SMC Research Summary
the latest research evidence underpinning our practice

Attention Deficit Hyperactivity Disorder

December 2021

What Is ADHD?

Attention Deficit Hyperactivity Disorder, commonly known as ADHD, is a neurodevelopmental condition that affects approximately 2-7% of people worldwide (Sayal et al., 2017). According to the ICD-10, ADHD is characterised by two cardinal features:

- **Impaired attention** – manifested by a lack of persistent task involvement and a tendency to move from one activity to another without completion.
- **Hyperactivity** – characterised by restlessness, talkativeness, noisiness, and fidgeting.

While most cases of ADHD are diagnosed in children between the ages of 6 and 12 (as reported by NHS statistics), diagnosis can also happen in adulthood. The same criteria are used in cases of adult diagnosis, although impaired attention and hyperactivity are judged according to what might be considered typical at certain stages of development. For instance, while a child's attentional impairment might look like a learning difficulty at school, an adult with ADHD might experience trouble with completing household tasks or managing their productivity at work.

Common Strengths

While ADHD comes with its challenges, it may confer certain strengths that make life more enjoyable. Some people with ADHD have the ability to achieve intense, immersive, and long-lasting states of concentration when doing things that they particularly enjoy. In the ADHD community, this mental state is known as hyperfocus.

Researchers are only starting to look into the cognitive and neural underpinnings of this phenomenon, so it is unclear what proportion of people with ADHD experience hyperfocus (Ashinoff & Abu-Akel, 2021). Those who have discussed their personal experiences with hyperfocus, however, have emphasised the cognitive energy and boost in creativity that tend to accompany this state. Many people with ADHD use these periodic states of intense focus to cope with the demands of modern working life and compensate for their general difficulties with attention.

According to Dr. Russell Barkley, a clinical psychologist and Professor of Psychiatry at Virginia Commonwealth University, people with ADHD can temporarily overcome their difficulty with directing attention "*if they're doing something they enjoy or find psychologically rewarding"*, and that *"they'll tend to persist in this behaviour after others would normally move on to other things."*[1] In this sense, a method of coping with attentional impairment can sometimes lend itself well to maximising productivity in short bursts.

Common Challenges

While clinical descriptions of ADHD might suggest that this condition exists as a singular phenomenon, each person with ADHD experiences their symptoms differently. This variability between individuals means that a one-size-fits-all approach cannot be taken when it comes to the management of ADHD signs and symptoms, which may include:

[1] https://www.additudemag.com/understanding-adhd-hyperfocus/

Please cite this as: Zodorotsova, N., (2021). Attention Deficit Hyperactivity Disorder (ADHD): A Brief Summary of Key Research. Salvesen Mindroom Centre, Edinburgh, UK.

- Impaired focus when working and/or doing day-to-day tasks
- Difficulty with motivating oneself to start and finish tasks
- Difficulty in regulating and managing emotional responses
- Hyperactivity and restlessness
- Impulsivity and difficulty in suppressing behaviour that may be inappropriate
- Sensory issues, such as being easily overwhelmed by certain sensations, or needing a lot of sensory stimulation to feel well

Research has shown that many people with ADHD also experience co-occurring conditions. As many as 80% of adults with ADHD have an additional psychiatric problem, such as a mood disorder, anxiety disorder, or substance abuse disorder (Torgersen et al., 2006). The complexity of symptoms which may present themselves in someone with ADHD can sometimes make this condition challenging to identify and treat. Therefore, each component of an individual's complex clinical profile needs to be addressed in an appropriately contextualised manner.

The Evidence on Supports

Despite the challenges that come with having ADHD, people with this condition are entirely capable of living fulfilling and productive lives. Having the right support structures in place can enable a person with ADHD to cope with their symptoms and accomplish their goals. Here are some helpful tactics we know about already:

- Tactics to help with executive function: This can come in the form of sticking to a clear daily routine, writing down to-do lists, setting timers, and breaking down big tasks into smaller ones.
- Support networks: The support of family and friends can be very helpful to someone with ADHD, as this can ensure that everyone's needs are communicated and met. A list of support groups for adults with ADHD can also be found on the AADD-UK website: https://aadduk.org/help-support/support-groups/
- Regular exercise: Maintaining an active lifestyle can help people with ADHD manage their energy levels and take care of their mental and physical wellbeing. Exercise can also provide the basis for a strong daily routine. A recent meta-analysis, which looked at the findings of 14 separate studies, has shown that exercise greatly improves inattention in ADHD, as well as co-occurring symptoms like anxiety, depression, and irritability (Zang, 2019).
- Medication: For some, medication used in the treatment of ADHD may help with promoting consistent focus. However, the potential risks and benefits of pharmacological interventions should always be considered with care.

And here are some interesting new methods for treating ADHD which are currently being tested and refined:

- Neurofeedback therapy: This form of therapy combines EEG (electroencephalography) brain data and a user interface, allowing people with ADHD to monitor themselves in states of focus. The patient establishes a 'feedback loop' between themselves and their brain activity, gradually learning how to maintain a state of focus. You can learn more about Neurofeedback here https://www.additudemag.com/neurofeedback-therapy-treat-adhd/
- Digital game therapy: We often associate video games with distraction. However, certain video games have been developed to aid the treatment of inattention in ADHD. EndeavourRx is the first prescription-only video game treatment for ADHD, and it has been used by clinicians in the US since June 2020. It isn't available in the UK yet but it does provide an example of where ADHD supports may be heading in the future. You can find out more about it here: https://www.endeavorrx.com/

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What's Next in Research?

Research into the cognitive and neural underpinnings of ADHD has grown more refined over the years, shifting from the prioritisation of clinical labelling to the acceptance of complexity and diversity among individuals with neurodevelopmental disorders. In the past, researchers tended to study the cognition, behaviour, and brains of people who held an official ADHD diagnosis. Most of this research was also done on boys and men, since it was assumed that ADHD occurs primarily in males. However, many researchers are now aware that:

1. ADHD presents itself heterogeneously across individuals; people with ADHD differ considerably in their behaviours, cognitive profiles, and experiences (Musser & Raiker, 2019).

2. The cardinal symptoms of ADHD—inattention and hyperactivity—occur not only in ADHD, but also in other diagnostic categories, like autism (Ros & Graziano, 2019).

3. Girls and women experience ADHD in a different way than boys and men, and this may have led experts to under-identify the disorder in females, leading to misdiagnosis and underdiagnosis (Skolgi et al., 2013).

4. Many people with ADHD experience periods of hyperfocus, indicating that ADHD isn't just a disorder of inattention, but rather, the maldistribution of attentional resources (Ozel-Kizil et al., 2016).

Now, transdiagnostic approaches—which look at the symptoms of ADHD across people with different diagnoses, or even no clinical diagnoses at all—are becoming commonplace in cognitive, behavioural, and neuroscientific research. There has also been a growing emphasis on identifying the signs of ADHD in girls and women and addressing the variability of individuals' experiences of the main symptoms. While there is still a long way to go before scientists and clinicians understand the mechanisms behind ADHD, these recent shifts in the research represent a transition from reductionism to complexity. As the scientific and clinical communities increase their understanding of ADHD, it is hoped that people with this condition will be able to access support that better addresses their unique needs.

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