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Botting, Nicola and Bean-Ellawadi, Allison and Williams, David M. (2016) Language impairments in childhood - A range of profiles, a variety of reasons. *Autism & Developmental Language Impairments*, 1 . pp. 1-2.

### DOI

<http://doi.org/10.1177/2396941516654609>

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Publisher pdf

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# Language impairments in childhood – A range of profiles, a variety of reasons

Autism & Developmental Language  
Impairments  
Volume 1: 1–2  
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sagepub.com/journalsPermissions.nav  
DOI: 10.1177/2396941516654609  
dli.sagepub.com



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As any researcher or practitioner working in the field of communication difficulties knows, children who show difficulties with language present with a variety of different symptoms and features. They may have a disorder that is diagnosed based on primary difficulties with communication, such as autism spectrum disorder or developmental language impairment (DLI). They may have other recognised syndromes, such as Down syndrome or attention deficit hyperactivity disorder (ADHD) that impact on language development; or they may have difficulties that stem from different language experiences such as children who are deaf or blind.

The sheer heterogeneity of feature presentation across these populations does not stop at inter-group comparisons. Even *within* each of these groups of children, we are aware of a very large variation in language ability and in the profiles of impairment that each individual might experience. This has often led to important debates about our definition, description and diagnosis of children with different language difficulties. In the domain of autism, for example, there have been recent discussions about the labels ‘Asperger’s Syndrome’ and ‘high functioning autism’ (Kite, Gullifer, & Tyson, 2013). In DLI, there has been a shift away from referring to this disorder as specific language impairment (SLI), but there is no consensus as yet regarding a suitable alternative term (Bishop, 2014; Reilly et al., 2014).

The complexity of identifying groups and understanding this variation has implications for future research:

Firstly, we need to take into account the heterogeneity of different groups of children with language

difficulties and use this to enhance our understanding of the nature, underlying basis, and treatment of language impairments. It may be that different stages of development are observed even across children who are chronologically similar in age, or that different levels of skill can be used to give information about prognosis. In Dohmen, Bishop, Chiat, and Roy (2016), the findings suggest that the range of ability shown by children with late-developing language might be predicted by other underlying skills such as imitation.

Secondly, making theoretical links to aetiology within and across different groups of children is complex when the group definitions themselves are fuzzy and when different researchers disagree about how disorders should be described. Levy and Ebstein (2009, p. 657) state that ‘the inherent imprecision of behavioral phenotyping is the single most important factor contributing to the failure to discover the biological factors that are involved in psychiatric and neurodevelopmental disorders’. Understanding the aetiology of various language profiles is also less than straightforward. Although long-standing evidence suggests that most cases of both autism and DLI have a genetic basis (Bailey et al., 1995; Bishop, North, & Donlan, 1995, respectively), these studies often rely on very clear cut clinical cases and there are many children who fall on the borderlands of diagnostic criteria. The genetic contribution to language difficulties in these children is less clear. Despite this rather muddy picture of childhood language impairments, there is surprisingly little research that seeks to directly compare abilities across groups within the same study; that takes sampling into account; or that carefully pulls apart how different task

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demands might elicit differing profiles. In 2008, we attempted to lay out where the differences and similarities might lie between autism and SLI (Williams, Botting, & Boucher, 2008) and came to the conclusion that there was not enough evidence at that time to say that the language difficulties in autism are the same as those in SLI. In ADLI, we hope to publish papers from a wide array of populations and where possible draw together themes. Articles that directly compare different populations are especially sought after.

Thirdly, the role of development needs to be central to our investigations. The fact that children are changing rapidly might add to the wide distribution seen in most groups with developmental disorders. Nearly two decades ago, research using cluster analysis suggested that there were different subgroup profiles of children with SLI (Conti-Ramsden, Crutchley, & Botting, 1997). Somewhat reassuringly, we found that these largely mapped onto existing theoretical ideas about subgroups described by Rapin (1996). However, when we followed up the same children a year later, an interesting result was evident: although the same subgroups of children were present in the data, half of the individual children had moved subgroup and now belonged to a different 'profile' (Conti-Ramsden & Botting, 1999). This emphasised the need for developmental and longitudinal work. Thankfully, this type of research has increased since those earlier papers. However, articles that map changes in profiles over time are still crucial to our understanding of developmental disorders and language difficulties and ADLI particularly welcomes this type of study. Pickles, Durkin, Mok, Toseeb, and Conti-Ramsden (2016) explore different language profiles alongside features of ADHD, providing an interesting comparison of development and the links between difficulties. The use of advanced statistical modelling techniques helps to understand the pathways of change in much more sophisticated ways.

We believe that a more focussed language journal, such as ADLI, that highlights childhood communication or the wider outcomes of children with language needs, will facilitate understanding and discussion on these issues. The open access nature of the publication means that support and intervention for children with language and communication difficulties can be directly based on recent state-of-the-art evidence, and that families and individuals affected by communication issues can be part of the research reading community.

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