

EDUCATIONAL PSYCHOLOGY

SEN/ALN



Segregation versus Inclusion



Historically, people with specific learning disabilities have been **segregated from mainstream school** practices (Atkinson et al. 1997).

Similarly, several people with sensory impairments as well as physical disabilities have been **excluded from society** (Humphries and Gordon, 1992).

Segregation = **severe social practices like sterilization and incarceration**. Such practices had been observed due to **misconceptions** of physical and intellectual characteristics (Oliver and Barnes, 1998).

The practice of separating the disabled originated from the mistaken notion that **human bodies must conform to a certain standard or norm**

Think

5 reasons
why children
should be
segregated

5 reasons
why children
should not be
segregated



Segregation versus Inclusion



In an article written by Dunn (1968), the segregation of special children involves many issues of concern, which were generalized into four main points of argument;

- students' **academic achievement**
- the detrimental effects of **labeling** associated with placement outside the mainstream
- the **racial imbalance** in special education
- recent advances in **individually paced curricula** which would make it possible to accommodate students with disabilities in the regular class.

Educators have argued that exposing children into '**ordinary**' education settings will be **the most effective means of equipping children into better self-supportive adults** in the future (Jenkinson, 1997).

What is inclusion?

Inclusion is about **creating a secure, accepting, collaborating and stimulating school** in which everyone is valued, as the foundation for the highest achievement for all pupils

In an inclusive school:

the inclusive ethos permeates all **school policies** so that they increase learning and participation for all pupils

school practices reflect the inclusive ethos and policies of the school

(adapted from *Index for inclusion*, CSIE)

A duty not to discriminate

Disabled pupils must not be treated less favourably than other pupils in relation to:

admissions and exclusions

education and associated services including:

- - the curriculum
- - teaching and learning
- - the serving of school meals
- - school sports
- - school trips



What are Special Educational Needs (SEN)



A legal term. It describes the needs of a child who has a **difficulty or disability which makes learning harder** for them than for other children their age.

Around **one in five children has SEN** at some point during their school years. Some children - right through their time in school.

SEN covers a **broad spectrum** of difficulty or disability. Children may have wide-ranging or specific problems. Eg, a child might have difficulty with one area of learning, such as letters or numbers. Or they might have problems relating to other children, or to adults.

Having English as a second language is not considered by law to be a SEN.

Think

What are the
different
types of SEN
in today's
classroom?



Types of SEN/ALN

- Moderate learning difficulties
- General learning difficulties
- Severe learning difficulties
- Profound & multiple learning difficulties
- Dyslexia
- Dyscalculia
- Dyspraxia
- Attention Deficit Hyperactivity Disorder
- Autistic Spectrum Disorders
- Hearing impairment
- Visual impairment
- Multi-sensory impairment
- Speech, language and communication difficulties
- Behavioural, emotional and social difficulties
- Specific learning difficulties
- Physical disabilities
- Emotional and behavioural difficulties

The SEND Code of Practice (England) - June 2014



Special Educational Needs
& Disabilities

A key part of the Children and Families Act (2014) which will reform the systems for adoption, looked after children, family justice and SEND.

Statutory guidance from the DfE on duties, policies, procedures and associated regulations in making provision for children and young people with special educational needs and disabilities (SEND).

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/398815/SEND_Code_of_Practice_January_2015.pdf

The Additional Learning Needs and Education Tribunal (Wales) Act 2018



a unified legislative framework to support all children of compulsory school age or below with additional learning needs (ALN) and to support young people with ALN who are in school or further education (FE)

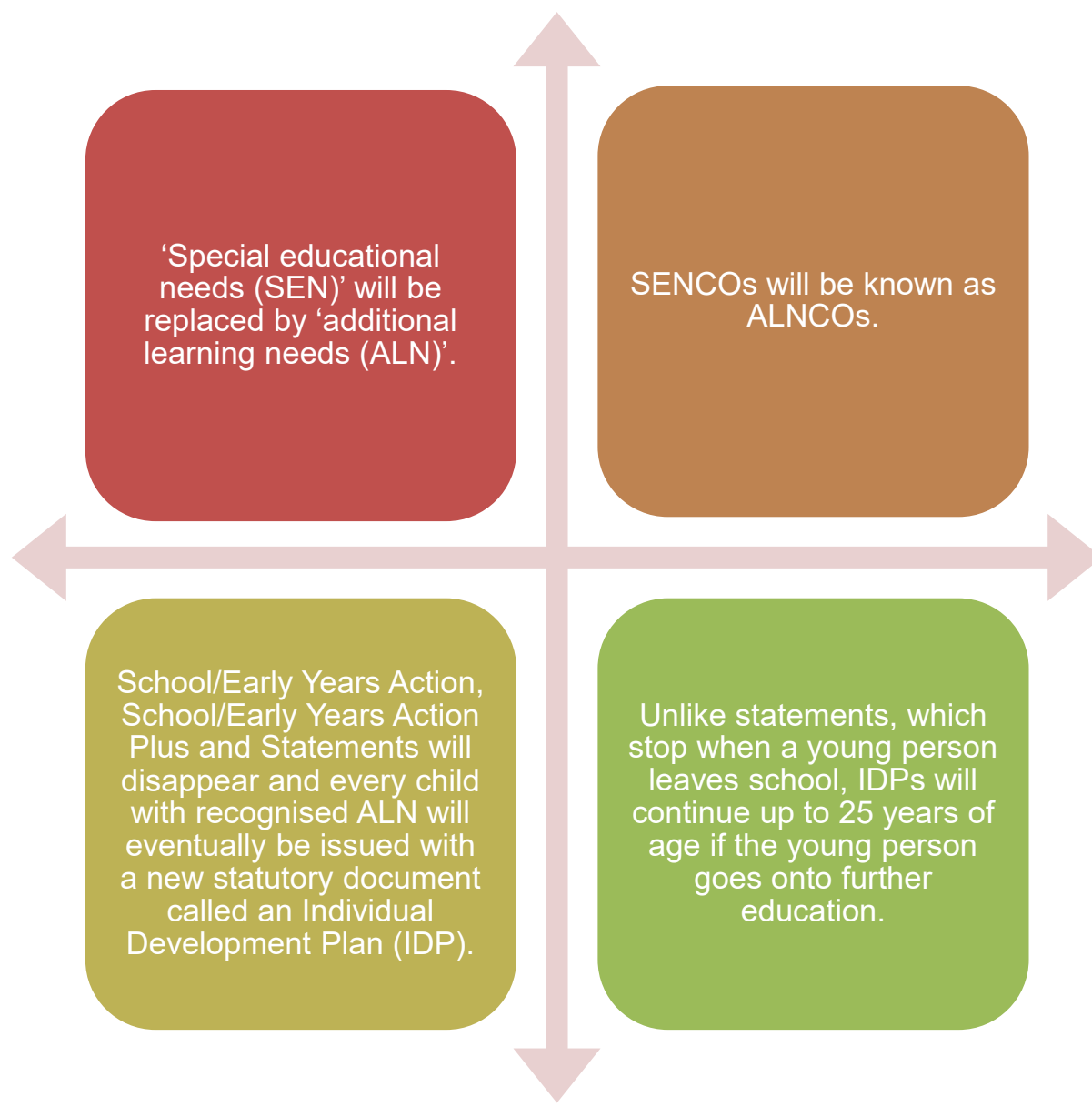
an integrated, collaborative process of assessment, planning and monitoring which facilitates early, timely and effective interventions

a fair and transparent system for providing information and advice, and for resolving concerns and appeals.

It is expected the ALN system set out in the Act will be fully implemented over a three-year period.

The implementation period is expected to run from September 2020 to August 2023.

The Additional Learning Needs and Education Tribunal (Wales) Act 2018



Definitions of SEN/ALN

A child or young person has ALN if they have a **learning difficulty or disability** which calls for special educational provision to be made for him or her.

A child of compulsory school age or a young person has a learning difficulty or disability if he or she:

- has a **significantly greater difficulty in learning** than the majority of others of the same age, or
- has a disability **which prevents or hinders** him or her from making use of educational facilities of a kind generally provided for others of the same age in mainstream schools or mainstream post-16 institutions.

Individual Development Plan

Statements of SEN
and Learning Difficulty
Assessments -
replaced with an
Individual
Development Plan.

This will provide
statutory protection for
children and young
people with Additional
Learning Needs
across Wales.

