

ADHD

According to Shire (2018) The (DSM V) classification of ADHD shows that symptoms present in three different ways.

Inattentive presentation: The child will appear easily distracted, find difficulty in following verbal instruction and find great difficulty in completing tasks and organising themselves and keeping track of their work/belongings.

Hyperactive Presentation: The child will have difficulty sitting still and often fidget or run around when it's not appropriate. Children can be very disruptive and find difficulty in stopping talking, taking turns and waiting until the appropriate time to speak in conversation.

Combined presentation: The child will experience a mix of symptoms from both of the above presentations.

Shire (2018) expands upon this stating that children with ADHD can also suffer from other conditions such as Oppositional Defiant Disorder (ODD), Conduct Disorder, Autism Spectrum Disorder, Anxiety/ depression and sleep Problems. Lloyd (2014a) expands upon this further stating That children with ADHD may also suffer from conditions such as sensory processing difficulties, dyslexia, dyspraxia and dyscalculia. Lloyd (2014b) believes that practitioners need to be mindful that children with ADHD are susceptible to anxiety and depression as this has a further impairment on their cognitive function. Lloyd (2014b) ascertains that reducing learner anxiety for children with ADHD is essential for learner attainment and confidence.

Diagnosis

According to NHS (2021) in order to diagnose a child with ADHD the child must be displaying symptoms for a period that is longer than six months, displaying symptoms before the age of 12 and in more than one setting. Symptoms must also be causing them to face significant difficulty in either a social or academic level. Shire (2018) agrees with this method of diagnosis and expands on this stating that in order to be diagnosed children's symptoms must meet the (DSM V) criteria for ADHD. However Mowlema *et al.* (2019) believes this criteria is biased to the diagnosis of boys, leaving girls at risk of being missed. This is due to the (DSM V) criteria being based on observations of boys, similarly the DSM – 5 field studies included a greater percentage of male participants. This according to Mowlema *et al.* (2019) leads to only the most severe cases in girls or those with typically 'male' presenting symptoms being diagnosed.

Interventions

Beker *et al.* (2014) and XianHo *et al.* (2017) both explore the benefits of exercise for children with ADHD and agree that exercise can be effective in alleviating the symptoms of ADHD. This can be expanded upon by Barile (no date) who ascertains that exercise improves learning on three levels. Firstly improving alertness and attention, secondly preparing nerve cells to bind together which is the cellular level for learning new information and thirdly it encourages the hippocampus to create new nerve cells making retaining information easier. This line of thinking can be expanded upon further by Horewood (2009) who suggests the use of sensory circuits as an intervention for children with sensory processing difficulties.

Sensory Circuits

Sensory circuits are a fun physical activity to help children to achieve the correct level of alertness for learning. Horewood (2009) states that the circuit must be completed in a particular order, starting with alerting activities, then an organising phase and finally a calming phase lasting no more than 20 minutes in total.

Alerting

The aim is to provide the child with vestibular and proprioceptive stimulation and can include jumping, bouncing, running skipping or rolling.

Organising

Involves activities that help improve focus and attention by using skills such as balancing, sensory processing and timing. These activities could be wobble boards, balancing, throwing at target or weaving in and out of cones.

Calming

This is possibly the most important section and involves activities that ensure the child is calm and ready to learn. Activities can include deep pressure, weighted blankets, massage or swinging/rocking.

Fresno Pacific University (2021) also suggests that daily nature walks could be a form of exercise to add into the daily routine to improve concentration for all students. The use of nature walks could illicit double the benefits of exercise alone as studies by Taylor and Kuo (2009) and Kuo and Taylor (2011) have shown that daily doses of nature can be effective in the treatment of ADHD by reducing the attention deficit symptoms in participants. Taylor and Kuo (2009) suggest that schools could add in natural elements to the playground and classrooms to provide restoration from symptoms, indoors teachers may wish to create a calm area with aquariums or terrariums and indoor plants.

Barriers to Learning

McKinley and Stormont (2008) Ascertain that academic underachievement is the most prevalent characteristic associated with ADHD, children with ADHD are at increased risk of achieving lower grades in academic subjects such as Maths and English than their typically developing peers. ADHD does not however correlate with low intelligence, Lloyd (2014a) Believes the key to academic achievement for children with ADHD is to address the emotional distress they face in school. Schultz (2021) explores this further believing that repeated patterns of failure, frustration and fear in school, create stress that builds up over time. This build up is not only neurologically damaging it also creates patterns of misbehaviour seen in children with ADHD, with children lashing out or acting silly preferring to be viewed as a troublemaker than unintelligent. These behaviours can often lead to teachers labelling the child as wilful or oppositional, Smyth (no date) supports this thinking stating that teachers' attitudes to children with intellectual difficulties were different to those with behavioural and emotional difficulties, showing less positive attitudes to the inclusion of children with such difficulties. Attitudes such as this are engrained into the school system, Robinson (2013) believes a total overhaul of how children are taught is needed, stating that the current system is detrimental to children's success due to the view that there are people who are academic and those who are not. ADHDwise (2021) supports this view stating that children with ADHD are exposed to 20,000 more negative comments by the age of 12 than their typically developing peers. That equates to 4 daily messages conveying that they are not good enough largely due to issues that are out of their control. Lloyd (2014a) expands on this further stating that due to the threshold in place to access child and adolescent mental health services (CAMHS) many children who need additional support to self manage their mental health and learning difficulties cannot access services. Lloyd (2014a) believes that schools need to understand the needs and vulnerabilities of children with ADHD, placing a higher value on teacher training on the impact of mental health on behaviour or children with ADHD will continue to face a lifetime of disadvantage and underachievement.

