BEHAVIOURAL, EMOTIONAL AND SOCIAL DEVELOPMENT
UNIT 15
ATTENTION DEFICIT DISORDER (ADHD)

Learning Objectives:

Teachers to

- Reflect on the evidence for possible causes of ADHD
- Consider the role of medication in managing the behaviour of pupils with ADHD; and
- Consider ways in which the learning environment can be made more effective for children with ADHD.

ONLINE RESOURCES

The content and tasks throughout these PDFs are supported by online resources that are designed to facilitate and supplement your training experience.

Links to these are signposted where appropriate. The resources use graphics and interactive elements to:

- Highlight salient points
- Provide at-a-glance content summaries
- Introduce further points of interest
- Offer visual context
- Break down and clearly present the different stages and elements of processes, tasks, practices, and theories

The online resources offer great benefits, both for concurrent use alongside the PDFs, or as post-reading revision and planning aids.

Please note that the resources cannot be used in isolation without referencing the PDFs. Their purpose is to complement and support your training process, rather than lead it.

You should complete any learning or teaching tasks and additional reading detailed in this PDF to make full use of the Advanced training materials for autism; dyslexia;

speech, language and communication; emotional, social and behavioural difficulties; moderate learning difficulties.

To find out more about the resources, how they work, and how they can enhance your training, visit the homepage at: www.education.gov.uk/lamb

The first resource for this unit can be found here:
www.education.gov.uk/lamb/besd/adhd/intro

AD/HD (Attention Deficit/Hyperactivity Disorder) is a medical diagnosis (possibly involving brain dysfunction), in which individuals have difficulty in controlling impulses, inhibiting their behaviour and sustaining attention span. This leads to a variety of educational, behavioural, social and other related difficulties.

See online resource:
www.education.gov.uk/lamb/besd/adhd/overview

In the home and in the classroom this often manifests itself in terms of problems with self-control, following rules and organisation. Children present with a wide range of difficulties and each child's profile is very individual.

The Diagnostic and Statistical Manual of Mental Disorders, DSM IV TR (2000) describes the essential features of the disorder as "*a persistent pattern of inattention and /or hyperactivity/impulsivity that is more frequent and severe than is typical observed in individuals at a comparable level of development*." The manual lists three subtypes:

- Mainly inattentive (without hyperactivity)
- Mainly hyperactive (without attention deficit)
- Combined type AD/HD

There is some disagreement about the prevalence of ADHD. Reports vary from between 4 per cent to 10 per cent of children in UK. (NICE guidelines 2010)
These differences may reflect a lack of agreement in diagnosis.
However, ADHD is said to be the most common childhood-onset behavioural disorder, with boys more likely to be affected than girls. If the 10 per cent estimate is accepted that means that every teacher can expect to include 2 or 3 children with ADHD in his/her classroom.

See online resource:
www.education.gov.uk/lamb/besd/adhd/prevalence

Causes of ADHD

Research into the causes of AD/HD has focused primarily on the search for neurological function**.** It is suggested that there are differences in activity in the frontal lobes of the brain, which is the area known to be associated with control of concentration, time awareness, and impulse control.

The theory is that people with ADHD may have unusually low levels of activity in the neurotransmitter, dopamine, in this part of the brain. A neurotransmitter is a chemical that transmits information across the junction (synapse) that separates one nerve cell from another nerve cell. This messaging failure results in a poor response to circumstances in which skills such as concentration, time awareness and impulse control are required.

Russell Barkley (1998) suggests that these neurologically based problems of response inhibition lead to a deficiency in some key 'executive functions' these include:

Working memory – which is necessary in order to retain and manipulate information long enough to plan a response

Internalised speech – which is the process of self-talk, during which possible consequences and implication of behaviour are considered

Motivational appraisal- which provides information about emotional associations and the extent to which the impulse to act is likely to produce the outcome we want.

Behavioural synthesis – which enables us to plan new behaviours as an outcome of analysis past behaviours

Apparent difficulty with these functions is typical of the behaviour of many people who are diagnosed with ADHD and all can have detrimental consequences for educational performance.

See online resource:
www.education.gov.uk/lamb/besd/adhd/executive-function

Medication (Central nervous system (CNS) stimulants)

The use of psycho-stimulants can raise chronically low levels of activity of the neurotransmitter, dopamine, and so regulate the message-carrying process Methylphenidate (trade name Ritalin) is the most widely psycho-stimulant prescribed for ADHD.

In the short term, use of psycho-stimulant medication results in improvements in focus, attention span and impulse control in approximately 80 per cent of children who take it (Greenhill, L 1998). However, these improvements are only maintained if the child continues to take the medication.

See online resource:
www.education.gov.uk/lamb/besd/adhd/medication

Concerns about medication

Side effects: the most common are reduced appetite/weight loss, mild sleep disturbance, and headache. These must be closely monitored and reported to a G.P. There is some evidence of erratic dosing which may account for some side effects. This needs careful monitoring and parental awareness.
Ritalin manufacturers recommend that it is only used to treat children of 6 years and over, and should be discontinued periodically to assess the child's condition, but these guidelines are not always followed.

Causes of ADHD

Evidence for a genetic cause comes from familial studies[1]. (Tannock 1998) There is evidence that ADHD is more common in biological relatives of children with ADHD than it is in the biological relatives of children who do not have ADHD.

