Thinking About Neurodivergence: A Whole-School Responsibility?

Partnership for the Inclusion of Neurodiversity in Schools

The programme is funded by the Department for Education (DfE), supported by the Department for Health and Social Care (DHSC) and NHS England (NHSE)

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Aims for Today

Aim	Completed
I will understand more about the words ‘neurodiverse’, ‘neurotype’, ‘neurodivergent’ and ‘neurodevelopment’.	
I will be able to understand more about the different areas of neurodevelopment and what is meant by a ‘spikey profile’	
I will be able to understand why certain profiles may result in a diagnosis of Autism Spectrum Disorder (ASD) or Attention Deficit Hyperactivity Disorder (ADHD)	
I will be able to think about how I would find out about needs and how to support these	

Plan

Aim 1 Understanding the words

- Introducing neurodiversity language
- Have a go
- Neurodevelopment
- Slido
- Video
- 5-minute break

Aim 2 Nine neurodevelopment areas and a spikey profile

- 1-5 areas of neurodevelopment

- 5 minute break and activity

- 6-9 areas of neurodevelopment

Aim 3 Understanding how different profiles may result in diagnosis

- Profiles of neurodevelopment
- Diagnostic criteria for ASD and ADHD

Aim 4 Knowing how to identify and support needs

- Break

- Iceberg model
- How to find out about and support needs

- Activity

slido

What are your own aims for today?

ⓘ Start presenting to display the poll results on this slide.

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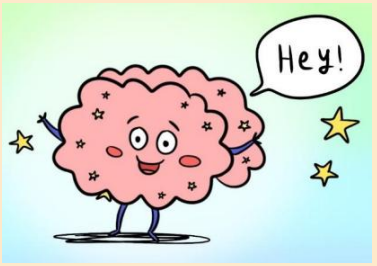
Why do we need to think about neurodiversity?

‘Kaninchen und Ente’ (‘Rabbit and Duck’) from the 23 October 1892 issue of *Fliegende Blatter*

Terminology- talking about brains

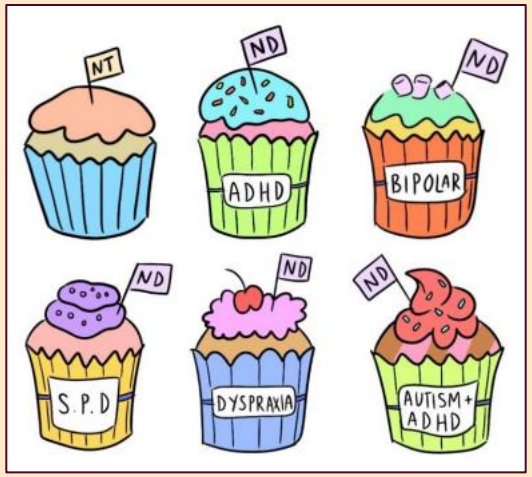


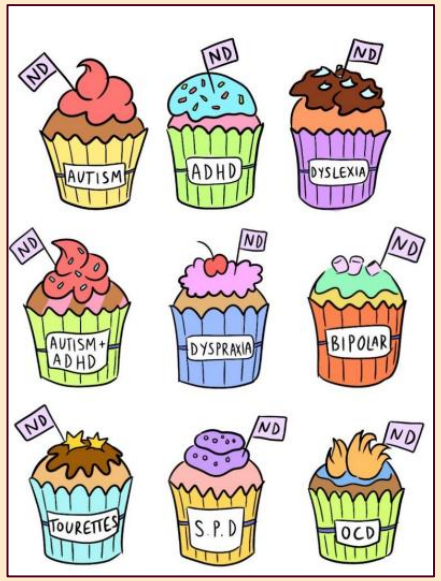
hcrg Care Group

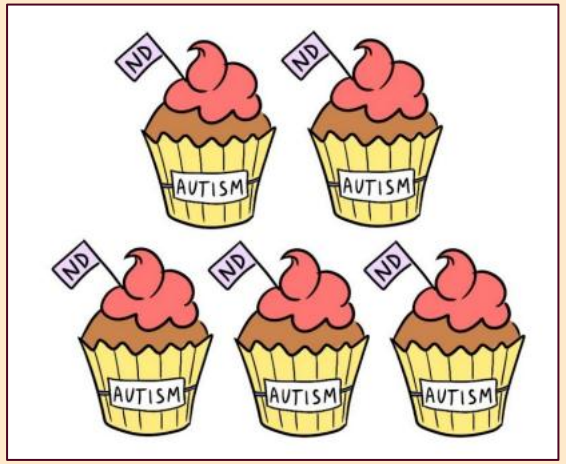
Neurodiversity	The brains that most people are used to
Neurodivergence	Brains that work in ways that most people don't expect
Neurotype	Different types of brains that work in different ways
Neurotypical	A brain that works in a particular way

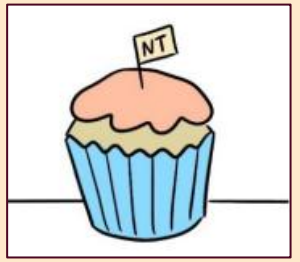
Terminology- talking about brains

Neurodiversity	Neurodivergence	Neurotype	Neurotypical



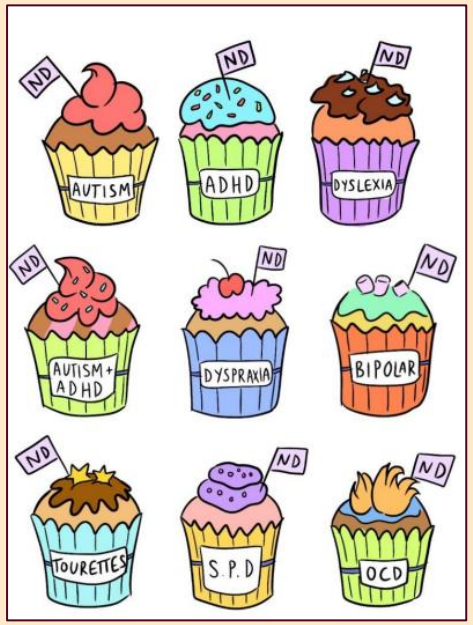






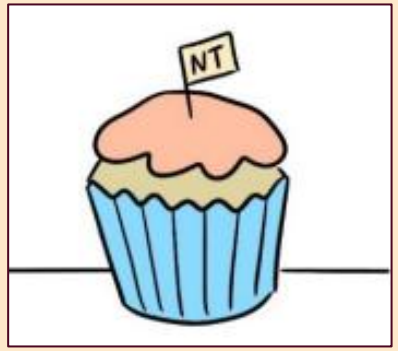
Terminology Have a go

Neurodiversity | Neurodivergence | Neurotype | Neurotypical



These cakes are different to the neurotypical cake. They include dyslexia, dyspraxia, OCD and others. We can call them