An IDP should contain the following:

the child or young person's identified needs;

the agreed outcomes for the child or YP

the additional provision required to meet those needs;

an Action Plan that sets out how, when and who will deliver the agreed interventions and how the outcomes of interventions will be measured;

information that is sufficiently robust to form a legally enforceable document.

success criteria and review dates

The right of appeal to the ALN Tribunal against:

a decision not to put an IDP in place;

a refusal of a request to review an IDP;

the content of an IDP, including the description of the child or young person's needs or the educational provision required to meet those needs;

a failure to make available the provision identified through the IDP;

the school named or the type of school named in the IDP

a refusal to review an IDP or to make changes following a review

a failure of the LA to take over responsibility for an IDP following a request to do so

a decision to cease to continue an IDP

all the above would be open to children and young people 0-25 and their families

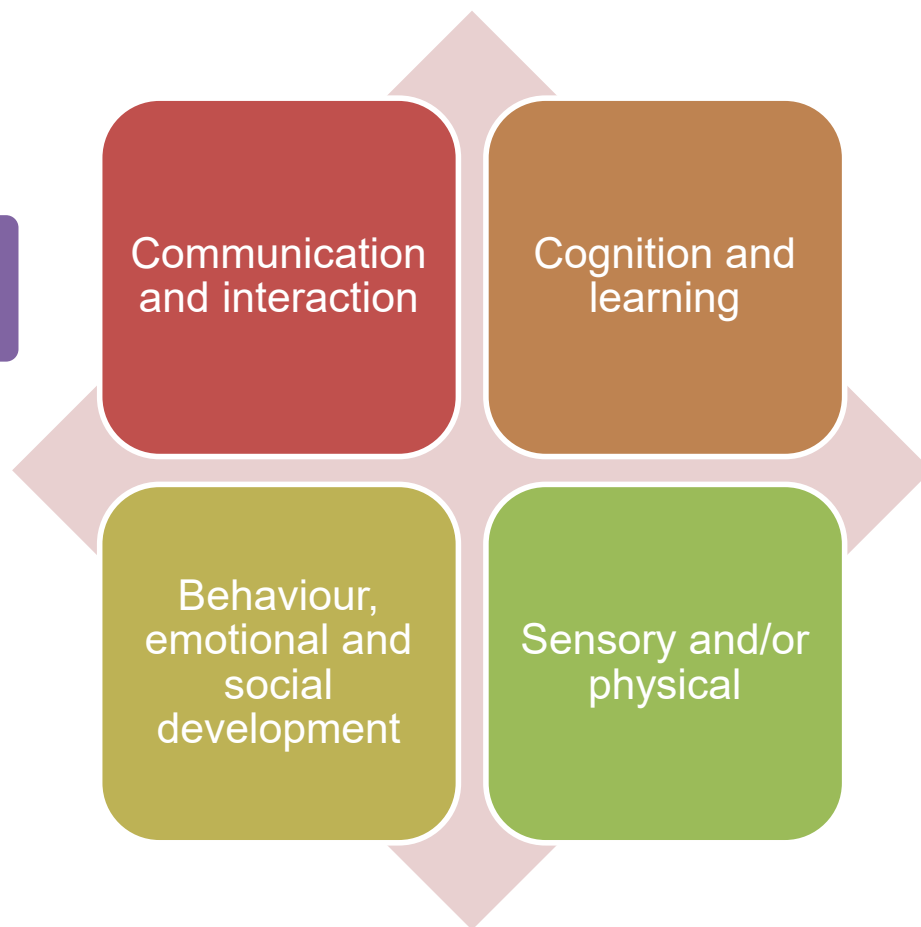
ALN



ALN can affect a child or young person's ability to learn.

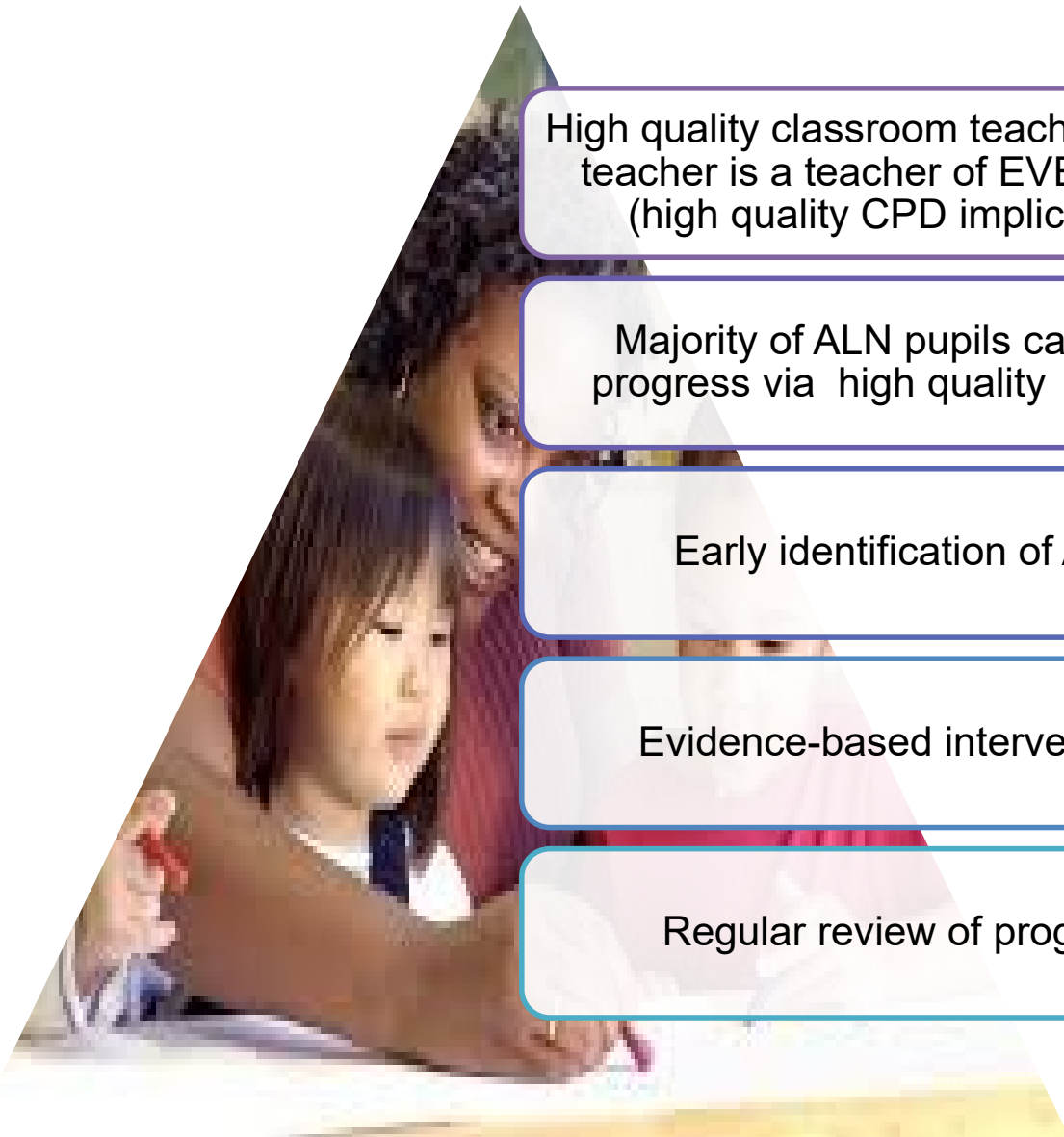
They can affect their:

- behaviour or ability to **socialise**, eg they struggle to make friends
- **reading and writing**, eg because they have dyslexia
- ability to understand things
- **concentration levels**, eg because they have ADHD
- physical ability



The four areas of need

Expectation of schools



High quality classroom teaching – every teacher is a teacher of EVERY pupil (high quality CPD implications)

