

‘The impact of neurodiversity and wellbeing in prisons’

Rationale and use of computer screening tools in prisons for people with learning difficulties and disabilities

Professor Amanda Kirby has a chair in Developmental Disorders in Education at University of South Wales, and founded The Discovery Centre. She is also the CEO of Do-IT Solutions and has been working with prisons for 16 years developing the Do-IT Profiler system to be used in this setting. Hayley Gibbon is a Doctoral candidate at the School of Psychology, University of South Wales.

Introduction

Number of documents in the past ten years have identified a clear need to support individuals with difficulties and disabilities at all stages of the justice pathway. This includes, for example, the recent *Unlocking Potential Review*, as well as the *Valuing Learning Disability*, *Valuing Learning Disability*, *The Bradley Review* and other reports by the

identified, the processes to support each person according to their needs identified given the variability of presentation and challenges.

This paper is the first of a series aiming to discuss some of these challenges, and examines how a person-centred approach can be enacted. It describes how using technology can be a means of delivering equitable and robust needs assessment across the Definition of Disability under the 2010, and presents some overviews of the system.

The two key



in College and University with:

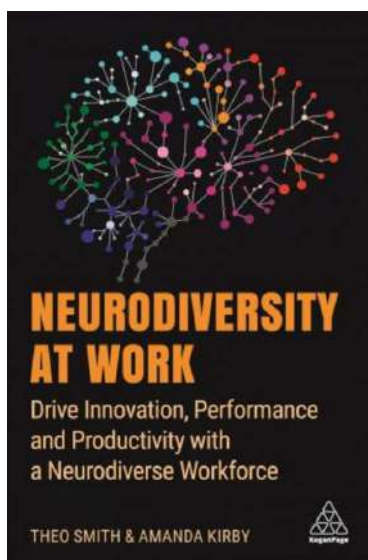


Online screening of offenders for Learning Difficulties and Disabilities - what are the benefits?

Helen Arnold-Richardson and Professor Amanda Kirby

The prevalence of people with Learning Difficulties and/or Disabilities (LDD) in the Criminal Justice System (CJS) has received increasing attention over the last decade. Various publications including *Unlocking Potential: A review of education in prison*¹ and *The Bradley Report*² discussed the difficulties of knowing the exact numbers of people with LDD in custody, with even less information regarding those on community sentences. The *Coates Review*³ and the *White Paper*⁴ cited that 1 in 3 people who are in contact with CJS have an LDD. These documents gave a greater emphasis on action not only for identification of offenders who have LDD, but also in staff having the skills to support at all stages within the CJS.

However, because of a lack of clear definitions, systems and processes to screen, it remains difficult to be sure of the specific figures per condition. The range varies greatly, for example from 4% to 56% of offenders having Dyslexia and 30% to 40%+ having ADHD. Debate also continues about which conditions are included or excluded under the umbrella of LDD in criminal justice, health and social care organisations⁵. The reality is that all LDD's co-occur or overlap with one another, so a person is quite likely to have challenges in one or more areas. Having in or out one condition from the umbrella means that parts of that person's strengths and challenges may not be identified. For example, someone could have reading, writing and co-ordination difficulties, be impulsive and have organisational difficulties, but they may only have been diagnosed with Dyslexia.



The study of an embedded system in prison to support individuals with learning difficulties and disabilities in the criminal justice system

Amanda Kirby and Lisette Saunders

Professor Amanda Kirby is Chair of Developmental Disorders in Education at University of South Wales, Wales, UK. Lisette Saunders is Deputy Director at G4S HP and VCI Prison, Bridgend, UK.

Abstract

Purpose: The purpose of this paper is to describe that it is a challenge for an embedded process for learning difficulties and disabilities in the criminal justice system (CJS). This is followed by an example of how this approach has been embedded in one offender setting. The use of a novel computational assessment and a decision tree, and how it has been used to enhance the initial screening process and to provide a person-centred pathway for support for the individual. The paper presents a review of the current literature on the CJS as a context for the study. The paper also highlights some of the current challenges in design.