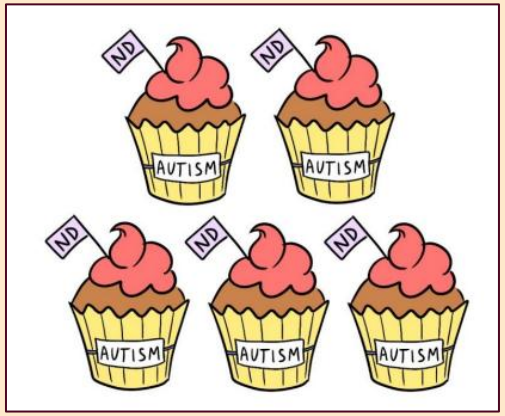
……



This cake is the type of cake that most people expect. We can call it

……

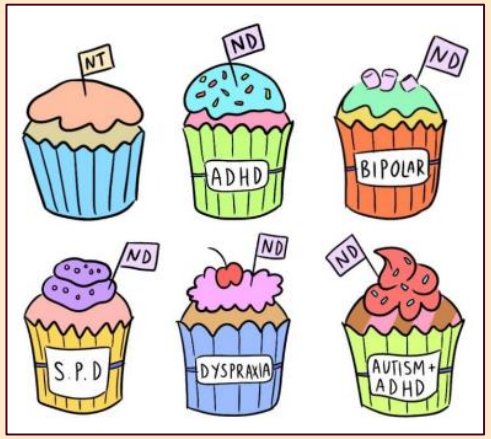
……



These cakes are all the same type. They are an example of one

……

……



These cakes include neurodivergent cakes and neurotypical cakes. They are an example of

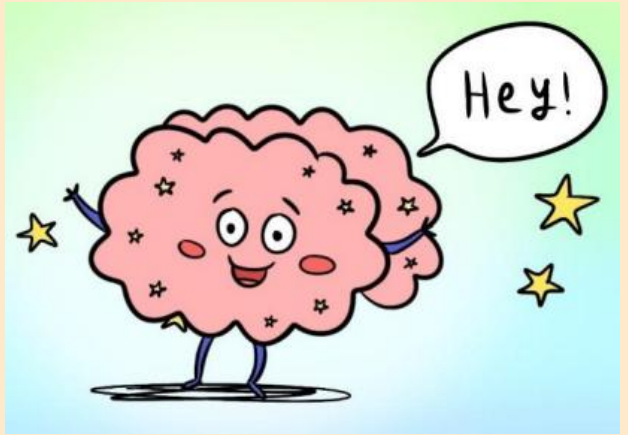
……

……

Neurodevelopment (ND)

- The effects of ‘brain wiring’
- What neurodevelopmental differences have you heard of?

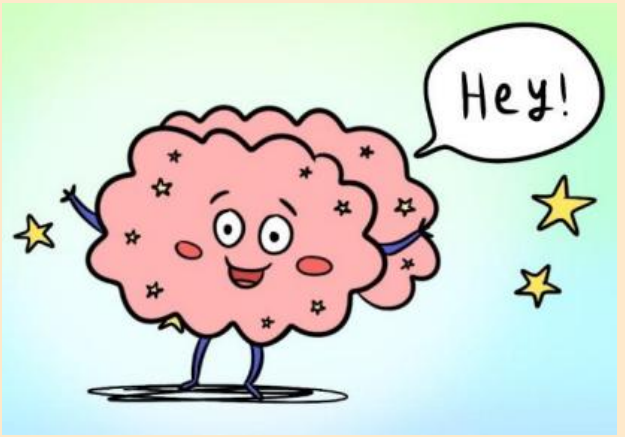
  - Autism Spectrum Disorder (ASD)
  - Attention Deficit Hyperactivity Disorder (ADHD)
  - Dyslexia
  - Dyscalculia
  - Learning disability
  - Dyspraxia
  - Semantic Pragmatic Disorder
  - Developmental Language Disorder (DLD)
  - Stuttering/ Stammering



Neurodevelopment (ND)

How could you see the effects of differences in neurodevelopment?

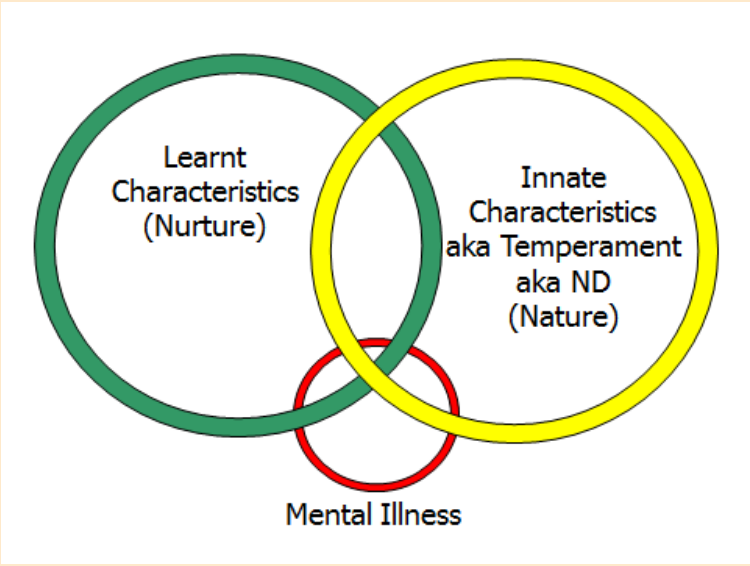
- Behaviour
- How a person thinks
- How a person sees the world
- How a person responds emotionally
- Problem solving
- Learning style
- Communication
- How a person relates to others



Neurodevelopment (ND)

What else would influence the development of the brain?

- Learnt characteristics from environmental factors
- Mental illness



Neurodevelopmental traits are not a mental illness, but people with ND differences are more likely to have difficulties with their wellbeing.

slido

Why are people with ND differences more likely to have difficulties with their wellbeing?

ⓘ Start presenting to display the poll results on this slide.

Video

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Aim 2
Nine neurodevelopment areas and a spikey profile

1-5 areas of neurodevelopment

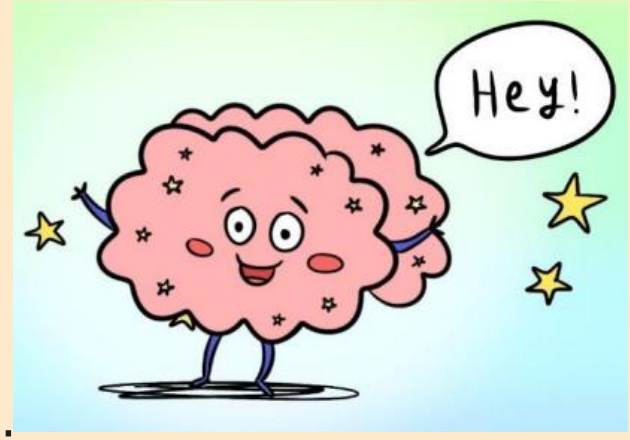
5 minute break and activity

6-9 areas of neurodevelopment

Areas of Neurodevelopment

Which areas of development or ability may be impacted by neurodevelopment?