Majority of ALN pupils can make progress via high quality teaching

Early identification of ALN

Evidence-based interventions

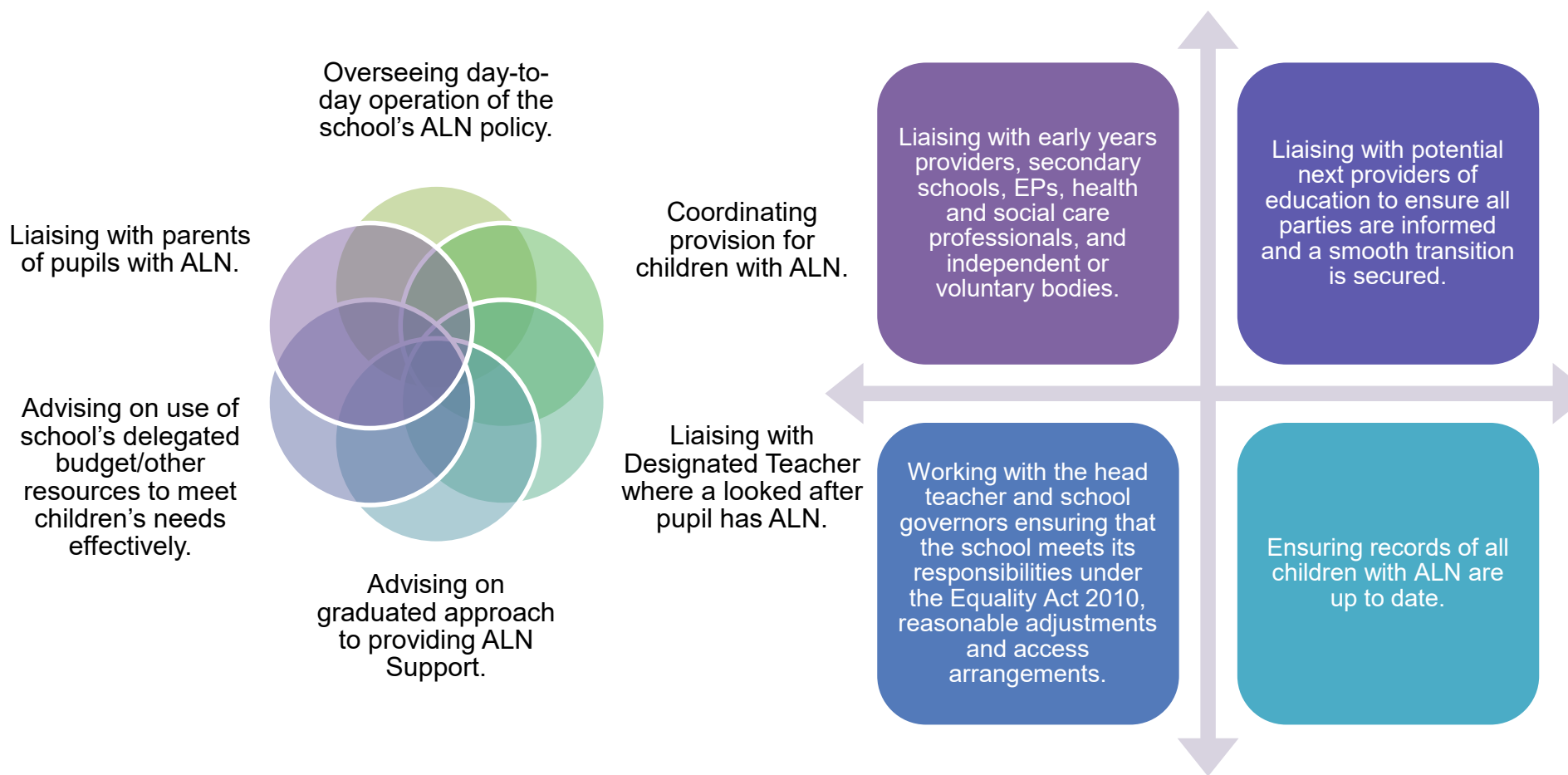
Regular review of progress

Where the ALNCO is newly appointed and where they have not previously been the ALNCO at that or any other relevant school for a total period of more than 12 months, they **MUST** achieve a **National Award in SEN Co-ordination** within **3 years** of appointment.

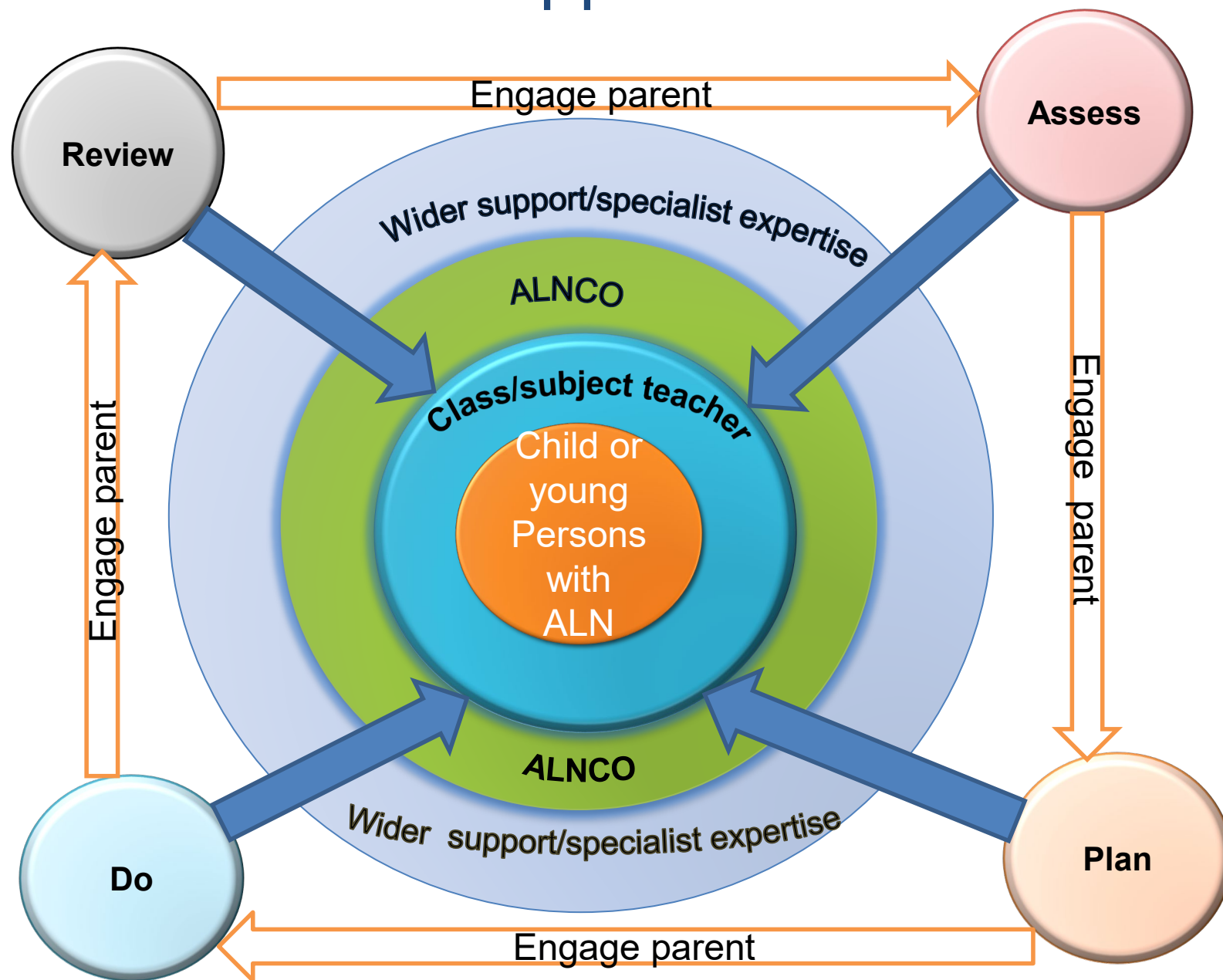
Will be most effective in their role if they are **part of the school leadership team.**

The school should ensure the ALNCO **has sufficient time and resources** to carry out duties.

Key responsibilities of the ALNCO include:



A whole school approach



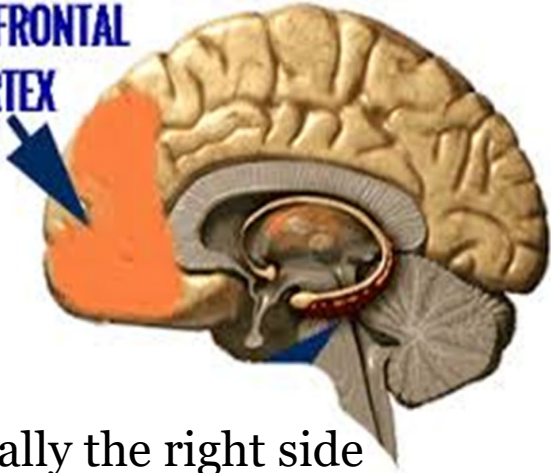
ALN – Welsh government





What is ADHD?

PREFRONTAL
CORTEX



Usually the right side



It is a
neurological
problem!

It's a problem
in the area of
the brain that
allows us to
tune out of what
we shouldn't be
focussing on.

It's also the part
of the brain that
controls our
impulses and
social behaviour

In many
children with
ADHD this part
of the brain has
not fully
developed.

ADHD Classification



International
Classification
of Mental and
Behavioural
Disorders
10th revision
(ICD-10)

Hyperkinetic disorder (HKD)

A persistent and severe impairment of psychological development, characterised by “early onset; a combination of overactive, poorly modulated behaviour with marked inattention and lack of persistent task involvement; and pervasiveness over situations and persistence over time

Diagnostic
and Statistical
Manual of
Mental
Disorders –
5th Edition
(DSM-5)

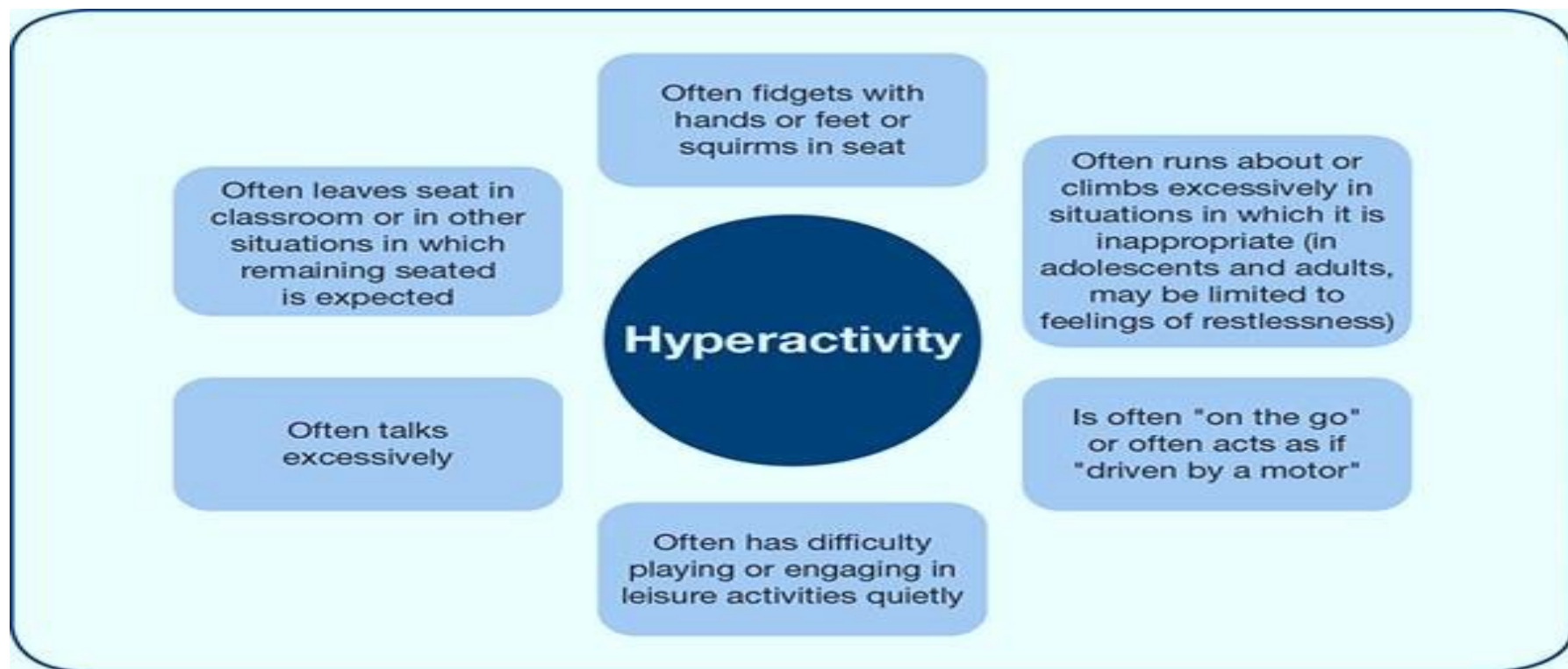
Attention-deficit hyperactivity disorder (ADHD)

