

FAST FACTS

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*Indispensable
Guides to
Clinical
Practice*

Specific Learning Difficulties

by Amanda Kirby and Bonnie J Kaplan

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Specific Learning Difficulties

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Glossary of abbreviations and synonyms

ADD: attention deficit disorder, also called ADHD

ADHD: attention deficit hyperactivity disorder

ASDI: Asperger Syndrome (and high-functioning autism) Diagnostic Interview

CAST: Childhood Asperger Syndrome Test

CD: conduct disorder

DCD: developmental coordination disorder, called dyspraxia in the UK

DEST: Dyslexia Early Years Screening Test

DISCO: Diagnostic Interview for Social and Communication Disorders

DSM-IV: *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association, fourth edition

DST: Dyslexia Screening Test

dyslexia: usually called reading disability in North America

dyspraxia: called developmental coordination disorder in North America

OCD: obsessive–compulsive disorder

ODD: oppositional defiant disorder

PECS: Picture Exchange Communication System

reading disability: called dyslexia in the UK

SENCO: special educational needs coordinator

TEACH: Teaching and Education of Autistic Children and Handicapped Children

WIAT-II: Wechsler Individual Achievement Test II

WISC III: Wechsler Intelligence Scale for Children, version III

WJ-R: Woodcock–Johnson Psychoeducational Battery – revised

Introduction

The term ‘specific learning difficulties’ is not universally accepted, but is commonly used to refer to three problems:

- dyslexia (usually called reading disability in North America)
- developmental coordination disorder (DCD), called dyspraxia in the UK
- attention deficit hyperactivity disorder (ADHD), also called attention deficit disorder (ADD).

In addition, four other conditions commonly overlap with these learning and attention problems:

- oppositional defiant disorder (ODD)
- conduct disorder (CD)
- Asperger’s syndrome
- obsessive–compulsive disorder (OCD).

Fast Facts – Specific Learning Difficulties considers these six learning and behavior problems, addressing four questions for each.

- What is this disorder, including its core symptoms and signs, what is its incidence and prevalence, and what is known about its cause?
- What are the criteria for this disorder as specified by the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, of the American Psychiatric Association (DSM-IV)?
- Who assesses and diagnoses this disorder, and how?
- What are the treatments for this disorder, including management at home and in school?

Key reference

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, 4th edn. Washington, DC: American Psychiatric Association, 1994.

Advantages and disadvantages of labeling children

The use of a diagnostic label to characterize a child makes many people uncomfortable, and indeed, in many situations children themselves may be better off if they are not told about their diagnosis and labeling. In the current era, however, labeling is a necessity and can even be beneficial (Table 1.1).

Of course, labels may also be harmful in certain ways. For example, a label can have negative connotations that may affect individuals who come into contact with the labeled child. Some people may have preconceived ideas about a disorder based on their previous experience of others with the same label, such as a child with Asperger's syndrome

TABLE 1.1

Advantages of diagnostic labels for specific learning difficulties

- Acknowledges for parents that there is a genuine reason for their worries and concerns
- Renders parents less likely to be dismissed by others as just 'over-anxious parents'
- Can make funds or services available to the child; in some settings, the absence of a label means that funding will not be allocated for that child
- Can legitimize a genuine condition: e.g. for many years, dyslexia was erroneously seen as a 'middle-class' condition, a label used by parents to excuse the poor academic performance of their children
- Allows children to be counted for research purposes
- Can assist others who work with the child to focus on the appropriate type of intervention
- May be used as a legal reference point to consider one child's support compared with others
- May be used by authorities to plan service delivery
- Helps in determining the appropriate baseline assessment to be used before school remediation programs

who may have been seen as a difficult child rather than a child with difficulties. In addition, a child may be given more than one label or even the wrong label, or may view the label as a stigma for life that implies disability rather than as a difficulty/difficulties that can improve.

Overlapping conditions

Many, if not most, children with a developmental problem qualify for more than one diagnostic label. For example, a population study showed that 23% of children showed signs of developmental coordination disorder (DCD), 8% met criteria for attention deficit hyperactivity disorder (ADHD), and 19% were categorized as dyslexic. Nearly 25% of the affected children were found to have all three, while 10% had both ADHD and DCD, and 22% had dyslexia and DCD. In another population study, 87% of children meeting the full criteria for ADHD had one or more diagnoses and 67% at least two additional diagnoses. The most common additional diagnoses were oppositional defiant disorder (ODD) and DCD.