1. Speech and Language
2. Energy Levels
3. Attention and Impulse Control
4. Motor Skills
5. Emotion Regulation Ability
6. Sensory Processing
7. Adaptability and Flexibility
8. Social Interaction and Social Relationships
9. Cognition



Don't forget that differences in any of these areas may only be fully known by the person themselves. They may do their best to hide or 'mask' their difficulties.

Areas of Neurodevelopment
1. Speech and Language

- Comprehension
  - Understanding what people say
- Expression
  - Using talking
- Social Communication

Areas of Neurodevelopment
2. Energy Levels

Divergent energy levels can be split and described by either being:

- Hypo-Active (Low Energy Levels) or
- Hyper-Active (High Energy Levels)

Areas of Neurodevelopment
3. Attention and Impulse Control

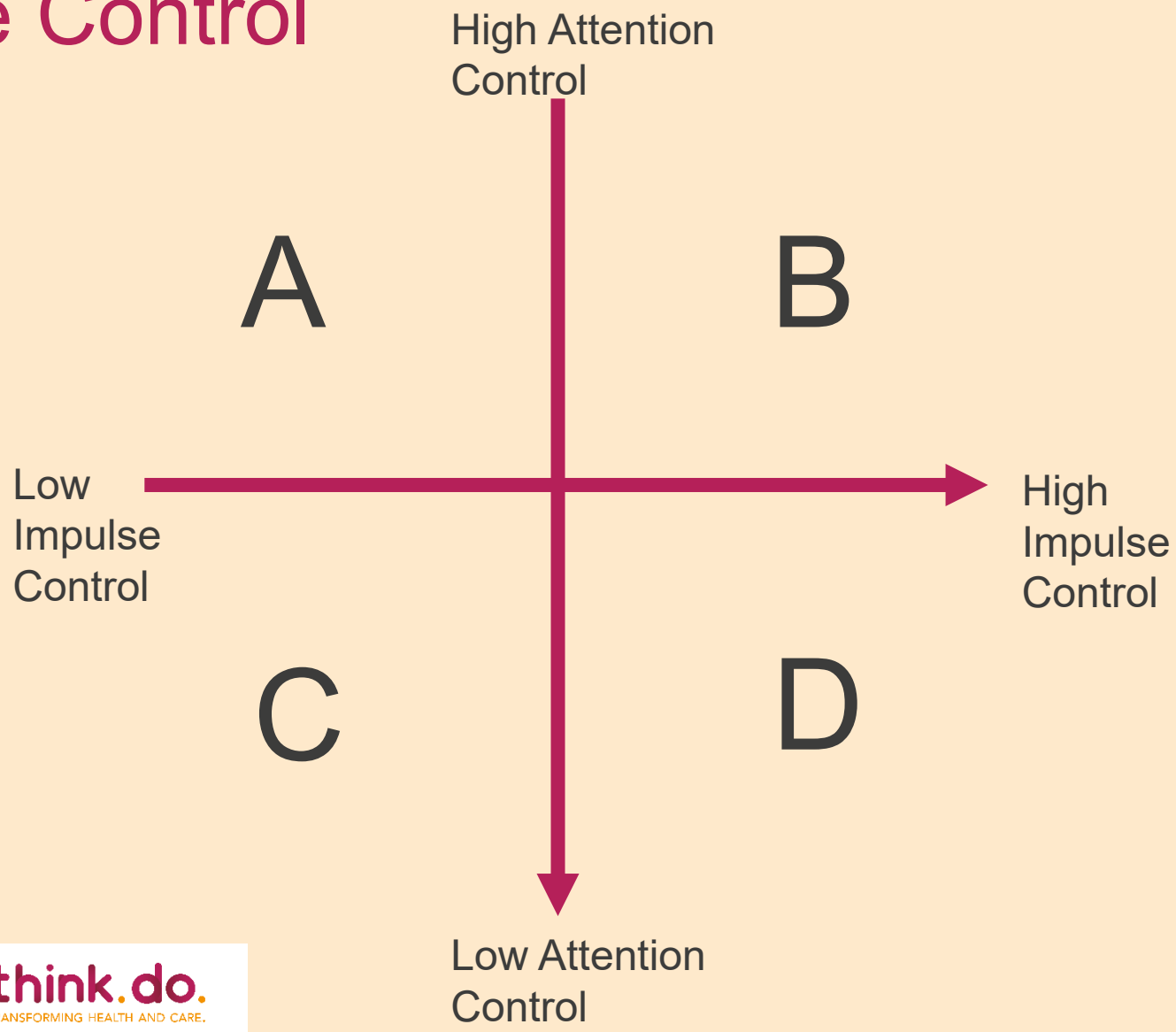
- Attention - ability to focus on a task
- Impulse control
- Both can be low or high

Areas of Neurodevelopment

3. Attention and Impulse Control

Think about someone you have worked with, now or in the past where you think there were attention or impulse control differences.

See if you can plot what you noticed on this chart.



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Which area was your pupil in?

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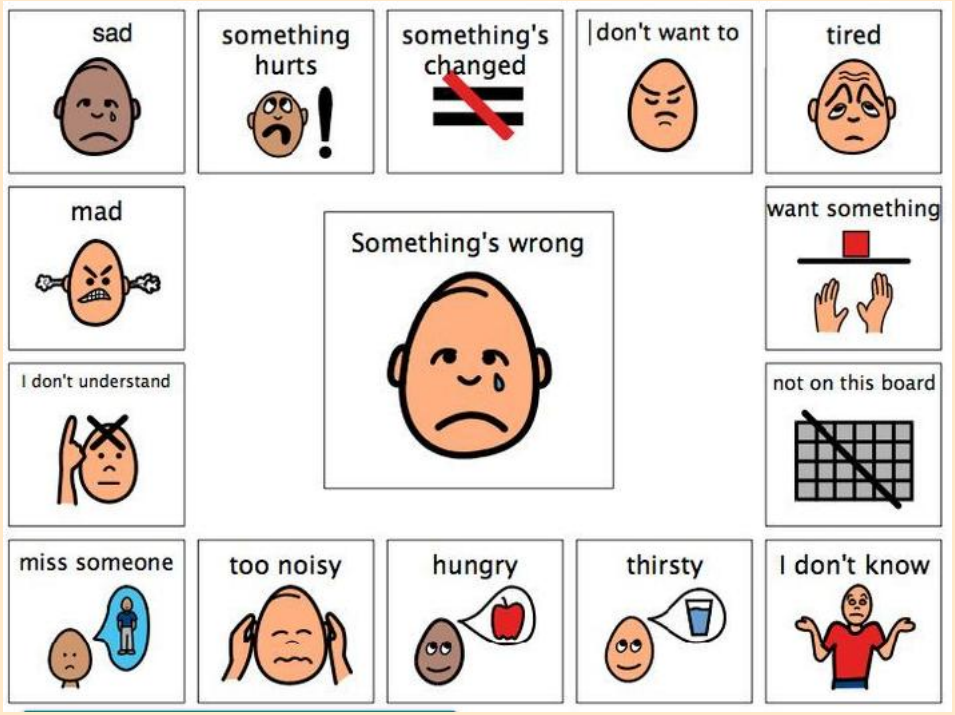
Areas of Neurodevelopment
4. Motor Skills