"a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development"

<http://www.adhd-institute.com/assessment-diagnosis/diagnosis/#sthash.tCbZmDnY.dpuf>



Figure created from information in the DSM-5™ and ICD-10 classifications



Impulsivity

Often blurts out answers before questions have been completed

Often has difficulty awaiting turn

Often interrupts or intrudes on others



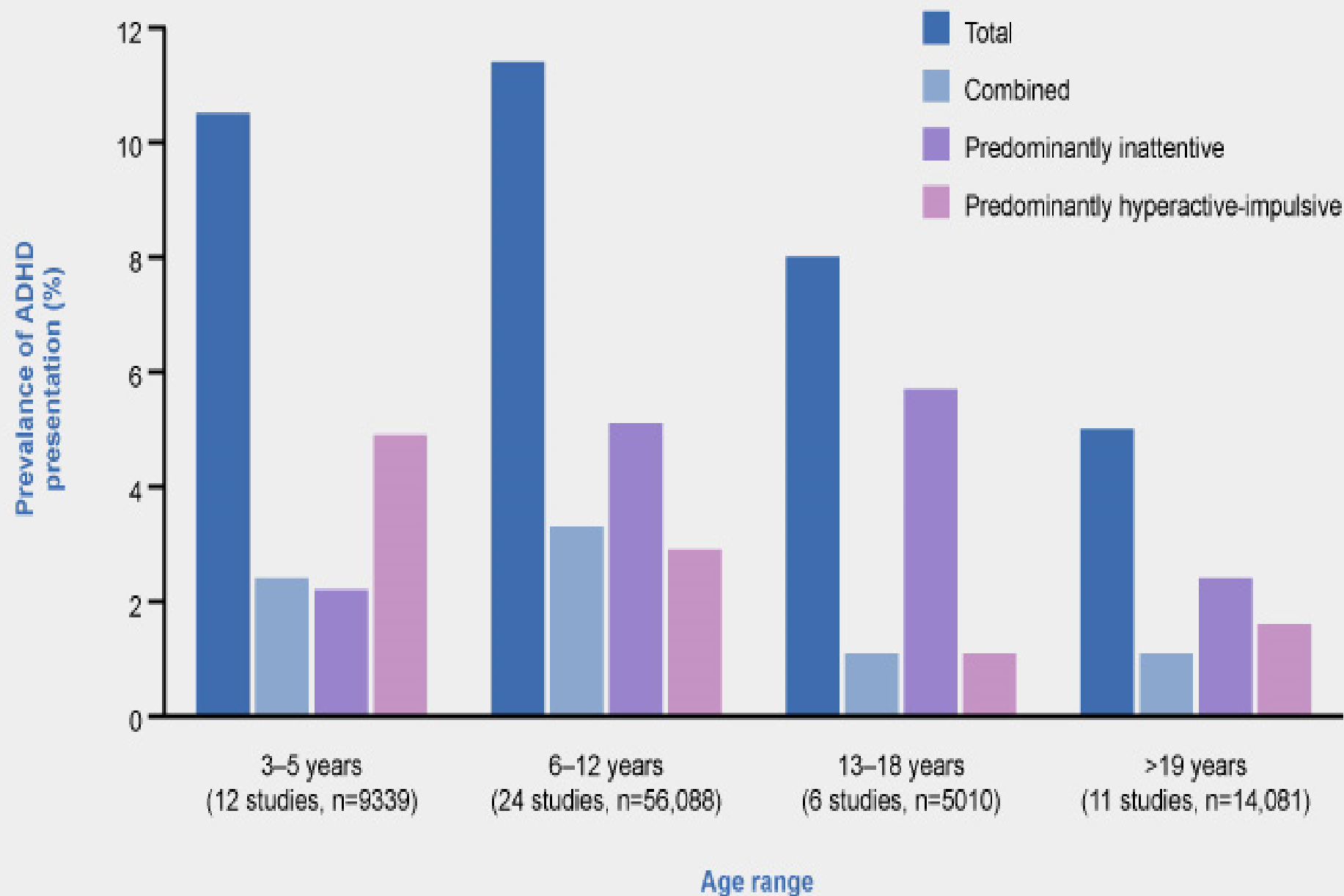
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Presentation of ADHD

<i>Combined</i>	<i>Inattentive</i>	<i>Hyperactive/impulsive</i>
All three core features are present and ADHD is diagnosed when ≥ 6 symptoms of hyperactivity/impulsivity and ≥ 6 symptoms of inattention have been observed for ≥ 6 months	Diagnosed if ≥ 6 symptoms of inattention (but < 6 symptoms of hyperactivity/impulsivity) have persisted for ≥ 6 months	Diagnosed if ≥ 6 symptoms of hyperactivity/impulsivity (but < 6 symptoms of inattention) have been present for ≥ 6 months

Current severity of ADHD

<i>Mild</i>	<i>Moderate</i>	<i>Severe</i>
Few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairments in social or educational functioning	Symptoms or functional impairment between “mild” and “severe” are present DSM-V, APA (2013)	Many symptoms in excess of those required to make the diagnosis, or several symptoms that are particularly severe, are present; or the symptoms result in marked impairment in social or educational functioning



ADHD: Prevalence and Demographics - UK



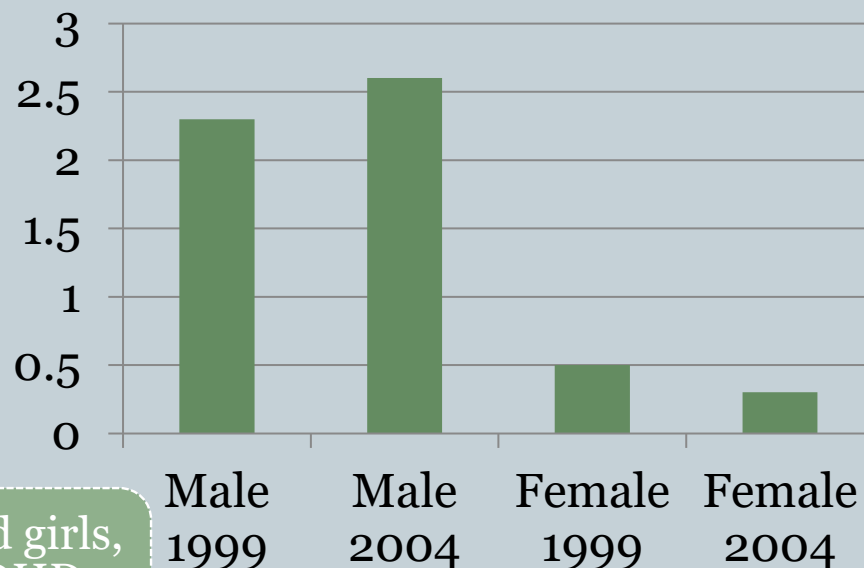
Between the ages of 5 and 15 years - 3.62% of boys and 0.85% of girls had ADHD. (Ford et al., 2003)

The wide variation - the lack of a strict definition, lack of precise and objective methods for assessment, geographic differences.



- same definitions of ADHD for both boys and girls, and usually find more boys than girls with ADHD (a ratio of about 3 to 1).

