Is early differential diagnosis of SLI, PLI and ASD important for long-term educational outcomes?

Introduction

Specific language impairment (SLI), pragmatic language impairment (PLI), and autistic spectrum disorder (ASD) are all considered to be subgroups of developmental language disorder, and can have a lasting impact on a child’s educational, social and employment outcomes. Early diagnosis and intervention has been shown to benefit these children in terms of, not only their current educational and social functioning, but also their long-term outcomes.

But do these disorders need to be diagnosed differentially?

Background

• It is estimated that around 7% of children have a language impairment, but little is known about how these disorders progress4
• These disorders can persist into adolescence and adulthood, often with concomitant literacy problems5
• It is known that young people with SLI can struggle academically in adolescence1
• It is also known that people with language impairment can have “significant difficulties with psychosocial adjustment”9
• Little is known about the outcomes of individuals with different subtypes of language disorder9

The lines between SLI, PLI and ASD are blurred, and cut-off points for the different subtypes of language impairment vary between different assessments: it has actually been suggested that PLI falls in the middle of a continuum between SLI and ASD1,2.

However, intervention and management of the subgroups differ, as do the expected educational and social outcomes. Does differentially diagnosing these disorders at an early age mean that a child can expect a better long-term outcome? Are the outcomes for the subgroups even significantly different?

The studies detailed here have explored these questions.

Literature base

The following are all studies of long-term outcomes for children with language impairment.

Whitehouse et al (2009) investigated the educational and work outcomes of children with PLI, SLI and ASD, and found that:

Diagnosis related to long-term outcome

• Children diagnosed with SLI were likely to pursue vocational training/work in jobs not requiring a high level of language or literacy ability
• Children diagnosed with PLI achieved higher educational outcomes and were more likely to work in ‘skilled’ professions
• Children diagnosed with ASD had lower levels of independence and had more trouble finding employment

However, this paper did find that the profile of these children changed over time, with a small number of participants developing ASD-like symptoms.

In a separate study, Whitehouse et al (2009) investigated the adult language and literacy outcomes of developmental language impairment, and found that:

The language profile of different sub-types of DLD relates to language and literacy outcomes in adulthood

People diagnosed with SLI showed lasting difficulties with speech production and grammar; compared to those with PLI, who show continued pragmatic impairment; and ASD, who show additional difficulty with social relationships. However, it was found that the profiles of ASD and PLI are similar, and that diagnoses are unstable, meaning a child diagnosed with PLI aged 5 may present very differently at school leaving age.

Conti-Ramsden et al (2009) studied the variability in school outcomes for children with SLI, and found that:

Literacy and language skills were predictive of educational achievement. Attainment at GCSE level correlated with psycholinguistic ability—particularly expressive language. Expressive language was, however, only predictive of English outcomes, not those of maths and science. The study also notes that there are many predictors for educational outcomes (such as maternal education and non-verbal IQ), so literacy and language are not solely responsible for educational outcomes.

Adolescents with SLI are at risk of poorer educational attainment than typically developing peers.

Adolescents with SLI were entered for significantly fewer KS4 examinations than their typically developing (TD) peers, and there was found to be a significant difference in the highest level of qualification achieved between the two groups. Significant differences in scores were also found between groups with resolved and persisting SLI. In fact, the study did not find any significant differences in number of examinations taken nor on grades achieved between the resolved-SLI group and their TD peers.

Conclusion & Implications

• Overall, the literature suggests that the three sub-types of language impairment are difficult to differentially diagnose4,5, and children are liable to move along the continuum of symptoms, possibly presenting with different disorders in early childhood compared to adolescence. Different assessment methods also have an effect4. However, the literature also shows that childhood language profiles DO relate to secondary school age and adult outcomes5,6, and that a child with a resolved language impairment has a better chance of a good outcome4.

• Therefore, it is important to differentially diagnose the different subtypes of language disorder at an early age, in order to maximise the child’s chances of a good educational outcome.

• Early diagnosis should increase the child’s chances of access to appropriate intervention and support, which, in turn, can improve their language abilities (a factor that is, at least in part, predictive of educational outcome8), and increase their chances of doing well in later exams. This could lead on to improved employment opportunities, and a better future.