- Fine motor
- Gross motor

Areas of Neurodevelopment
5. Emotion Regulation

- Use of cognitive and behavioural strategies to influence your own emotions
- Usually think about emotional regulation in negatives to positives, but can also be ‘calming down’ from excited state
- Reappraisal can be used to manage emotions
- Neurodevelopmental differences may be observable by considering intensity and speed of change in emotions
- ‘Extreme Emotions’ vs ‘No Emotions’



Areas of Neurodevelopment
6. Sensory Processing

What are the differences we might notice with sensory processing?

- Hypo/ hyper sensitivities
- Sensory overload
- Sight
- Sound
- Smell
- Taste
- Touch
- Balance (Vestibular)
- Body Awareness (Proprioception)

Areas of Neurodevelopment
6. Sensory Processing

Top 5 autism tips: managing sensory differences

National Autistic Society

Published on 13 May 2014
Author: Dr Olga Bogdashina

Dr Olga Bogdashina, author, practitioner and lecturer gives her Top 5 Tips for managing sensory differences for autistic people. This article aims to provide an overview of practical tips for professionals when working with autistic people who have sensory differences.

https://www.autism.org.uk/advice-and-guidance/professional-practice/sensory-differences

Break and activity

National Autistic Society

Areas of Neurodevelopment
7. Flexibility and Adaptability

- **Flexibility** is the ability to think of and decide on one from a range of options when a change is not required
- **Adaptability** is the ability to cope when changed is forced upon you

Areas of Neurodevelopment

8. Social Interaction and Social Relationships

Social interaction refers to reciprocal interchanges between people including attempting to initiate social interaction, responding to one another and sharing enjoyment.

Social relationships refer to building and maintaining relationships including friendships with peers, behaving in an expected way in social situations and understanding different types of relationships.

Areas of Neurodevelopment
9. Cognition

Cognitive ability is the skill of being able to maintain and process information, manipulate it and reason with it to solve a problem.

“Cognitive ability” is a broad term used in psychology, and it can be broken down into many parts, which in turn can also be broken down into more specific parts.

Spikey Profiles

‘Autism is a spectrum disorder which means autistic people can have varying support needs. One third of autistic people also have a learning disability. The autism spectrum isn't linear, and many people talk about the 'spikey profile.' This means an autistic person could be a leading expert on nuclear physics but unable to remember to brush their teeth or clean their clothes.’

National Autistic Society, 2023

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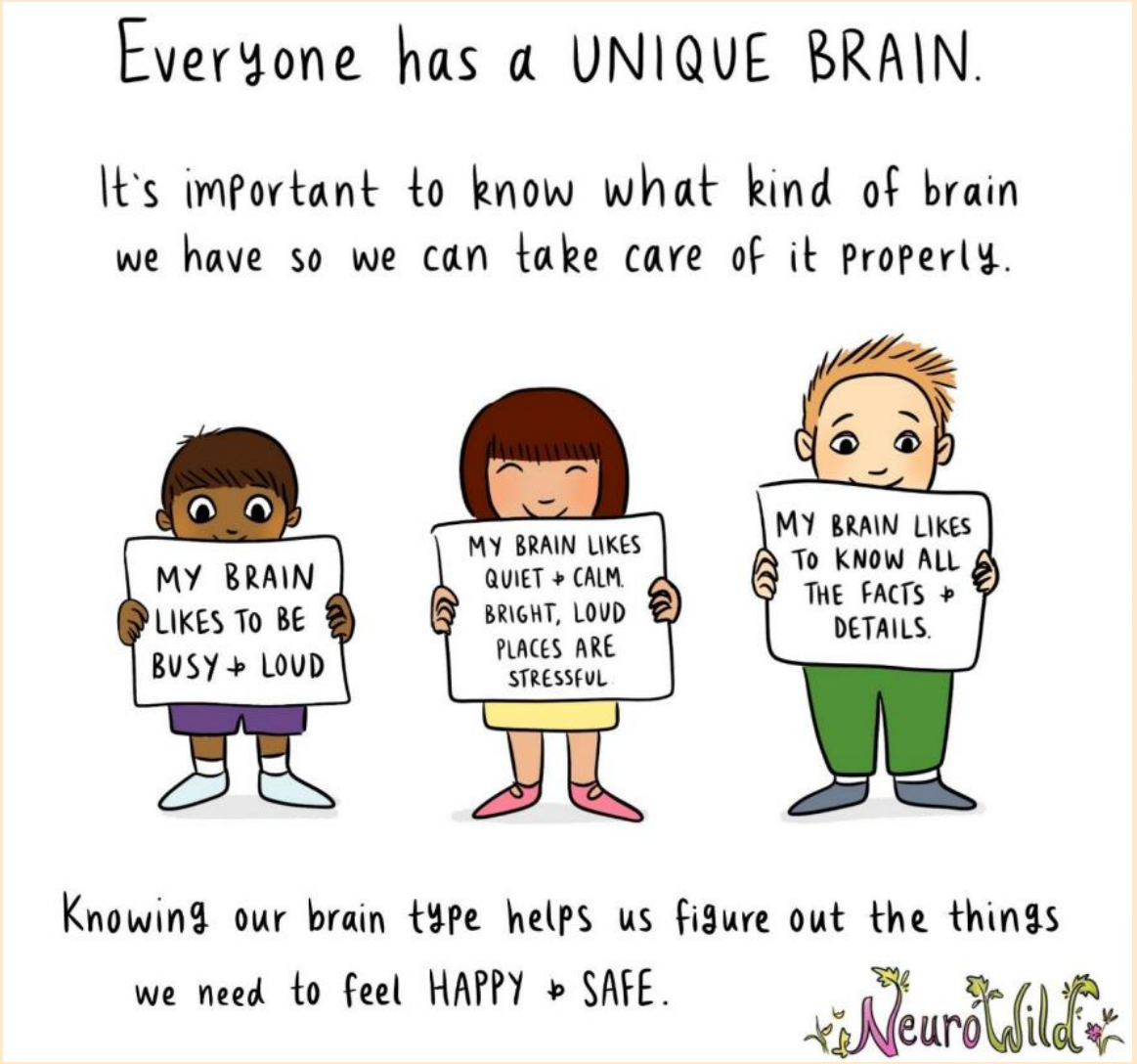
Aim 3
Understanding how different profiles may result in diagnosis