Sex ratios vary widely - referral bias. Males are more likely to have behaviour and conduct problems and thus more likely to be referred for psychiatric follow-up (Barkley, 1988)



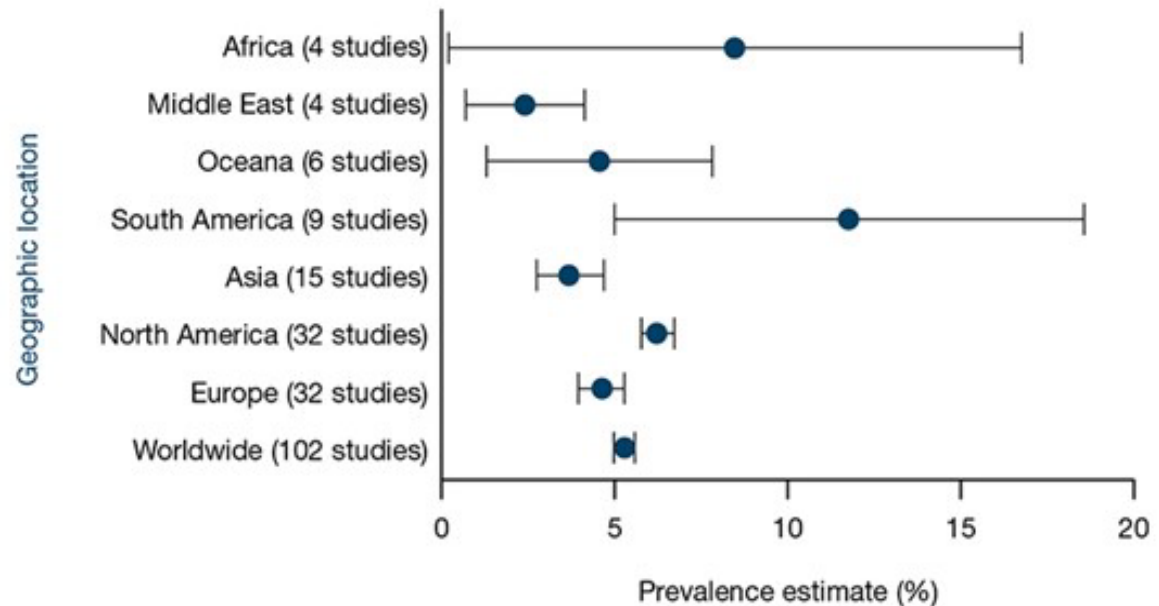
Children and Families Bill, 2013

Geographical location

DSM-V suggests that cultural attitudes towards the interpretation of behaviour may contribute to differences in prevalence estimates across studies

Meta-analysis of studies (n=102) - aged ≤ 18 years varied.

Prevalence for Europe was just under 5%



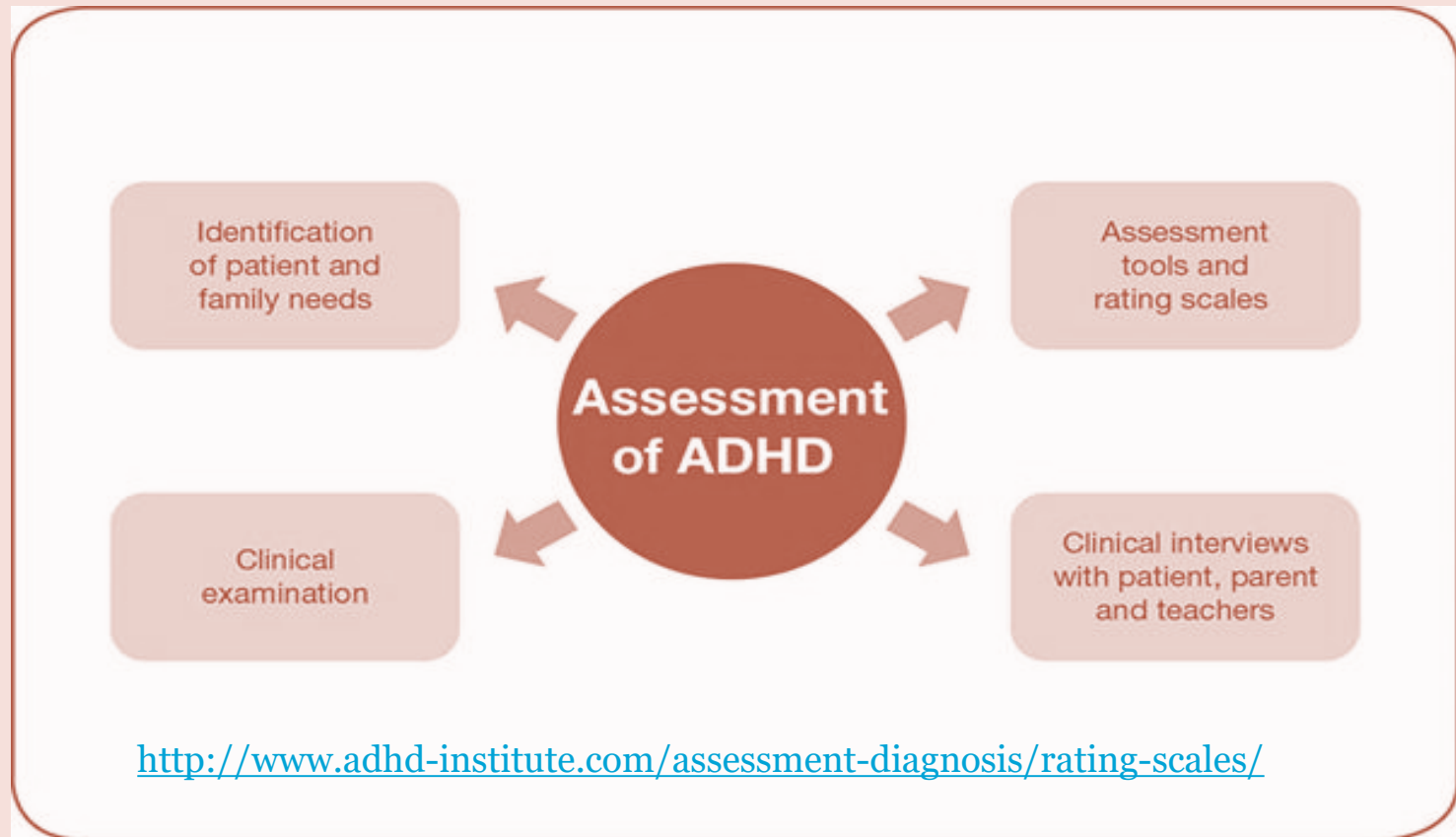
Reproduced with kind permission Polanczyk G, de Lima MS, Horta BL, et al. Am J Psychiatry 2007; 164: 942-948.

Children and adolescents with ADHD, n=171,756

Worldwide prevalence of ADHD is estimated at between 5.29% and 7.1% (Willcutt, 2012)



There is currently no single available tool
for the diagnosis



Formal diagnosis is made using evidence accumulated from the initial clinical assessment and medical classification systems

Comorbidity

A large percentage will have a comorbid learning disorder, another mental health disorder, or a neuro-developmental disorder.

This creates the chicken or egg conundrum.

Which came first: the ADHD or the supposed comorbidity?

The presence of comorbidity conditions makes the diagnosis of ADHD more difficult.

Larson (2011)

60,000, children, 6-17 years including over 5,000 with ADHD.

33% had one comorbidity disorder, 16% had two, and 18% had three or more.

Overall, 67% of ADHD children had at least one other mental health or neuro-developmental disorder compared to 11% of children without ADHD.

Learning disorders (46% vs 5%)

Conduct disorder (27% vs 2%)

Anxiety (18% vs 2%)

Depression (14% vs 1%)

Speech problems 12% vs 3%)

Autism spectrum Disorder (6% vs 0.6%)

Epilepsy/Seizures (2.6% vs 0.6%)

Aetiology

- Causes still largely unknown
- What we do know...
 - the occurrence of ADHD is closely tied with biological factors
 - ✦ Size and density of various brain structures
 - ✦ The way chemical reactions take place within the brain

Interplay between multiple genetic (Gizer, Ficks and Waldman, 2009; Larsson, et al. 2013) and environmental risk factors (Grizenko, et al. 2012)

Risk factors that affect the neurobiological basis of the disorder (Cortese, et al. 2012)

Brain structure differences



- Smaller cortex in ADHD
 - thoughts and actions
 - Diminished size usually occurs in the Frontal lobe
 - impulse control
 - socialisation
 - reason
 - judgement

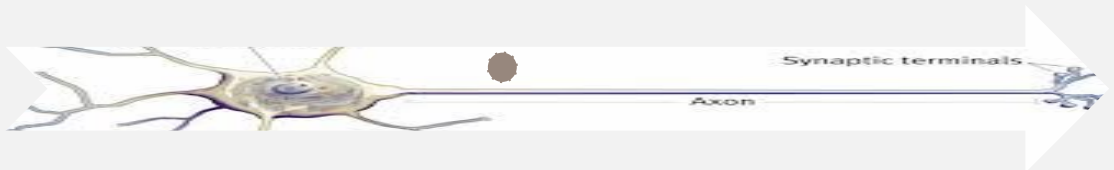
- Not fully developed – neurons in this part of the brain are needed for focussing, paying attention.



Chemical differences

Neurons communicate with one another using neurotransmitters – Dopamine and Serotonin

Neurotransmitter – chemical messengers that carry information to and from nerve cells



ADHD - Dopamine and Serotonin deficiency – Why?

To produce D and S– we need vitamin B6 and B9 (Folate)



When we eat/ supplement – they are in an inactivated form

We need to activate them



MTHFR

GENETIC DEFECT
(Methylenetetrahydrofolate)



So – defect does not allow activation

Genetics

DRD4 Dopamine receptor gene

DAT1 Dopamine transporter gene

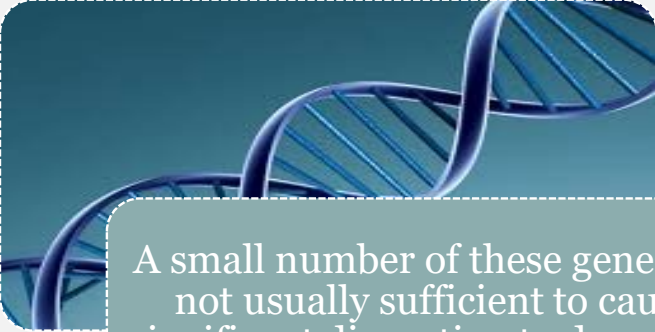
All chemical process in the body are under the control of genes.