References

- ADHDwise (2021) *ADHD is not a label*. Available at: . (Accessed: 10th May 2022).
- Barile, N. (no date) *Exercise and the Brain: How Fitness Impacts Learning*. Available at: (Accessed: 2nd May 2022).
- Becker *et al.* (2014) 'Physical Activity, Self-Regulation, and Early Academic Achievement in Preschool Children', *Early Education and Development*, (25)1, pp. 56-70. DOI:
- Boyes Turner (2017) *Parents to blame for misdiagnosis of special educational needs?*. Available at: (Accessed: 4th May 2022).
- Derks, E. M., Hudziak, J. J. and Boomsma, D. I. (2007) 'Why More Boys Than Girls With ADHD Receive Treatment: A Study of Dutch Twins', *Twin Research and Human Genetics*, Cambridge University Press, 10(5), pp. 765–770. Available at: (Accessed: 5th May 2022).
- Ding, W. *et al.* (2019) 'Oppositional Defiant Disorder Symptoms and Children's Feelings of Happiness and Depression: Mediating Roles of Interpersonal Relationships', *Child Indicators Research*, 13, 215–235.
- Fresno Pacific University (2021) *The Benefits of Physical Activity and Exercise in the Classroom*. Available at: (Accessed: 5th May 2022).
- Holland, J. Pell, G and KIDS (2019) 'Children with SEND and the emotional impact on parents', *British Journal of Special Education*, 45(4), pp. 393-411. DOI:
- Horewood, J (2009) *Sensory Circuits: A Sensory Motor Skills Programme for Children*. Cheshire: LDA.
- Kuo, F. E. & Taylor, A. F. (2011) 'A potential natural treatment for attention-deficit/hyperactivity disorder: evidence from a national study'. *American journal of public health*, 94(9), pp.1580–1586. .
- Lloyd, T. (2014a) *ADHD and the new SEN Code*. Available at: (Accessed: 3rd May 2022).
- Lloyd, T. (2014b) *Teaching pupils with ADHD*. Available at: (Accessed: 4th May 2022).
- McKinley, L. A. and Stormont, M. A. (2008) 'The School Supports Checklist: Identifying Support Needs and Barriers for Children with ADHD', *TEACHING Exceptional Children*, 41(2), pp. 14–19. DOI:10.1177/004005990804100202.
- Mowlema, F. *et al.* (2019) 'Do different factors influence whether girls versus boys meet ADHD diagnostic criteria? Sex differences among children with high ADHD symptoms', *Psychiatry Research*, 272, pp. 765-773. .
- NHS (2021) *Diagnosis - Attention deficit hyperactivity disorder (ADHD)*, Available at: (Accessed: 3rd May 2022).
- O'Regan, F. (2012) *Managing ADHD in the classroom*. Available at: (Accessed: 13/05/2022).
- Play Power Canada (2019) *How to Promote Physical Activity at Your School*. Available at: (Accessed: 2nd May 20

Robinson, K. (2013) *Changing Education Paradigms - ADHD, Creativity and the Education System*. [video] Available at: (Accessed: 12th May 2022).

Sager, J. (2022) *13 Quick and Fun Daily Classroom Fitness Activities*. Available at: (Accessed: 2nd May 2022).

Sayal, K., Goodman, R. and Ford, T. (2005) 'Barriers to the identification of children with attention deficit/hyperactivity disorder', *Department of Child Psychiatry*, 47(7), pp. 744-750.

Schultz, J. (2021) *Why School Stress Is Devastating for Our Children*. Available at: (Accessed: 12th May 2022).

Shire (2018) *Teaching and Managing Students With Systems, strategies solutions*. Available at: (Accessed: 4th May 2022).

Smeets, E. & Roeleveld, J. (2016) 'The identification by teachers of special educational needs in primary school pupils and factors associated with referral to special education', *European Journal of Special Needs Education*, 31(4), pp. 423-439. DOI:10.1080/08856257.2016.1187879

Smyth, S. (no date) *Does training matter? Exploring Teachers' Attitudes towards the Inclusion of Children with Autism Spectrum Disorder in Mainstream Education in Ireland*. Available at: (Accessed: 3rd May 2022).

Taylor, A. and Kuo, F. (2009) 'Children With Attention Deficits Concentrate Better After Walk in the Park', *Journal of Attention Disorders*, 12(5), pp. 402-409.

Wigal, S. B. *et al.* (2013) 'Exercise: Applications to Childhood ADHD', *Journal of Attention Disorders*, 17(4), pp. 279-290. DOI: .

XianHo, C. *et al.* (2017) 'Managing childhood and adolescent attention-deficit/hyperactivity disorder (ADHD) with exercise: A systematic review', *Complementary Therapies in Medicine*, 34, pp. 123-128, .