Profiles of neurodevelopment

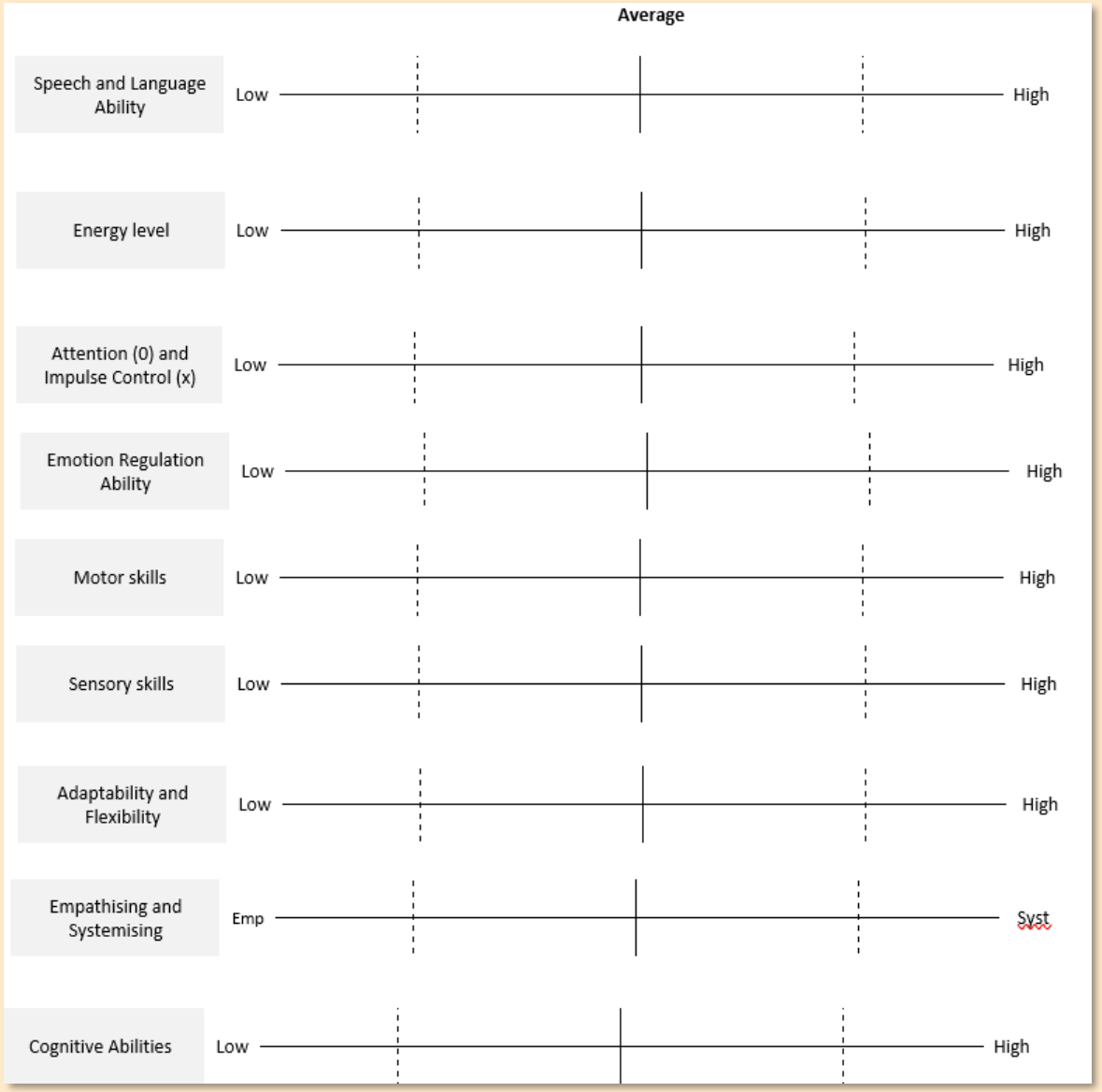
Diagnostic criteria for ASD and ADHD

Understanding Your Own Profile



Why Profiles Matter

Profiling Tools



Profiling vs Diagnosis

- ND traits are spread along a spectrum of difference in every case
- Current diagnostic criteria simply set a somewhat subjective point on the spectrum above which someone can be said to ‘have’ a disorder, and below which it can be said they do not
- One example of this is the Childhood Autism Rating Scale (CARS) assessment, where if a child scores above 30 points they will be diagnosed with autism, while if they score below 30 points they will not.
- **What are the problems with this approach?**
  - Misleading people into believing that all who have the diagnosis are the same
  - Misleading people into thinking that all who do not have the disorder don’t have need
  - Is “yes” or “no” to diagnosis useful information when supporting the person? What about people just below the ‘cut off’?

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

- DSMV- Diagnostic and Statistical Manual, 5
- ICD-11- International Classification of Disorders, 11
- Deficit and medical models

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive, see text):

1.Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
2.Deficits in nonverbal communicative behaviours used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
3.Deficits in developing, maintaining, and understanding relationships, ranging, for example, from difficulties adjusting behaviour to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.
Specify current severity: Severity is based on social communication impairments and restricted repetitive patterns of behaviour.

Source: DSM-5 Diagnostic and Statistical Manual of Mental Disorders, 5th Editi

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

B. Restricted, repetitive patterns of behaviour, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):

1.Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
2.Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behaviour (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat food every day).
3.Highly restricted, fixated interests that are abnormal in intensity or focus (e.g, strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest).
4.Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).
Specify current severity: Severity is based on social communication impairments and restricted, repetitive patterns of behaviour.

Source: DSM-5 Diagnostic and Statistical Manual of Mental Disorders, 5th edition

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

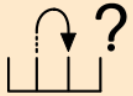
C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities or may be masked by learned strategies in later life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

Source: DSM-5 Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

Differences in **social-emotional reciprocity.** How conversations happen, how you share your stories, emotions and interests. (A1) 
Differences in **nonverbal communication used for social interaction.** How you use eye contact, facial expressions, gestures and body language. (A2) 
Differences in **developing, maintaining, and understanding relationships.** How you make and maintain friendships, show interest in other people, change how you act in different situations, and share play and activities. (A3) 
Stereotyped or repetitive motor movements, use of objects or speech (B1) This may include stimming, echolalia, using phrases repetitively, lining up objects 
Preference for sameness and routines, difficulties with unpredictable changes, certain ways of doing things (rituals). Change can cause stress (B2) 
Highly specific, intense or special interests (B3) 
Under or over reactions to sensory input or curious interest in sensory aspects of environment (B4) 

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Source: DSM-5 Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