Dopamine – no exception

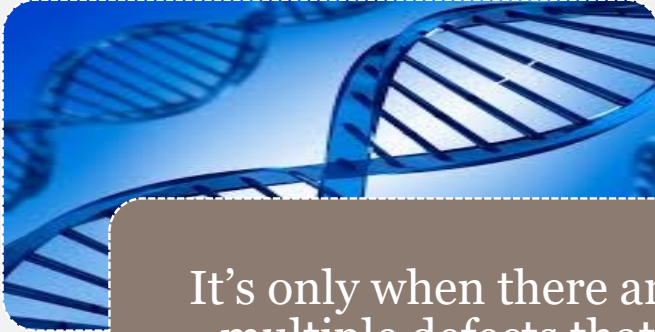
There are 100s of dopamine genes

A number of defective variants have been found

So – ADHD is not caused by one faulty gene – but is ‘polygenetic’ disorder



A small number of these genes are not usually sufficient to cause significant disruption to dopamine transmission – **other processes will compensate for small defects.**



It's only when there are multiple defects that overwhelm the compensatory mechanisms

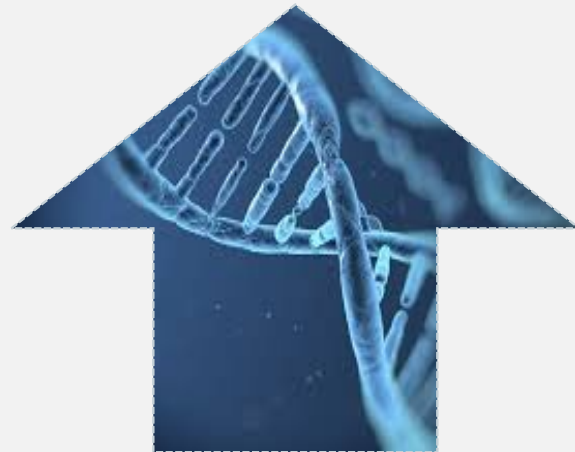
Genetics



Twin studies -
heritability estimated
to be 76% in the
population

(Farone , Perlis, Doyle, et al. 2005).

Swedish twin registry (n=21,000
children twin pairs, and n=37,714
adult twin pairs) - the genetic
contribution to ADHD was 88%
across child/adolescent twins; and
72% in adult twins (Larsson H, Chang Z,
D'Onofrio BM, et al. 2013)



Genetics



Adoption studies in children and adolescents have also indicated that **rates of ADHD are significantly higher between biological relatives** (parent-child or sibling) **compared with adoptive relatives** (Sprich, Biederman, Crawford, et al. 2000)



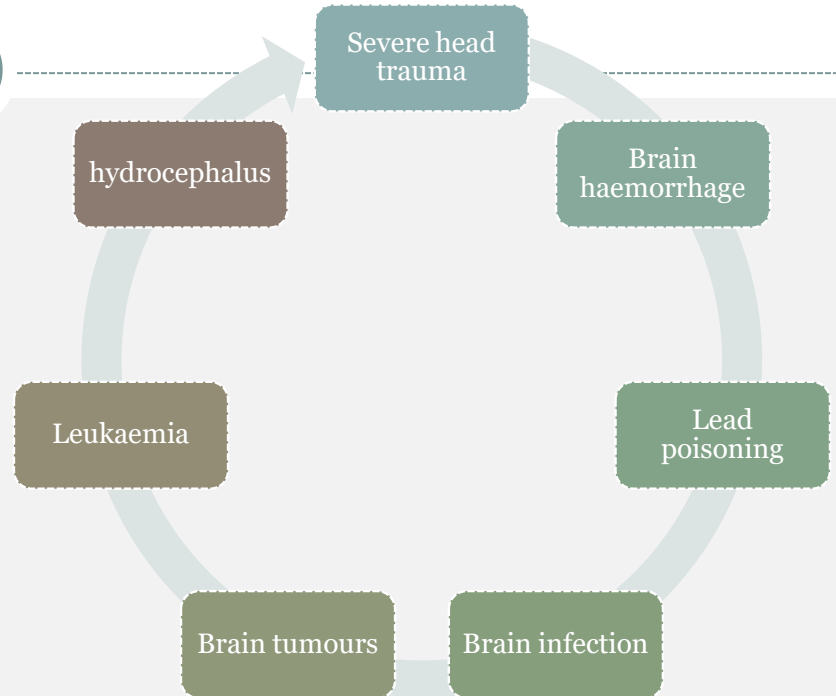
In addition, results from a genome-wide association study of pooled DNA from adults with ADHD suggested that a **genetic component was likely to contribute** to the persistence of ADHD from childhood into adulthood (Lesch , Timmesfeld, Renner, et al. 2008)

Non-genetic causes

Any condition that causes sufficient damage to the frontal lobes can cause ADHD



Some environmental conditions interact with a genetic susceptibility to ADHD

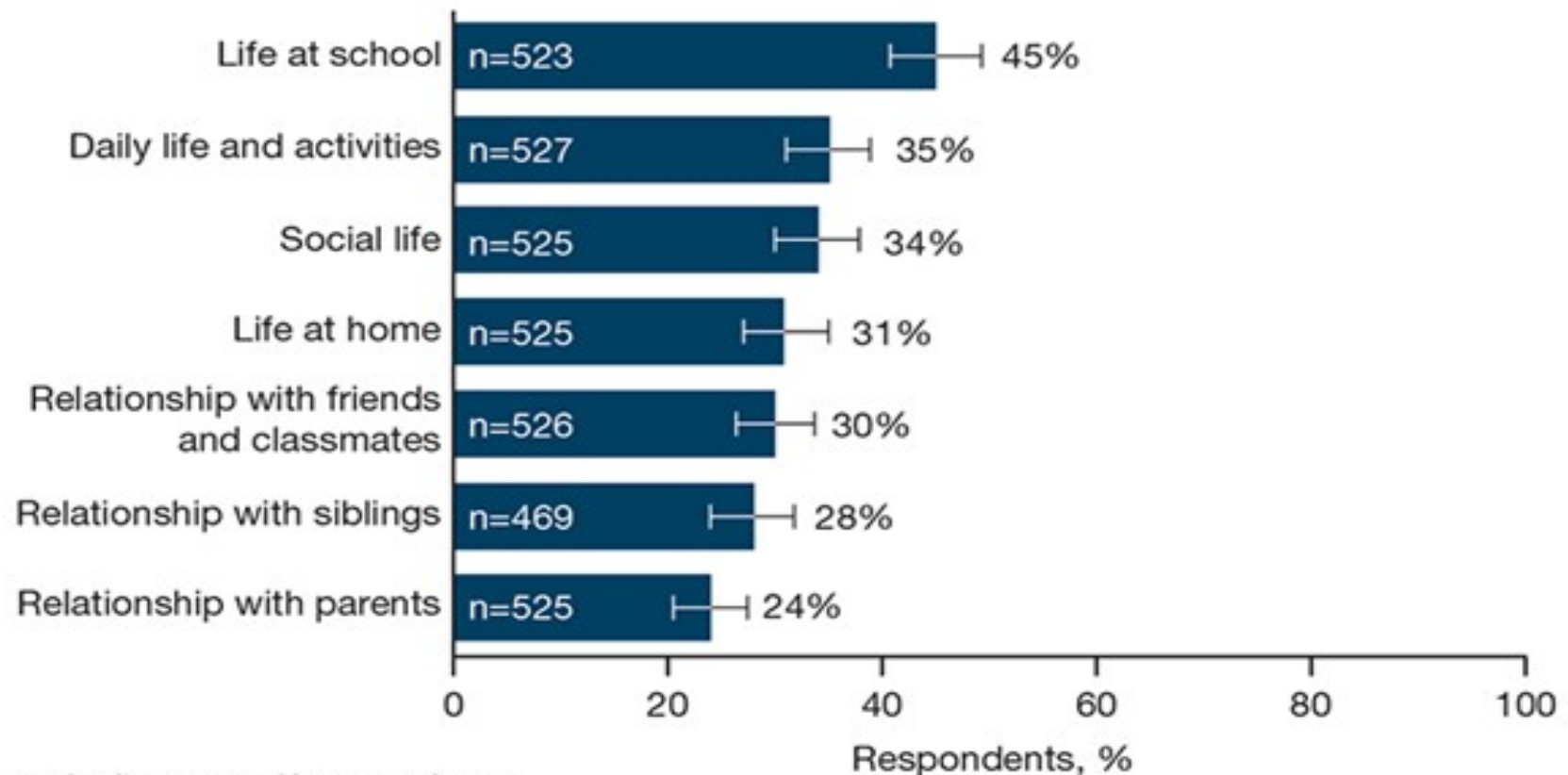


Low birth weight

Smoking during pregnancy

Alcohol abuse during pregnancy

Caci H, Doepfner M, Asherson P, et al (2013)



Life at school* as reported by parents/carers of children and adolescents with ADHD

*limited to children aged >6 years only

Reproduced with kind permission. Caci H, Doepfner M, Asherson P, et al. Eur Psychiatry 2013; 1-8.

