Pedagogika Przedszkolna i Wczesnoszkolna
Vol. 8 1 (15)/2020
**pp. 65–71**

Marta KOPCIKOVA
ORCID: 0000-0002-7069-447X
*University of Presov*

# On the Identification, Assessment, and Diagnosis of ADHD in Children*

**Abstract**

The paper looks at the issues of diagnosing and assessing ADHD in children with the aim to clarify the basic difference between the assessment and diagnosis of ADHD. Introductory part of the paper outlines the theoretical background of the disorder. It distinguishes between three main subtypes of attention deficit and hyperactivity disorder and briefly discusses the symptoms for each subtype, since understanding the symptoms aids proper identification of ADHD in children. The paper further tries to explain the necessity of steps leading to diagnosing the disorder, starting with identification and assessment of ADHD by parents and teachers. Finally, the paper provides the list of the criteria for diagnosing ADHD.

**Keywords:** ADHD, identification, assessment, diagnosis, disorder, hyperactivity, attention

## Attention deficit and hyperactivity disorder (ADHD) as a diagnostic category

Attention deficit and hyperactivity disorder (ADHD) is one of the most common psychiatric disorders to emerge in childhood. As Kinman (2017) has pointed out ADHD is a broad term and the condition can vary from person to person.

ADHD is the diagnostic category currently used to describe individuals with clinically significant problems relating to inattention and/or hyperactivity and impulsivity (American Psychiatric Association, 2000). This behav-

* This paper is an research outcome of the VEGA grant project 1/0691/16 "Experimental testing of the effect of sports activity on cognitive and executive functioning in pupils with ADHD", principal investigator prof. PhD. Iveta Kovalčíková, PhD.

ioral disorder often becomes obvious in early childhood. The Royal College of Psychiatrists (2017) has pointed out that many children are inattentive and restless, especially under the age of five. However, this clearly does not automatically mean they have ADHD. In attention deficit and hyperactivity disorder the key symptom is a persistent pattern of inattention and/or hyperactivity/impulsivity that is manifested more frequently and more severely than is typically observed in individuals at a comparable level of development (American Psychiatric Association, 2000; Jacobelli, Watson, 2008; Rapoport, 2009). As the Royal College of Psychiatrists (2017) has explained inattention and/or hyperactivity become a problem when they are more marked than in other children of the same age, and when they affect the child's school, social, and family life.

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR), published by the American Psychiatric Association in 2000, distinguishes three main subtypes of attention deficit and hyperactivity disorder, which makes it easier to differentiate between the various types of symptoms (Jacobelli, Watson, 2008; Rapoport, 2009). The three main types are: (1) the Combined Type, in which both significant inattention and hyperactivity/impulsivity are present; people with this subtype exhibit symptoms of inattention, hyperactivity, and impulsivity (Brennan, 2016); (2) the Predominantly Hyperactive Type, in which most problems have to do with hyperactivity/impulsivity; people with this subtype exhibit symptoms of hyperactivity and impulsivity but not inattention (Kinman, 2017); and (3) the Predominantly Inattentive Type, in which most of the problems are related to difficulty paying attention (American Psychiatric Association, 2000).

ADHD can manifest in deficits in cognitive functioning, perceptual-motor functions, regulation of emotions, and social adjustability (Bragdon, Gamon, 2006). As Greenspan (2009) has explained, ADHD is a complex disorder. There are different ways in which the symptoms manifest. For example, because some children are overly reactive to sights, sounds, and other sensations, they become highly distractible. Other children are just the opposite. They crave new sights and sounds as well as touch and, therefore, are constantly on the move, going from one thing to another. Still others are so underreactive to sights, sounds, and sensations in general that they withdraw into their imagination and, for this reason, appear inattentive. Yet other children become "lost in the trees" and have difficulty visualizing the big picture. Planning and sequencing motor actions are yet another problem area for many children with attentional difficulties.

ADHD is a disorder or syndrome. The ability of children with ADHD to perform at school is hindered by socially inappropriate behavior, which may mean problems with social skills or becoming easily distracted, or both (Rapo-

port, 2009). In addition, Russell Barkley (in: Jacobelli, Watson, 2008) has described children with ADHD as having impaired self-control, and frequently being overwhelmed by their own energy or intensity.