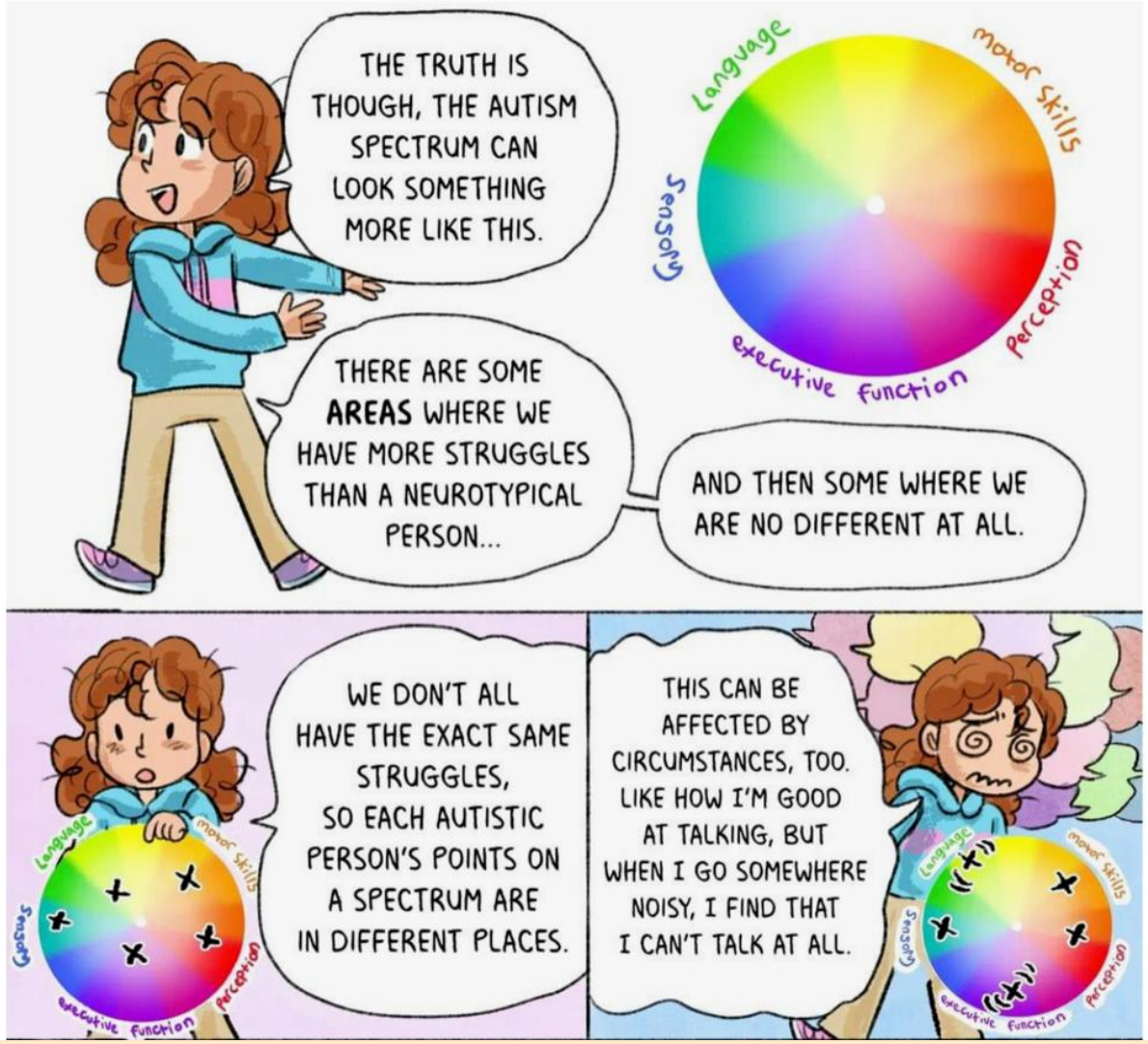
- Types of Autism? Severity Levels?

Understanding the spectrum

By Rebecca Burgess

The spikey profile

The dynamic profile



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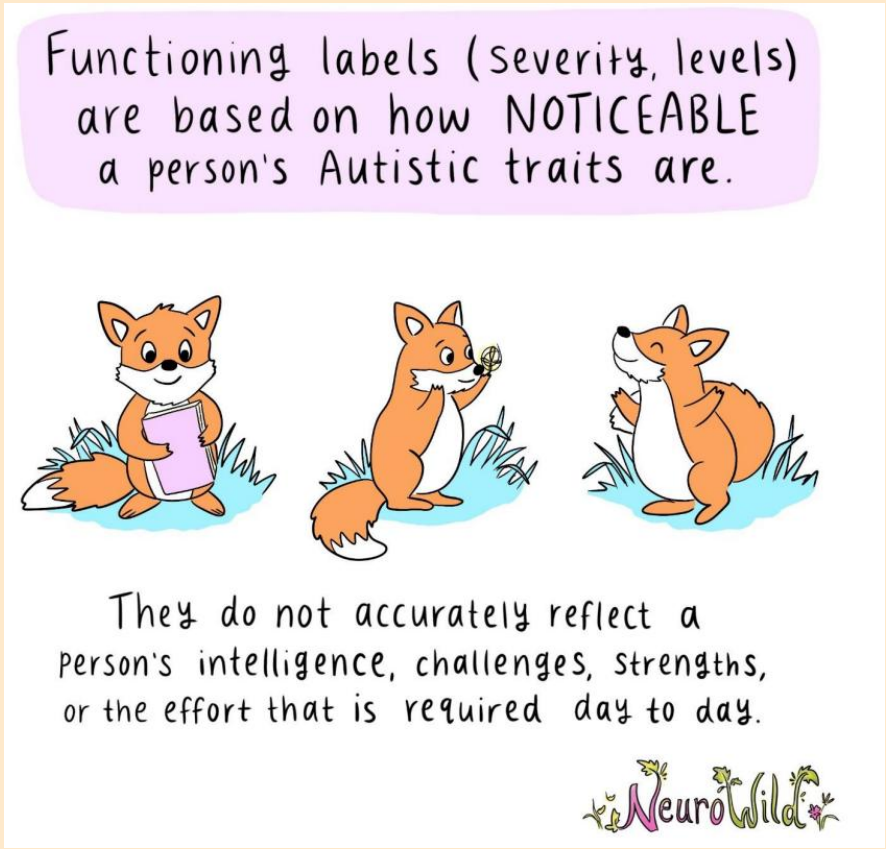
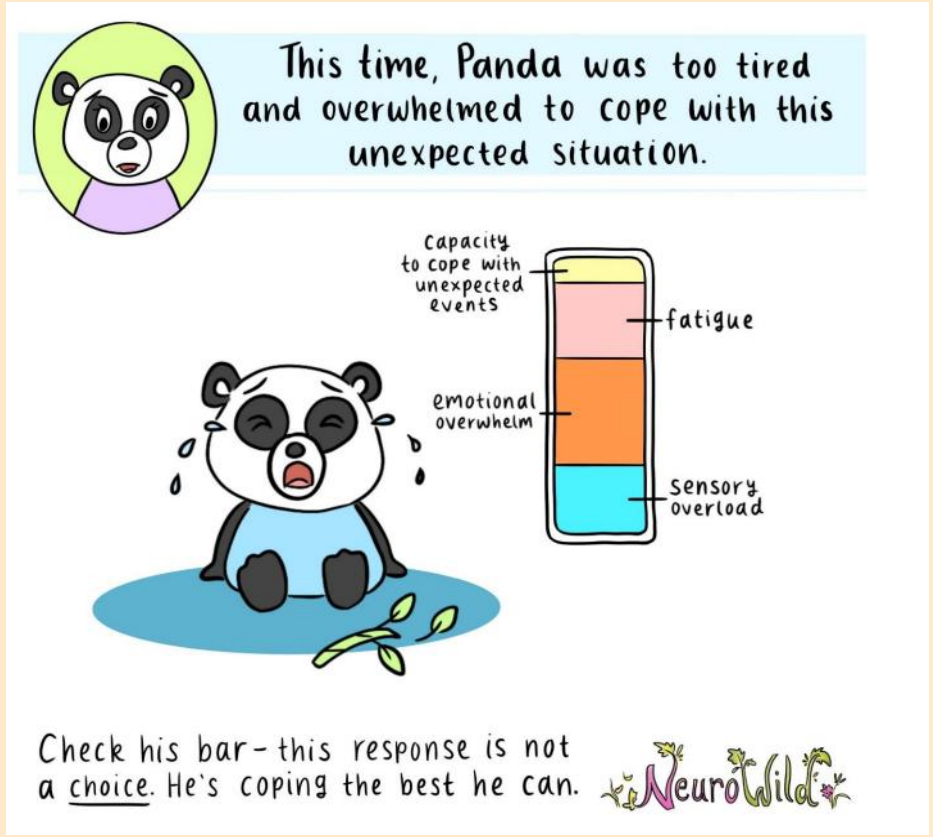