Parents/caregivers reported a **perceived negative impact** on various aspects of their child's life, including life at school (45%), daily life and activities (35%) and social life (34%)

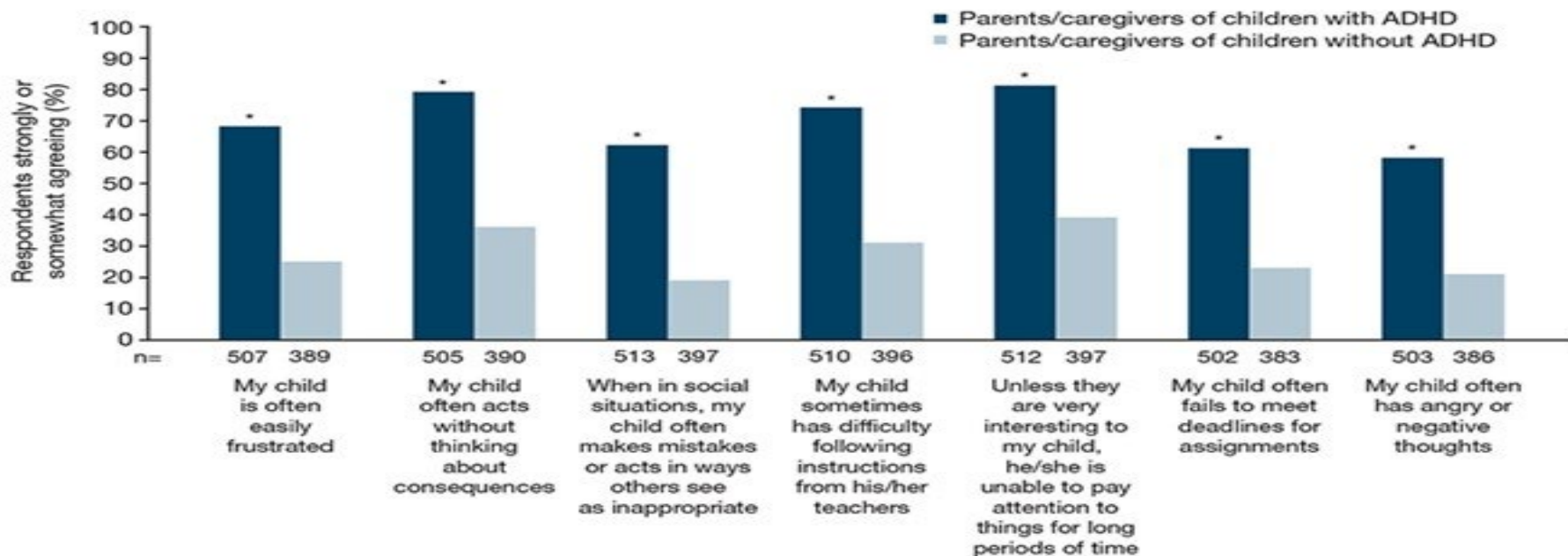
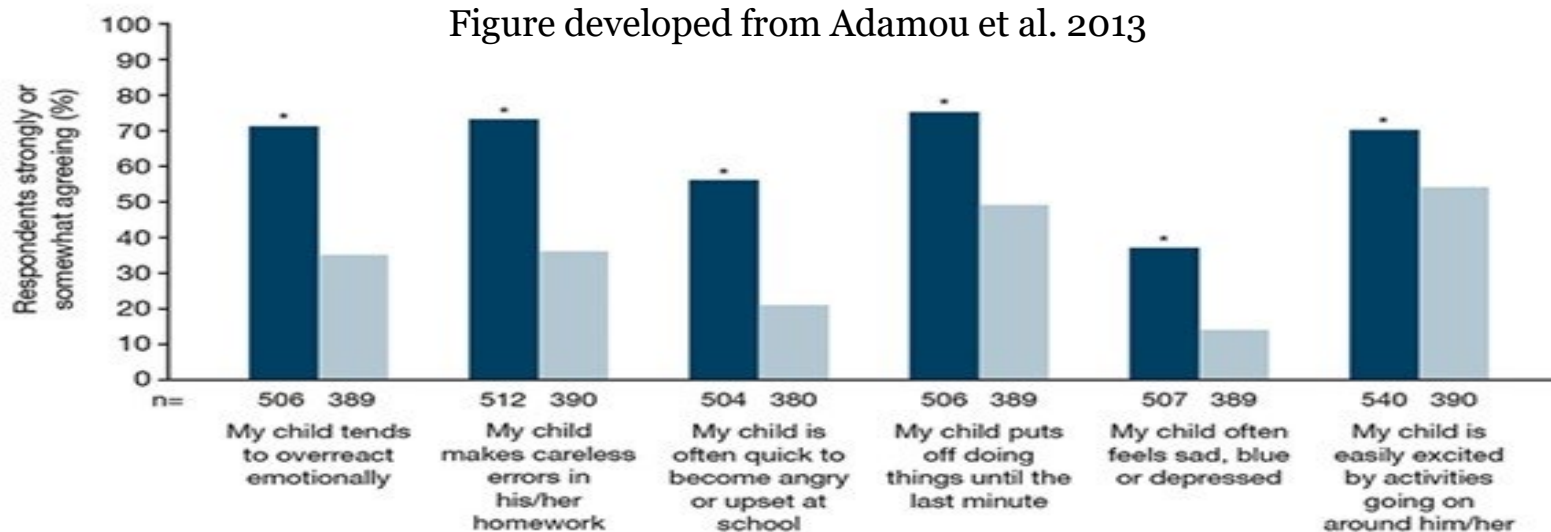


Figure developed from Adamou et al. 2013



Impairment at school as reported by parents/caregivers
Statements that more parents/caregivers of children with ADHD agreed with compared with parents/caregivers of children without ADHD when thinking about their child's experiences at school.

* $p < 0.001$ between ADHD and control groups; chi-squared test

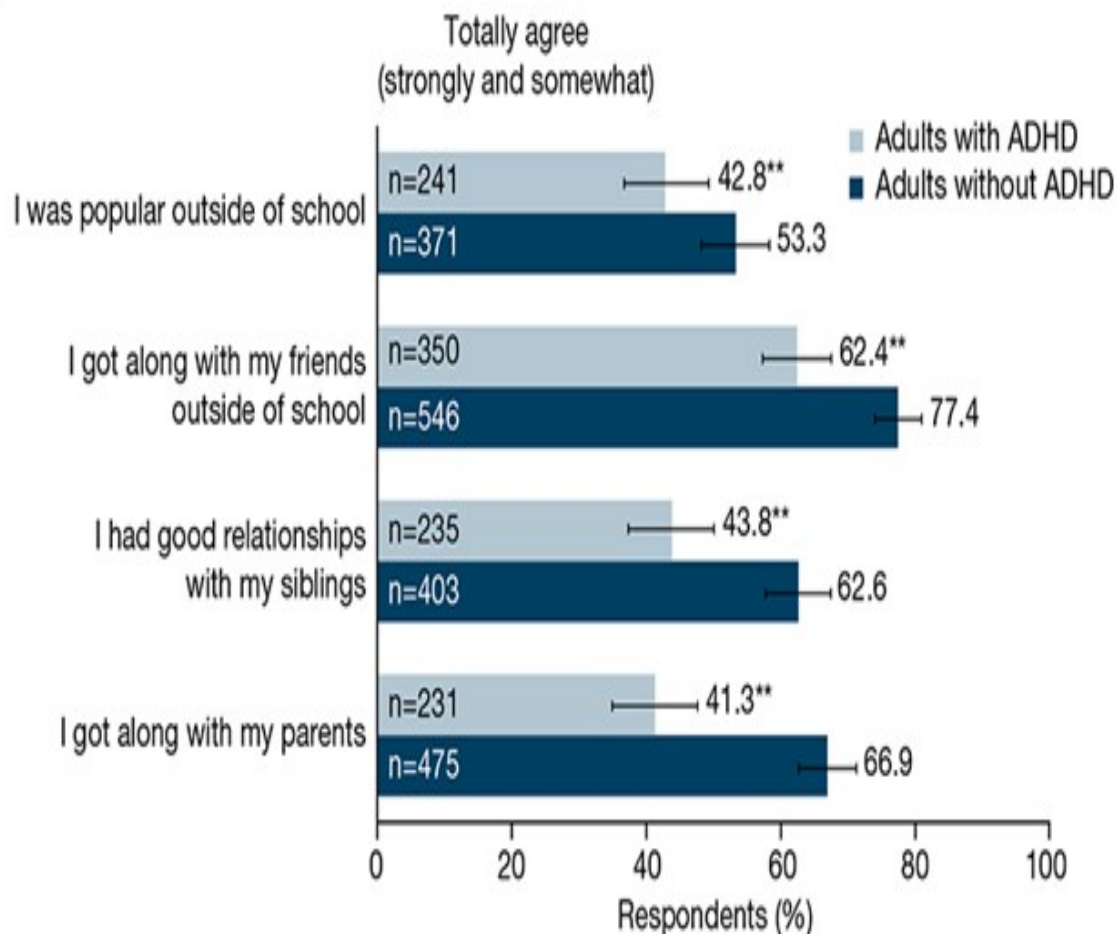
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Caci H, Doepfner M, Asherson P, et al. Eur Psychiatry 2013; 1-8.

European Lifetime Impairment Survey

(Caci, Asherson, Donfrancesco et al. 2015)

Impact as recalled by adults with ADHD (n=588) compared with adults without ADHD (n=736).

Adults with ADHD recalled **similar impact from their childhood**, as indicated by a lower degree of agreement with **positive statements** related to daily life and relationships compared with adults without ADHD



Impairment at home as recalled in adulthood
Statements with the greatest difference in terms of reported agreement between adults with ADHD and adults without ADHD.
**p<0.001, chi-squared test
Error bars, 95% confidence intervals

Reproduced with kind permission.
Caci H, Asherson P, Donfrancesco R, et al.
CNS Spectr 2015; 20: 112-121.