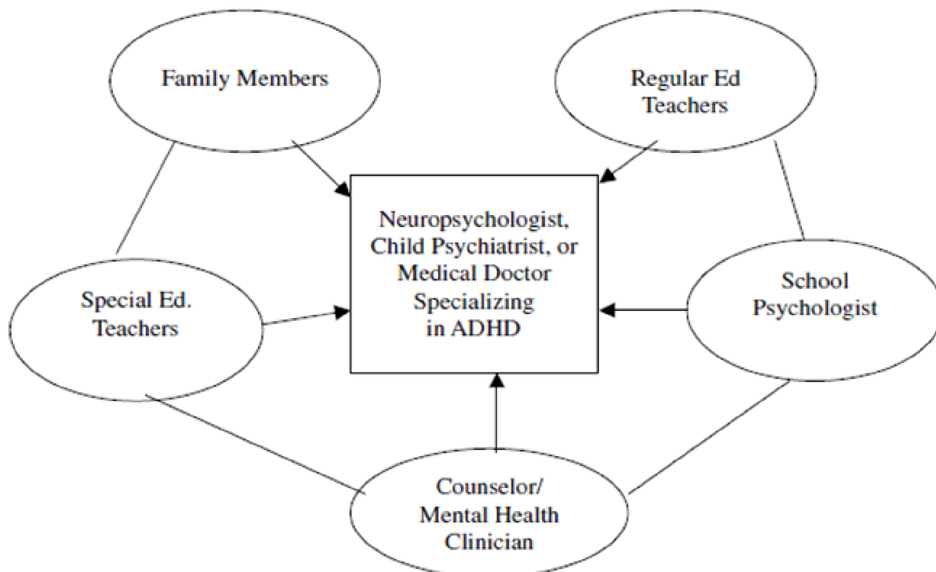
ADHD can manifest in different behaviors depending on age, setting (e.g., school, home, playground) and even motivation (e.g., doing an activity or something the child likes) (Royal College of Psychiatrists, 2017). Not all children have all the symptoms. This means some may just have problems with poor attention, while others are mainly hyperactive.

## Assessment of ADHD

There are certain steps that need to be taken prior to determining the treatment of ADHD. Generally the child's condition should first be identified and assessed, and only after that properly diagnosed.

Effectively assessing ADHD requires input from a number of sources. Jacobelli and Watson (2008) created a diagram of the professionals needed to obtain an effective evaluation. All these sources should provide input to the medical professional who will ultimately decide whether a diagnosis should be made and medication prescribed.

School professionals play a key role in identifying ADHD. While there is no single agreed protocol for identifying ADHD (Brock, Jimerson, Hansen,




Network of experts to identify ADHD. Source: Jacobelli, Watson, 2008

2009), it is generally accepted that caregiver reports and direct behavioral observation are a part of the comprehensive process of diagnostic assessment. Given that ADHD symptoms are especially prevalent in the school environment, teacher reports and classroom observations should be considered an important part of any ADHD assessment (Brock, 1999; Brock, Clinton, 2007; Koonce, 2007).

It is not always easy to identify that a child has ADHD. Teachers and counselors should talk with the child's parents about the child's health and lifestyle so that other problems can be ruled out. Jacobelli and Watson (2008) have suggested that the overall health of the child should be addressed first. A sick child will not pay attention or behave in line with teacher expectations, and will not be able to learn effectively. Teachers should be able to assess if the child appears to be properly nourished. If the child's brain is not getting adequate nutrition, it will not do its job. Teachers should also check whether the child is getting adequate rest. Psychosocial stressors in a child's life often result in behavior problems that are similar to the symptoms of disorders including ADHD.

Certain medical conditions, such as an overactive thyroid, may have symptoms resembling those of ADHD. Barkley (1990) listed some additional conditions that are associated with attention and organizational problems. Psychiatric conditions in this category include schizophrenia, bipolar disorder, depression, and posttraumatic stress disorder. Medical conditions include head injury, hypo- or hyperthyroidism, renal or hepatic insufficiency, anoxic encephalopathy, and vitamin deficiency.

