REFRESHMENT

Misdiagnosis and missed diagnosis of adult attention-deficit hyperactivity disorder

Joe Johnson, Sarah Morris & Sanju George

Joe Johnson is a Consultant Psychiatrist with North West Boroughs Healthcare NHS Foundation Trust, working in the NW Boroughs Adult ADHD Service at Hollins Park Hospital, Warrington, UK. He is also North West Lead for the UK Adult ADHD Network (UKAAN). **Sarah Morris** is an Advanced Clinical Pharmacist with North West Boroughs Healthcare NHS Foundation Trust, working at Hollins Park Hospital, Warrington. **Sanju George** is Professor of Psychiatry and Psychology at Rajagiri School of Behavioural Sciences and Research, Rajagiri College of Social Sciences (Autonomous), Kochi, India. **Correspondence:** Professor Sanju George. Email: sanjugeorge531@gmail.com

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SUMMARY

Attention-deficit hyperactivity disorder (ADHD) is a persistent, pervasive disorder characterised by symptoms of inattention, impulsivity and hyperactivity. Although traditionally considered a disorder of childhood, symptoms and associated impairments persist into adulthood for a significant proportion of individuals. Untreated ADHD can have a number of adverse effects for both the individual and wider society. Despite this, ADHD in adults is often misdiagnosed or its diagnosis is 'missed' in general psychiatric settings and this article highlights some reasons for this.

KEYWORDS

ADHD; adults; misdiagnosis; attention-deficit hyperactivity disorder; missed diagnosis.

Epidemiology and prognosis

Epidemiological studies suggest that the prevalence of attention-deficit hyperactivity disorder (ADHD) in the general adult population ranges from 2 to 5%. Among adults with a common psychiatric condition who are already accessing mental health services, it is as high as 10–20% (Kooij 2010). Some of the adverse consequences of untreated ADHD are increased rates of substance misuse, unemployment, criminality, relationship breakdown and driving accidents. Once diagnosed, ADHD is a treatable condition that responds well to pharmacological treatment. First-line treatment options for adults have been shown to have an effect size of 0.6–0.9, which is significantly high compared with other commonly used psychiatric medications, such as antidepressants (effect size 0.3–0.5) (Leucht 2012).

Diagnostic criteria of ADHD

ADHD is a persistent, pervasive disorder characterised by symptoms of inattention, impulsivity and hyperactivity. As a result of their inattentive symptoms, adults with ADHD may typically experience difficulties with day-to-day organisation, poor timekeeping, forgetfulness and making careless mistakes. Symptoms of hyperactivity–impulsivity may result in difficulties with money management, impatient behaviour, speaking or acting without thinking and excessive physical or mental activity. For adults to receive a diagnosis of ADHD, DSM-5 criteria require that five or more symptoms of inattention and/or hyperactivity–impulsivity must be present (American Psychiatric Association 2013). Note that this is lower than the six or more symptoms of inattention and/or hyperactivity–impulsivity that are required for a diagnosis of ADHD in childhood. Symptoms must have persisted for at least 6 months and have had a negative impact on social and academic/occupational functioning.

Several of the symptoms must have been present before 12 years of age, they must be present in two or more settings and must not be better explained by another mental disorder.

Now we look at some possible reasons why ADHD in adults is 'missed' or misdiagnosed.

Factors that may result in ADHD being missed as a diagnosis

Lack of awareness among clinicians

Previously, ADHD was considered to be a childhood disorder that improved with age, but it is now recognised to persist into adulthood in 50–66% of individuals, resulting in ongoing clinical and psychosocial impairment (Barkley 2002; Lara 2009). However, many clinicians are still not aware that ADHD is a valid diagnosis in adults.

Some also believe that hyperactivity symptoms must be present for a diagnosis, resulting in those who present with predominantly inattentive symptoms being overlooked. ADHD prevalence is higher in men than in women (1.6:1) (Willcutt 2012) and it has been suggested that this may be because women are more likely to present with predominantly inattentive symptoms and therefore not be diagnosed. Furthermore, some patients with ADHD have a tendency to hyper-focus on tasks that they are interested in and this may also mislead clinicians into believing that problems with concentration are absent.