Impact of ADHD on School Performance



Poor classroom behaviour



Poor academic achievement



Special education requirements
(tutoring and special educational
programmes)

School exclusion
Repetition of grades
Failure to gain
external
qualifications

Low self-esteem
Social clumsiness
Inflexibility
Defiant behaviour

Association between symptoms of
inattentiveness (as measured by the
Conners 10-item scale) in children aged 7
and 10 years and academic
underachievement at age 16 years (APA,
2013)

Adolescents and adults
with ADHD have been
found to be **less likely
to have achieved a
further education
degree** (Davis, Claudius,
Palinkas, et al. 2012)

Executive function



Executive function is a set of mental skills that help you get things done.

These skills are controlled by the frontal lobe.



Executive dysfunction

This stems from an inability to inhibit present behaviour so that demands for the future can be met (Barkley, 2000)

Executive functions

- Snake bite – no plan...
- Stepped on = bite back

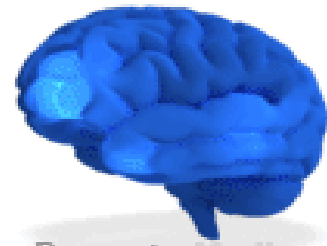


Humans
fortunately
have the
option to
modulate
behaviour

Frontal and pre-frontal
lobes play a large role in
this **self control and
planning**.

Where we came from, where
we want to go, and how to
flexibly control ourselves
in order to actually execute
the plan = EF

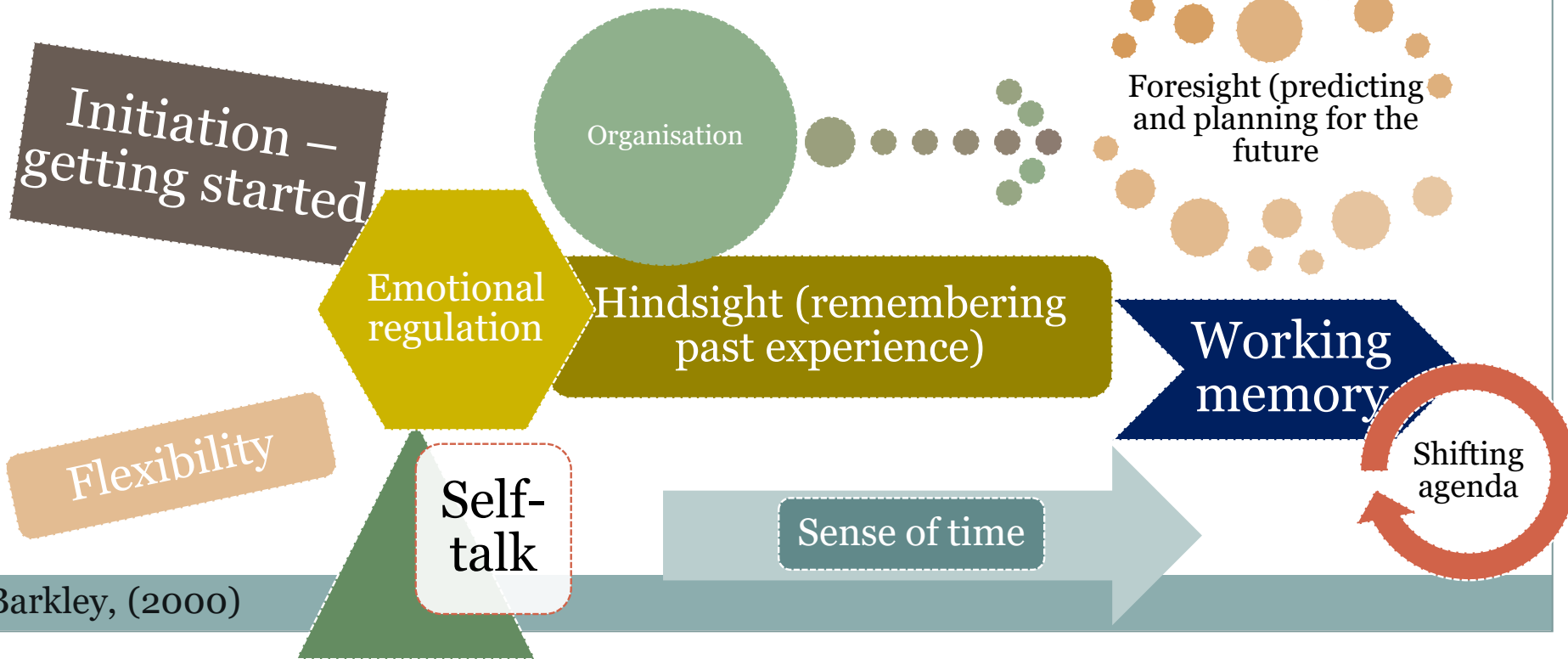
Executive dysfunction



PresenterMedia

Inhibition - putting brakes on your behaviour – to plan involves putting on the brakes on distracting activities – allows us to stop and think to consider our actions before we act.

Without these brakes – unable to inhibit distractions (inattentive), unable to inhibit instant reactions (impulsive), or unable to inhibit physically acting upon these stimuli (hyperactive).



EF- Attention deficit

- *Poor concentration*

- Inefficient attentional mechanisms
- Difficulty concentrating on tedious tasks
- Careless errors, lack of precision and attention to detail
- More difficulty with listening than looking – learning style
- Attentional mechanisms tire more quickly

- *Task Impersisitence*

- Failure to complete tasks

- *Disorganisation*

- Difficulty following sequences with supervision

- *Forgetfulness*

- LTM better than STM
- Difficulty following instructions

EF- Impulsivity

- *Stop and think*

- Difficulty with this before they act
- Often say the first thing that comes to mind
- Blurt out answers
- Tactless
- Risk taking
- Can't wait their turn

- *Do not learn from mistakes*

- *The problem isn't that they don't know the correct thing to do or that they don't want to do the right thing!*
- *It's their lack of SELF CONTROL*

Why? Impulsivity deficit

- The mechanisms that control behaviour in the brain seem unreliable
- *ADHD is a problem of performance, not of knowledge.*
- Russell Barkley PhD. – it's not a matter of not knowing what to do, but of not being able to do what you know.
- *Difficult delaying gratification*
 - LT goals difficult
 - Reward driven – immediate

- *So teaching a child to consider the consequences of their actions does not solve impulsivity.*
 - They lack the reflective and behavioural inhibition mechanisms needed to apply this to their everyday lives.
- *Act without thinking*
 - Risk taking
 - Accident prone
- *Difficulty sharing and cooperating - groups*

EF- Hyperactivity

- *On the go*

- Restless
- Overactive
- Fidgeting

- *Difficulty remaining seated*

- Walk about the classroom

- *Running and climbing*

- Slips and trips
- Injuries

- *Boisterous and loud*

- Difficulty engaging in quiet activities

- *Talk excessively*

- Disruptive

- *Repetitive sounds*

- Disruptive

Associated Problems



Peer problems

- Inattentive symptoms → ignored
- Hyperactive/impulsive symptoms → actively rejected
- Not deficient in social reasoning/understanding, but rather the execution of appropriate social behaviour

Family dysfunction/parental issues

- No clear causal relationship between family problems and ADHD
- Family problems can impact the severity and developmental course/outcomes of ADHD

Self-esteem

- Inflated: Positive illusory bias (Hoza)
- Low self esteem associated with comorbid depression

Summary



- ADHD is a neurological disorder
- Causes
 - Genetic and environmental
- 5% of school aged children in the UK
- Complex – co-morbidity
- Impact
 - Executive functions
 - Classroom behaviour
 - Academic achievement

References



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- National Institute for Clinical Excellence. Full Guidance - Attention deficit hyperactivity disorder: Diagnosis and management of ADHD in children, young people and adults, March 2009.
- <http://www.adhd-institute.com/burden-of-adhd/impact-of-adhd/#relatedmedia>

The Additional Learning Needs and Education Tribunal (Wales) Act 2018

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<https://beta.gov.wales/sites/default/files/publications/2018-11/additional-learning-needs-and-education-tribunal-wales-act-2018-implementation-guide-for-individual-development-plans.pdf>

Support for children and young people with Attention Deficit Hyperactivity Disorder (ADHD) in educational settings

<https://beta.gov.wales/sites/default/files/publications/2019-01/ways-of-supporting-learners-with-attention-deficit-hyperactivity-disorder-adhd.pdf>

Ways of supporting learners with Autistic Spectrum Disorder (ASD)

<https://beta.gov.wales/sites/default/files/publications/2019-01/ways-of-supporting-learners-with-autistic-spectrum-disorder-asd.pdf>

Additional Learning Needs and Education Tribunal (Wales) Act: implementation guide for individual development plans

<https://beta.gov.wales/sites/default/files/publications/2018-11/additional-learning-needs-and-education-tribunal-wales-act-2018-implementation-guide-for-individual-development-plans.pdf>

Papers on the impact of SEND in the classroom

- <http://eujournal.org/index.php/esj/article/viewFile/883/926>
-
- <http://www.ejbss.com/Data/Sites/1/augustissue/ejbss-12-1134-specialneedsstudents.pdf>
- <http://www.csse-scee.ca/CJE/Articles/FullText/CJE30-3/CJE30-3-DemerisEtAl.pdf>
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