## Diagnosis of ADHD

According to Brock, Jimerson and Hansen (2009), contrary to the popular belief that ADHD is systematically overdiagnosed, there is some evidence to suggest that ADHD may be underidentified, and that this may be related to treatment. For instance, in their study of twins, Reich, Huang, and Todd (2006) reported that only about half of the participants who could be diagnosed as having ADHD were receiving any medication treatment. Reich and colleagues stated that the problems were mainly to do with the availability of diagnostic screening and appropriate treatment among practitioners. A similar opinion is found in Jacobelli and Watson (2008), who stated that children were being underdiagnosed, most likely because of concerns about unnecessarily medicating children who may actually be behaving normally for their age and gender and because of the context-dependent nature of the behaviors associated with the diagnosis.

Nevertheless, since ADHD accounts for 30–40% of all referrals made to child guidance clinics, family and primary care physicians, and pediatricians (Connors, 2006), it is one of the most commonly diagnosed mental disorders among children.

Brock, Jimerson and Hansen (2009) have stated that the diagnostic criteria for the Predominantly Inattentive type of ADHD requires six or more of the nine symptoms of inattention to be present. Similarly, Brennan (2016) has given a detailed explanation of the criteria for diagnosing ADD, the inattentive subtype. ADD is diagnosed if a child under the age of 16 has six or more symptoms of inattention (five or more for older teens) for at least six consecutive months but no signs of hyperactivity/impulsivity. Similarly, the Predominantly Hyperactive-Impulsive subtype of ADHD is diagnosed if a child under the age of 16 has six or more hyperactive/impulse symptoms for at least six months (five or more for older teens) (Brennan, 2016). This form is more easily identified than the inattentive type. The criteria for the Combined type of ADHD requires both the inattentive and hyperactive-impulsive criteria to be met.

As Greenspan (2009) has pointed out diagnosing ADHD may not be simple at all. Although inattention, hyperactivity, and impulsivity are important symptoms when considering an ADHD diagnosis, these are the overt symptoms, and the problem is rooted in deeper elements, such as motor planning and sequencing, overreaction, and visual-spatial difficulties.

Much of the difficulty in diagnosing ADHD in children arises from the fact that many of the symptoms are similar to behavior that is developmentally appropriate for young children. How Buitelaar, Kan and Asherson (2011) put it, it is natural for a 4-year-old child to exhibit hyperactivity and impulsivity. Diagnosing ADHD in very young children is reliant on the extent to which the reported symptoms are more pronounced or prevalent than in other children of the same age. In other words, the diagnosis is based on whether the symptoms are inconsistent with the child's developmental level.

The literature contains different opinions on the age at which ADHD should be diagnosed. Brock, Jimerson and Hansen (2009) have stated that ADHD is least likely to be diagnosed among children under 9 years of age. Brennan (2016) has argued that some symptoms that make up the impairment have to be present before the age of 7. This corresponds to the view of the American Psychiatric Association (2000), which has stated that symptoms have their onset before the age of 7 years. Kinman (2017) suggested that a child with ADHD should display several symptoms before the age of 12.

In addition to the age limits and symptoms presented, Kinman (2017), using information from the American Psychiatric Association (2000), listed the following criteria for diagnosing ADHD:

— the child or adult must exhibit the above-described symptoms in two or more different settings, such as at school, at home, with friends, or during other social activities;

— there must be clear evidence that the symptoms interfere with the child or adult's functioning at school, work, or in social situations;

— the child or adult must exhibit symptoms that are not explained by another condition, such as mood or anxiety disorders;

— the child or adult must have symptoms that are considered clinically significant.

There is no single, simple, definitive test for ADHD. Making a diagnosis may require the use of both subjective and objective measures. The subjective aspect is a specialist assessment, usually done by a child psychiatrist or specialist pediatrician. According to the Royal College of Psychiatrists (2017) the diagnosis is made by identifying patterns of behavior, observing the child, and obtaining reports of behavior at home and at school. Sometimes, however, an objective computerized test may be performed to aid diagnosis. Some children also need special tests administered by a clinical or educational psychologist.