The problem with studies such as these is that it is difficult to control for environmental factors which are often shared by family members and which are likely to have an influence on behaviour. However adoption studies have shown that familial transmission occurs through biological, but not adoptive relationships; and twin studies suggest that genes may account for about 75% of the disorder's variability in the population (Faraone et al., 2005)

A great deal of research has been carried out on the genetic factors that may play a role in ADHD. However it remains difficult to implicate any specific gene in ADHD beyond reasonable doubt, due to the diversity and complexity of the condition. Banschewski, (2010) comments "*To date, the findings from genetic studies in ADHD have been somewhat inconsistent and disappointing. Specific gene-based studies have similarly only explained a small percentage of the genetic component of ADHD. Despite the high heritability of the disorder, genome-wide studies have not shown extensive overlaps.*"

Because of the obvious contribution made by family, parenting style and school experience it seems likely that ADHD is a complex condition in which genetic and biological factors interact with psychological and social factors. "*ADHD is not simply a biomedical issue. It is a multi-faceted problem having a bio-medical component a psychological component and a social component"* (Cooper 2002)

Diagnosis

Diagnosis of ADHD is made by a qualified medical clinician. An accurate assessment requires evidence of pervasiveness and should be based on detailed information from parents, teachers, educational psychologists and others professionals. (BPS 2000)
The information from schools and parents is often based on behaviour rating scales. These questionnaires are an assessment of the child's observable behaviours, and the criteria used are based on frequency descriptors (for example: often, seldom, never). There are some problems with this type of assessment as reliable diagnosis depends on how consistently those who are completing the questionnaire share a common understanding of the behaviour. How often is 'often'?
When we look at the behaviours that contribute to the rating scale, such as "restless" or "does not wait for directions" it is clear that the extent to which these behaviours will be deemed problematic is context -dependent. There are likely to be different perceptions of the behaviour at home, and in school, in the classroom or in the playground. This emphasises the importance of providing opportunity for meaningful dialogue between all those involved in the diagnosis, including the child.

Educational interventions.

See online resource:
www.education.gov.uk/lamb/besd/adhd/educational-interventions

Lesley Hughes (2007) discusses ways in which teaching styles can be adapted to cater to the different cognitive characteristics which are presented by children with ADHD.
For example, based on Russell Barkley's theory of cognitive deficiencies in relation to executive function, she suggests teaching pupils to use internal dialogue to regulate their thinking and behaviour.
This can take the form of rehearsing particular thinking routines to help to moderate impulsive behaviour, first through verbalisations, and then though internal dialogue.

Cognitive strategies are those which involve pupils in thinking about their own learning process and how they can be improved. These might include:

- Helping the pupil to understand how his/her behaviour affects others and discussing how it might be adapted.
- Providing direct training in behaviour that is acceptable in the classroom and the skills of positive interaction, e.g. gaining attention politely.
- Providing opportunities for pupils to remove themselves from classroom situations which they find distracting to a pre-determined quiet area.
- Training pupils to use questioning techniques rather than assertion. This can help pupils with ADHD to modify the tendency to dominate verbal interactions with peers. (Zentall 1995)

A number of strategies are designed to make use of the cognitive strengths of children with ADHD, for example in the provision of visual-motor tasks.

An example of this is asking pupils to write answers to teachers' questions on cards and hold them up for inspection by the teacher instead of calling out. This helps to reduce the period of delay between the competition of the task and the receipt of teacher feedback.

A study by Zentall and Smith (1992) found that visual-motor tasks such as this were associated with improved performance and behaviour of pupils with ADHD.

Increasing the opportunities for on-task verbal participation for pupils with ADHD, for example by reading passages aloud rather than silently, has also been shown to improve performance. (Zentall, 1995)

Studies reviewed by Pellegrini and Horvat (1995) found that levels of on-task behaviour increased when periods of 'seatwork' were punctuated by frequent periods in which pupils were required to engage in structured physical activity.

Other strategies which take into account the cognitive styles of pupils with ADHD, such as giving brief and clear sequences of instruction, accompanying verbal instruction with visual cues and providing resources that pupils can use for *reminders* of the 'what' and 'how' of the task, have all been shown to be associated with improved pupil performance both in academic achievement and behaviour (Zentall, 1995).

See online resource:
www.education.gov.uk/lamb/besd/adhd/cognitive-strengths

Reframing

Children with ADHD often become locked into cycles of negativity. Reframing involves finding a new and positive way of thinking about the problem behaviour.

"*Children with ADHD (like all children) perform most effectively when tasks are tailored to harness positive aspects of their characteristics and so prevent them from becoming dysfunctional*[2] *(Cooper 2002)*

Tasks

1. Listen to the audio clip "BESD Perspectives and Strategies for ADHD" .

   www.education.gov.uk/lamb/besd/adhd/perspectives-strategies-audio

   Note any reflections in your learning log.

2. With a particular ADHD pupil in mind make a list of positive characteristics (for example, enthusiasm for new tasks). List ways in which a teacher might be able to harness these positive characteristics to help learning in the classroom.

3. Explore the process of diagnosis for a pupil with ADHD in your setting. What form did it take? Who was consulted?

4. Do you have any pupils who are taking medication for ADHD? If so try to make an opportunity to observe the behaviour before and after taking medication. How would you describe the differences? Can you find out the pupil's attitude to taking medication?

Recommended reading

Hughes, L. & Cooper, P. (2007) *Understanding and Supporting Children with ADHD: Strategies for teachers, parents and other professionals.* London: Paul Chapman

References

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