Diagnostic Criteria- Autism Spectrum Disorder (ASD)

Autism is a Dynamic Difference

Diagnostic Criteria- Autism Spectrum Disorder (ASD)

Autism is a Dynamic Difference



Diagnostic Criteria- Autism Spectrum Disorder (ASD)

Autism is a Dynamic Difference

Diagnostic Criteria- Attention Deficit Hyperactivity Disorder (ADHD)

Inattentive Type Diagnosis Criteria

- Displays poor listening skills
- Loses and/or misplaces items needed to complete activities or tasks
- Sidetracked by external or unimportant stimuli
- Forgets daily activities
- Diminished attention span
- Lacks ability to complete schoolwork and other assignments or to follow instructions
- Avoids or is disinclined to begin homework or activities requiring concentration
- Fails to focus on details and/or makes thoughtless mistakes in schoolwork or assignments

Diagnostic Criteria- Attention Deficit Hyperactivity Disorder (ADHD)

Hyperactive/ Impulsive Type Diagnosis Criteria Hyperactive Symptoms

- Squirms when seated or fidgets with feet/hands
- Marked restlessness that is difficult to control
- Appears to be driven by “a motor” or is often “on the go”
- Lacks ability to play and engage in leisure activities in a quiet manner
- Incapable of staying seated in class
- Overly talkative

Impulsive Symptoms

- Difficulty waiting turn
- Interrupts or intrudes into conversations and activities of others
- Impulsively blurts out answers before questions completed

Diagnostic Criteria- Attention Deficit Hyperactivity Disorder (ADHD)

Additional Requirements for Diagnosis

- Symptoms present prior to age 12 years
- Symptoms not better accounted for by a different psychiatric disorder (e.g., mood disorder, anxiety disorder) and do not occur exclusively during a psychotic disorder (e.g., schizophrenia)
- Symptoms not exclusively a manifestation of oppositional behaviour

Classification Combined Type

- Patient meets both inattentive and hyperactive/impulsive criteria for the past 6 months

Predominantly Inattentive Type

- Patient meets inattentive criterion, but not hyperactive/impulse criterion, for the past 6 months

Predominantly Hyperactive/Impulsive Type

- Patient meets hyperactive/impulse criterion, but not inattentive criterion, for the past 6 months

Symptoms may be classified as mild, moderate, or severe based on symptom severity

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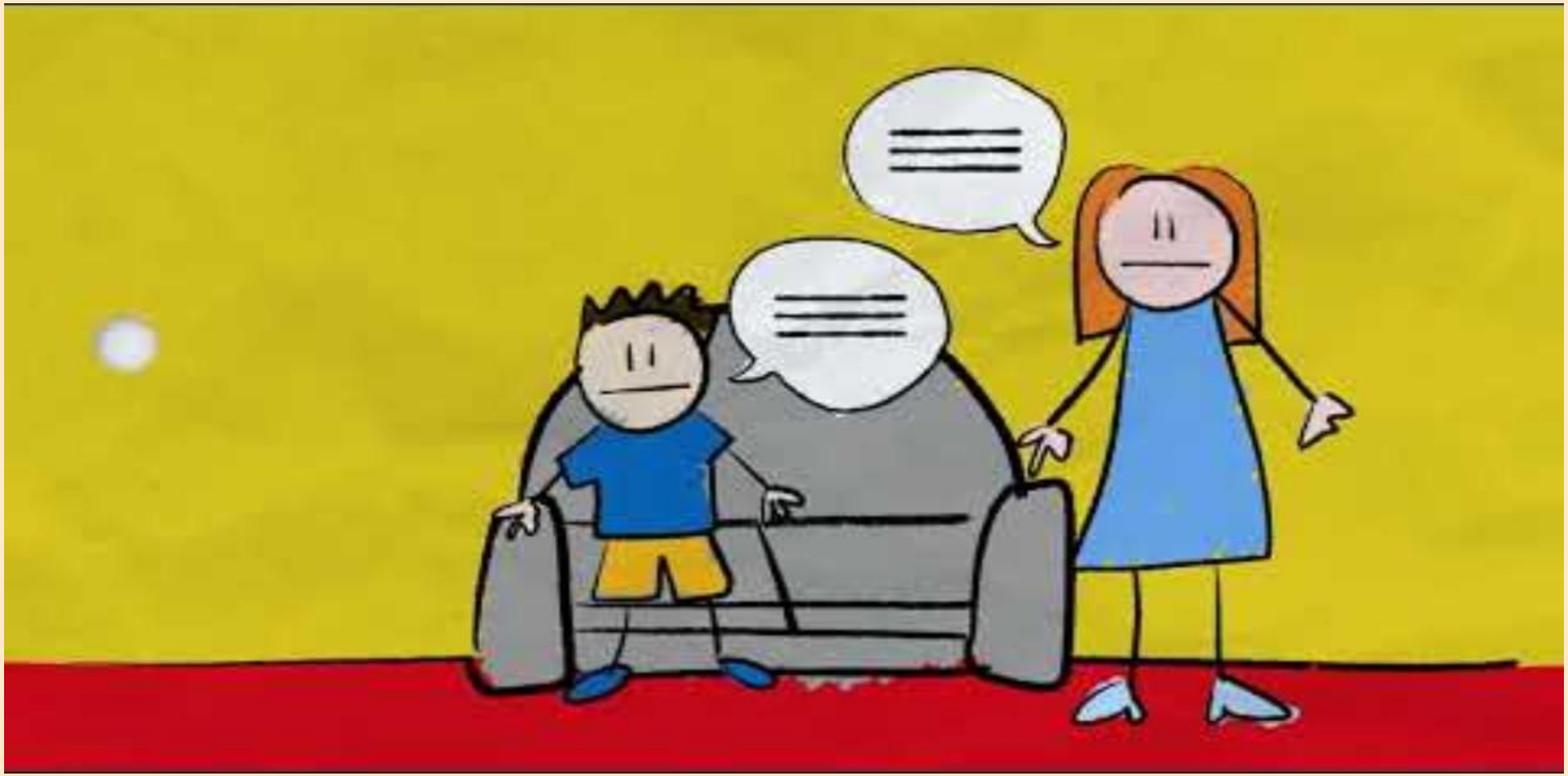
Aim 4
Knowing how to identify and support needs