Design/Methodology/Approach: This paper presents a review of the current literature to provide a context for the study of the embedded system.

Findings: The approach, along with the challenges faced in such a research.

Practical implications: The study presents a novel approach to support individuals with learning difficulties and disabilities in the CJS.

Originality/value: The embedded model represents a novel approach to support individuals with learning difficulties and disabilities in the CJS.

Keywords: mental health, screening, Autism Spectrum Conditions, DCD, Dyslexia, Dyscalculia.

Paper type: Conceptual.

Background

Individuals, as they travel through the criminal justice system (CJS) are required to understand information given to them. This begins at the police custody, take through the law courts and within and beyond prison. Some of these individuals will have the ability to describe to others

Aims of this brief session

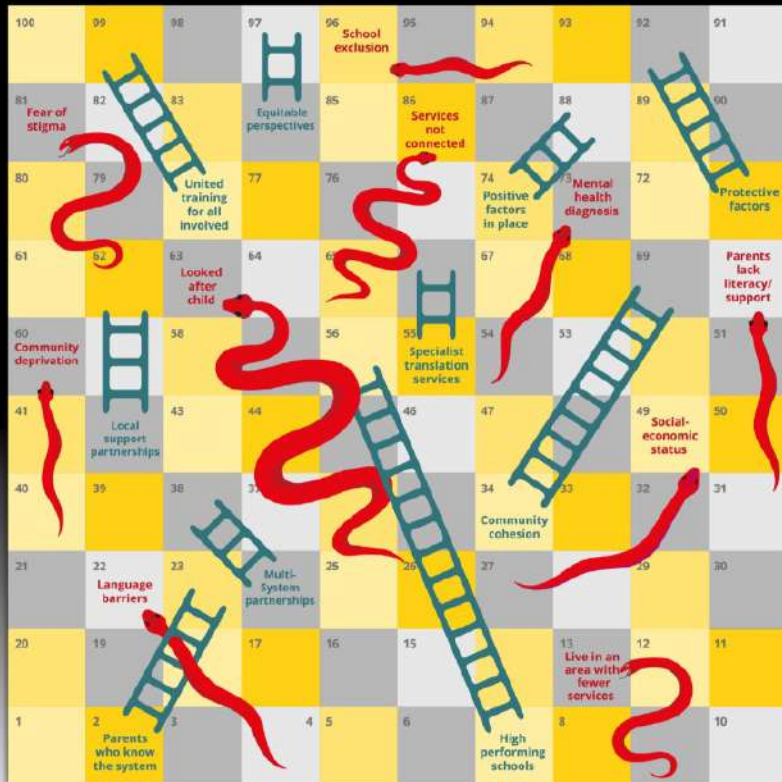
- **What is neurodiversity and the impact in prisons understanding this**
 - What is Neurodiversity? What do the words mean?
 - What are the strengths and challenges associated with neurodivergent conditions/traits?
 - Why do people in and out of the justice system get missed, misdiagnosed and misunderstood?
 - What strategies/adjustments in education that need to be considered?



One brain BUT multiple systems

ETHNICALLY DIVERSE CHILDREN & NEURODIVERSITY: PINBALL SYSTEMS, SNAKES AND LADDERS OR PERSON-CENTRED PROVISION

Prepared by Prof. Amanda Kirby - April 2024



<https://allianceofsport.org/news/new-report-pinball-systems-snakes-and-ladders-or-person-centred-provision/>



**Lots of papers and reports stating the
need to support neurodiversity in the
Criminal Justice Sector... e.g. in UK**



2008...



Recognising differences in every person

“People with learning disabilities are not a homogeneous group...they are all individuals with a wide range of life experiences, strengths, weaknesses and support needs.

However, many will share common characteristics which might make them especially vulnerable as they enter and travel through the criminal justice system.”

- ‘No One Knows’ Talbot, 2008



UK 2020...

