grows, and faces new challenges. Some symptoms may fade, but others may emerge. By embracing the term *developmental*, we

can go far toward promoting a richer clinical and educational understanding of DLD.

In summary, the characterization of DLD as presented in the CATALISE consensus aligns well with practice in U.S. public schools, especially in the rejection of cognitive referencing and the emphasis placed on functional impact. The term itself presents some obstacles as it can be misunderstood as denoting a temporary concern.

A Call to Action

It is imperative that we, as clinicians, researchers, and the professional organizations that represent us, educate stake holders on the nature of developmental disorders. To emphasize this critical need, consider that an insurer recently wrote to one of us (K. M.), "If a child just isn't talking or not talking clearly—it is not covered." Would insurers be as likely to dismiss a 6-year-old who "just" is not walking or walking steadily? These are not children who are too lazy to talk or who will catch up eventually. They cannot talk (or understand talk) as well as their peers because of a life long condition characterized by atypical neural development (Mayes, Reilly, & Morgan, 2015), and it is time that we use all national and international platforms available to us to make this case. Rather than hiding from the term *developmental*, we see advantages in sharing its true meaning with families and policymakers.

Ultimately, the words that people use cannot be mandated by the policies or preferences of any given group of individuals. Speech-language pathologists know better than most that this is not how language works. If consensus on a term were the only issue at stake, we would not be so invested in seeing the CATALISE recommendations adopted. The CATALISE project was not only about terminology but also an evidence-based characterization of neurodevelopmental language deficit. In our view, the characterization of DLD as presented in CATALISE motivates a fresh approach to understanding neurodevelopmental language deficit—one that recognizes its dimensional nature, anticipates variations over developmental time, and values what can be gained by examining a broader phenotype. It provides a useful platform for advocates, motivates new directions for research, and reflects clinical practice in the United States. Advances in policy, research, and clinical service are essential to the health and well-being of people with DLD. Herein lies our enthusiasm for the CATALISE consensus.

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