- Break

- Iceberg model
- How to find out about and support needs

- Activity

The Iceberg model



Case study – Year 3.

Tom is 8 years old.

Lunch time staff have noticed that he is running away at the end of playtime, poking and kicking others in the line and when coming back to the classroom he is not cooperating for the next lesson.

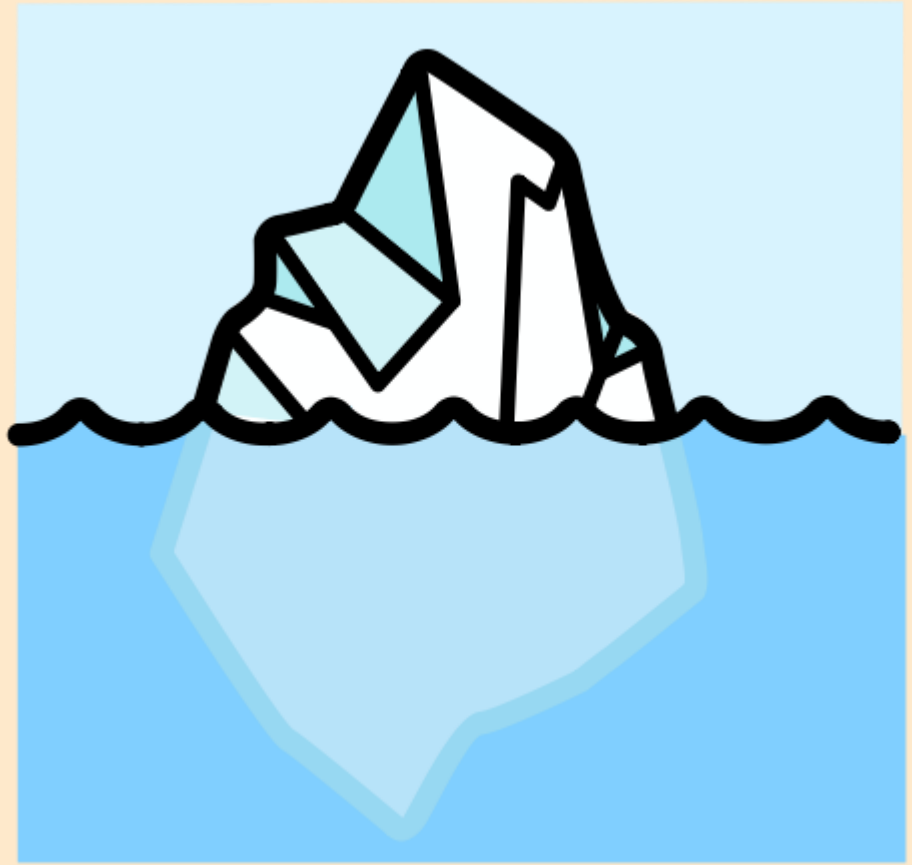
Behaviours you notice – tip of the iceberg

Running away

Poking and kicking

Doesn't want to come back to class

Not ready to learn



Needs you can't see

Physical needs

- Picky eater
- Really tired
- Slow eater
- Thirsty
- Constipated
- Hearing
- Medication
- Sight
- Over or under stimulated
- Physical stimulation
- Temperature

Emotional needs

Fall outs with peers
Rule breaking
Nobody wanted to play with them
Nobody wanted to play their game/ rules
Difficulty expressing themselves
Transitions
Demand avoidance
Learning needs
Family circumstances
Friend not at school

What could you do to support needs of people you are working with?

- No two people are the same. Ask them or ask people who know them well what helps.
- Consider using a profiling tool to help identify needs
- Use the following tool to be more aware
- Think about the possible challenges for ND patients and colleagues in your area of work
- Reasonable adjustments for colleagues (Equality Act, 2010)

ND areas	What are the possible issues here?	How could I help?
• Speech and Language • Energy levels • Attention and Impulse control • Motor skills • Sensory processing • Flexibility and adaptability • Emotional regulation • Social interaction and social relationships • Cognition		

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I will be able to think about how I would find out about needs and how to support these	✓

Further Information

For autism

- We recommend you find out more about autism and would recommend starting with the following websites

  Autism Understood has been created by young people, for young people

  www.autismunderstood.co.uk

  Ambitious about autism is the national charity for autistic children and young people

  www.ambitiousaboutautism.org.uk

- We recommend your parents/carers book a place on an autism workshop for parents so they can find out up to date information about autism, including helpful strategies that can support you.

  Autism Central provides resources, one to one support and events for parents/carers

  www.autismcentral.org.uk/

For ADHD

- We recommend you find out more about ADHD by visiting the following websites:

  ADHD foundation provides training, resources and information

  www.adhdfoundation.org.uk/

  Young Minds has a useful guide about ADHD, including strategies for home and school

  www.youngminds.org.uk/parent/parents-a-z-mental-health-guide/adhd/

NHS information about ADHD includes information about medication

www.nhs.uk/conditions/attention-deficit-hyperactivity-disorder-adhd/

Thinking About Neurodivergence: A Whole-School Responsibility?

Partnership for the Inclusion of Neurodiversity in Schools

The programme is funded by the Department for Education (DfE), supported by the Department for Health and Social Care (DHSC) and NHS England (NHSE)

care.think.do.
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