Much of the literature on this issue uses the term ‘comorbidity’, intended to convey the idea that two or more conditions occur together. The term comorbidity is not appropriate in this situation, however, at least partly because the assumption that the multiple disorders have independent etiologies cannot be proved. In fact, the very high overlap of developmental disorders may be an indication that they are not independent. A new conceptual framework, which has been called atypical brain development, may help to explain developmental disorders and their relationship to each other. One implication of this framework is a new emphasis on the individual strengths and weaknesses of each child, with individualized treatment programs based on the child’s profile rather than on a diagnostic category.

The present book makes no assumptions about the independence of the six categories of disorders discussed and emphasizes the importance of individual assessments and treatment recommendations.

Diagnostic labels versus functional labels

In view of the disadvantages of labeling mentioned above, and because children do not fit into the neat diagnostic boxes specified in the

Attention deficit hyperactivity disorder (ADHD or ADD) has been recognized since ancient Greek times, but the label for this behavioral syndrome has varied enormously through the ages. The current designation from the American Psychiatric Association *DSM-IV* is ADHD, though the public often continues to use the term ADD. The *DSM-IV* specifies three subtypes of ADHD:

- primarily inattentive
- hyperactive–impulsive
- combined inattentive and hyperactive–impulsive.

ADHD is part of a spectrum of specific learning difficulties. It is not correlated with intelligence, and contrary to common belief, IQ is normally distributed in children with ADHD; there is no association with giftedness. Also contrary to common belief, memory is not unusually weak in these children. If children with ADHD attend to information, they remember it just as well as other children do.

ADHD is one of the most common neurodevelopmental disorders, affecting 3–5% of school-age children. At least three times as many boys as girls are affected, and in clinically referred samples the ratio is often as high as 6:1. As many as one-third of people with ADHD may also meet the criteria for oppositional defiant disorder (ODD; see Chapter 5), and perhaps one-quarter of them eventually meet the criteria for conduct disorder (CD; Chapter 5).

Etiology

It has been known for a long time that ADHD runs in families. Strong evidence of genetic involvement has been derived from twin and adoption studies, in which about 50% of parents who themselves had ADHD have a child with the disorder, and 10–35% of children with ADHD have a first-degree relative with ADHD. It is common for parents, on being told that their child has ADHD, to realize that they themselves manifest the same syndrome. Although no individual predisposing genes for ADHD have been identified, molecular genetic

studies have focused on chromosomal regions associated with dopamine pathways in the brain.

While there is ample evidence to support the existence of some abnormality of brain function, either genetic or acquired, environmental factors may also be involved. For example, ADHD is weakly linked to prematurity in the newborn. In any large sample of children with ADHD, prematurity is reported more often than would be expected, though most people with ADHD are not born prematurely.

Pathophysiology

Investigations of brain structure and function using advanced imaging devices have shown significant differences between healthy controls and patients with ADHD. Both noradrenergic and dopaminergic neuroreceptor systems have been implicated in the development of ADHD. The dopamine system acts in the brain in areas that are largely responsible for specific functions, such as the regulation of motor output. The noradrenergic system acts more broadly, controlling the state of arousal, selective attention and orientation, as well as the response to sensory stimulation.

Some evidence suggests that a subset of children with ADHD may also have sleep difficulties, but no definite link or causality in either direction has been established.

Long-term outcome

ADHD contributes to school failure and long-term difficulties in the workplace. The school problems are easy to understand: the child with ADHD usually has difficulty working alone or with groups, and finds it difficult to follow the teacher. Most symptoms of ADHD tend to improve with age, however, perhaps because people learn coping skills, and direct themselves into fields where their attention problems are less of an obstacle. Despite this, research indicates that 50–80% of children diagnosed with ADHD continue to experience symptoms into adulthood. In addition, much research suggests that adults with ADHD exhibit relatively high rates of depression and anxiety, and ADHD is associated with elevated alcohol and drug abuse.