Stigma

Adults with ADHD have often had to endure lifelong difficulties and may feel that they have grossly underachieved for their potential, resulting in low self-esteem. Many of them want to avoid being 'labelled' with a psychiatric diagnosis and have considerable anxieties about having to take medications to feel 'normal'. This may result in them avoiding seeking help from professionals.

Masking and/or self-medicating of symptoms

Adults with ADHD may develop ways of compensating for their lifelong difficulties. Examples include pursuing a career that is fast paced, varied or involves physically demanding work. They may also have a partner or spouse who compensates for their organisational difficulties. Many adults who have undiagnosed ADHD resort to 'self-medicating' their symptoms with caffeine, alcohol or illicit drugs such as cannabis, cocaine or amphetamines.

Factors that may result in misdiagnosis

Age-related change in symptoms

The symptoms of hyperactivity often seen in childhood may be more likely to manifest as inner restlessness, overtalkativeness or inability to relax in adulthood. A significant number of adults with ADHD also experience symptoms of emotional dysregulation, with frequent mood changes throughout the day, low tolerance to frustration and temper outbursts that may be misinterpreted as a mood or personality disorder.

Overlapping symptoms and comorbidity

Symptoms of ADHD such as poor concentration, physical restlessness, impulsivity and mood lability overlap with symptoms of depression, anxiety, bipolar affective disorder and borderline personality disorder, which can result in an incorrect diagnosis being made.

ADHD is a highly comorbid condition, with 75% of adults with ADHD having at least one other psychiatric diagnosis (Kooij 2010). These include mood disorders, anxiety, personality disorder and substance misuse. Often, it is the comorbid conditions that are recognised and the symptoms of ADHD that are missed.

Conclusions

There are several patient- and clinician-related reasons why ADHD may be missed or misdiagnosed in adults, but to ensure that patients access appropriate and timely support/treatment it is important that ADHD is considered as a possible diagnosis.

BOX 1 Further reading resources

Johnson J, Morris S, George S (2020) Attention deficit hyperactivity disorder in adults: what the non-specialist needs to know. *British Journal of Hospital Medicine*, **81**(3): 1–11.

National Institute for Health and Care Excellence (2018) *Attention Deficit Hyperactivity Disorder: Diagnosis and Management (NICE Guideline NG87)*. NICE.

Royal College of Psychiatrists' webpage 'ADHD in Adults': www.rcpsych.ac.uk/mental-health/problems-disorders/adhd-in-adults

UK Adult ADHD Network (UKAAN) website: www.ukaan.org

Readers further interested in the assessment and treatment of adult ADHD are directed to resources listed in Box 1.

Author contributions

All three authors contributed to the conception of the idea, writing and revising the manuscript.

Declaration of interest

J.J. has received honoraria for talks at training events supported by the following pharmaceutical companies: Janssen, Flynn and Takeda/Shire. S.M. works as a pharmacist independent prescriber in both National Health Service and private adult ADHD clinics; she has been on an advisory board for Shire Pharmaceuticals, has received honoraria for delivering a talk on the treatment of ADHD for Flynn Pharmaceuticals and Takeda, and has received sponsorship from both companies to attend educational and training events on adult ADHD.

ICMJE forms are in the supplementary material, available online at https://doi.org/10.1192/bja.2020.34.

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Kooij SJ, Bejerot S, Blackwell A, et al (2010) European consensus statement on diagnosis and treatment of adult ADHD: The European Network Adult ADHD. *BMC Psychiatry*, **10**: 67.

Lara C, Fayyad J, de Graaf R, et al (2009) Childhood predictors of adult attention-deficit/hyperactivity disorder: results from the World Health Organization World Mental Health Survey Initiative. *Biological Psychiatry*, **65**: 46–54.

Leucht S, Hierl S, Kissling W, et al (2012) Putting the efficacy of psychiatric and general medicine medication into perspective: review of meta-analyses. *British Journal of Psychiatry*, **200**: 97–106.

Willcutt EG (2012) The prevalence of DSM-IV attention-deficit/hyperactivity disorder: a meta-analytic review. *Neurotherapeutics*, **9**: 490–9.