As Jacobelli and Watson (2008) have reported, one of the widely used ADHD assessments is called the Conners Continuous Performance Test. The latest version, Conners Continuous Performance Test 3rd Edition (Conners CPT 3™) assesses attention-related problems in individuals aged 8 years and older. During the 14-minute, 360-trial administration, respondents are required to respond to any letter that appears, except the nontarget letter "X." By indexing the respondent's performance in different areas of attention, such as inattentiveness, impulsivity, sustained attention, and vigilance, the Conners CPT 3 can be a useful adjunct to the process of diagnosing ADHD, as well as other psychological and neurological attention-related conditions (Conners, Staff, 2000).

## Conclusion

The aim of the paper was to provide an overview of the assessment and diagnosis of ADHD. We believe that it is crucial to understand the importance and usefulness of diagnosing a child. The hope is that by doing, so we will improve our ability to help the child learn, develop, and relate to others in a happy and healthy way. After all, as Jacobelli and Watson (2008) see it, a diagnosis is nothing more than a label placed on the child, based on a group of observable or otherwise verifiable behaviors or other types of symptoms. If we know that a child who has that particular group of symptoms responds positively to certain kinds of treatment or interventions, then the diagnosis can be used to the child's advantage. All in all, the proper

diagnosis leads to the treatment that best suits the children´s needs so that they may benefit from it.

Acknowledgment: This work was supported by the Slovak Research Agency under grant number VEGA 1/0691/16.

## Bibliography

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders.* 4th ed., revised. Washington, D. C.: American Psychiatric Association.

Barkley, R. A. (1990). *Attention Deficit Disorders*. In: M. Lewis, S. M. Miller (eds.), *Handbook of Developmental Psychopathology*, pp. 65–75.

Bragdon, A. D., Gamon, D. (2006). *Když mozek pracuje jinak. Specifické mozkové poruchy nebo různé odchylky od běžného fungování mozku.* Praha: Portál.

Brennan, D. (2016). *ADD vs. ADHD*, WebMD Medical Reference, https://www.webmd.com/add-adhd/childhood-adhd/add-vs-adhd#1

Brock, S. E. (1999). *Diagnosis of Attention-Deficit/Hyperactivity Disorder (ADHD) in Childhood*, "The California School Psychologist", 4 (1), pp. 18–29.

Brock, S. E., Clinton, A. (2007). *Diagnosis of Attention-Deficit/Hyperactivity Disorder (AD/HD) in Childhood: A review of the literature*. "The California School Psychologist", 12 (1), pp. 73–91.

Brock, S. E., Jimerson, S. R., Hansen, R. L. (2009). *Developmental Psychopathology at School. Identifying, Assessing, and Treating ADHD at School*. NY: Springer.

Buitelaar, J. K., Kan, C. C., Asherson, P. J. (eds.). (2011). *ADHD in Adults. Characterization, Diagnosis, and Treatment.* Cambridge: Cambridge University Press.

Conners, C. K., Staff, M. H. S. (eds.). (2000). *Conners' Continuous Performance Test II: Computer Program for Windows Technical Guide and Software Manual.* North Tonwanda–NY: Mutli-Health Systems.

Connors, C. (2006). *Attention Deficit Hyperactivity Disorder: The latest assessment and treatment strategies*. Kansas City: Compact Clinicals.

Greenspan, S. I. (2009). *Overcoming ADHD. Helping Your Child Become Calm, Engaged, and Focused-Without a Pill*. Cambridge, Ma.: Da Capo Press.

Jacobelli, F., Watson, L. A. (2008). *ADD/ADHD Drug Free: Natural alternatives and practical exercises to help your child focus.* NY: AMACOM.

Kinman, T. (2017). *What's the Difference Between ADHD and ADD?*, https://www.healthline.com/health/adhd/difference-between-add-and-adhd#severity

Koonce, D. A. (2007). *Attention Deficit Hyperactivity Disorder Assessment Practices by Practicing School Psychologists*. "Journal of Psychoeducational Assessment", 25 (4), pp. 319–333.

Rapoport, E. M. (2009). *ADHD and Social Skills*. Maryland: Rowman & Littlefield Education.

Reich, W., Huang, H., Todd, R. D. (2006). *ADHD Medication Use in a Population-Based Sample of Twins*. "Journal of the American Academy of Child & Adolescent Psychiatry", 45 (7), pp. 801–807.

The Royal College of Psychiatrists (2017). *Attention-deficit Hyperactivity Disorder and Hyperkinetic Disorder: Information for parents, carers and anyone working with young people*.