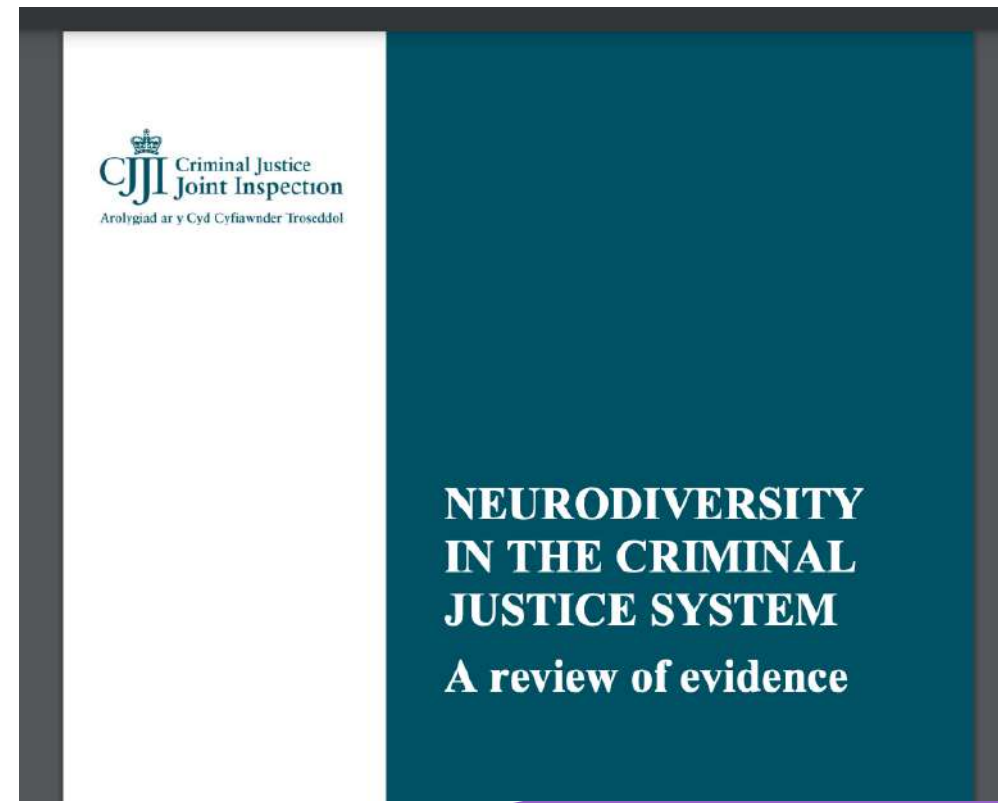


“Neurodivergent offenders often have speech, language and communication needs. Consequently, this cohort can experience difficulties understanding and processing complex information, particularly in stressful circumstances, such as whilst serving a community sentence. They are required to understand the processes and their sentencing requirements, as well as be able to communicate proficiently with a wide range of individuals. There is a risk that this cohort face extra challenges when trying to comply with criminal justice processes and procedures.”

A Smarter Approach to Sentencing by Lord Chancellor and Secretary of State for Justice, Ministry of Justice, September (2020)

MOJ 2021- Neurodiversity in the Criminal Justice System

“A programme of awareness-raising and specialist training should be developed and delivered to staff working within criminal justice services. For frontline staff this learning should be broad-based, mandatory, raise awareness of neurodivergent conditions and how they impact on communication and be supported by practical strategies for working with neurodivergent people. More specialised training should be provided for staff whose roles require it. The programme should be developed and delivered in consultation with people who have personal experience of neurodivergence. “



House of Commons Education Committee

May 2022



Not just another brick in the wall: why prisoners need an education to climb the ladder of opportunity – Report Summary

This is a House of Commons Committee report, with recommendations to government. The Government has two months to respond.

Author: [Education Committee](#)

Related inquiry: [Prison education](#)

Date Published: 18 May 2022

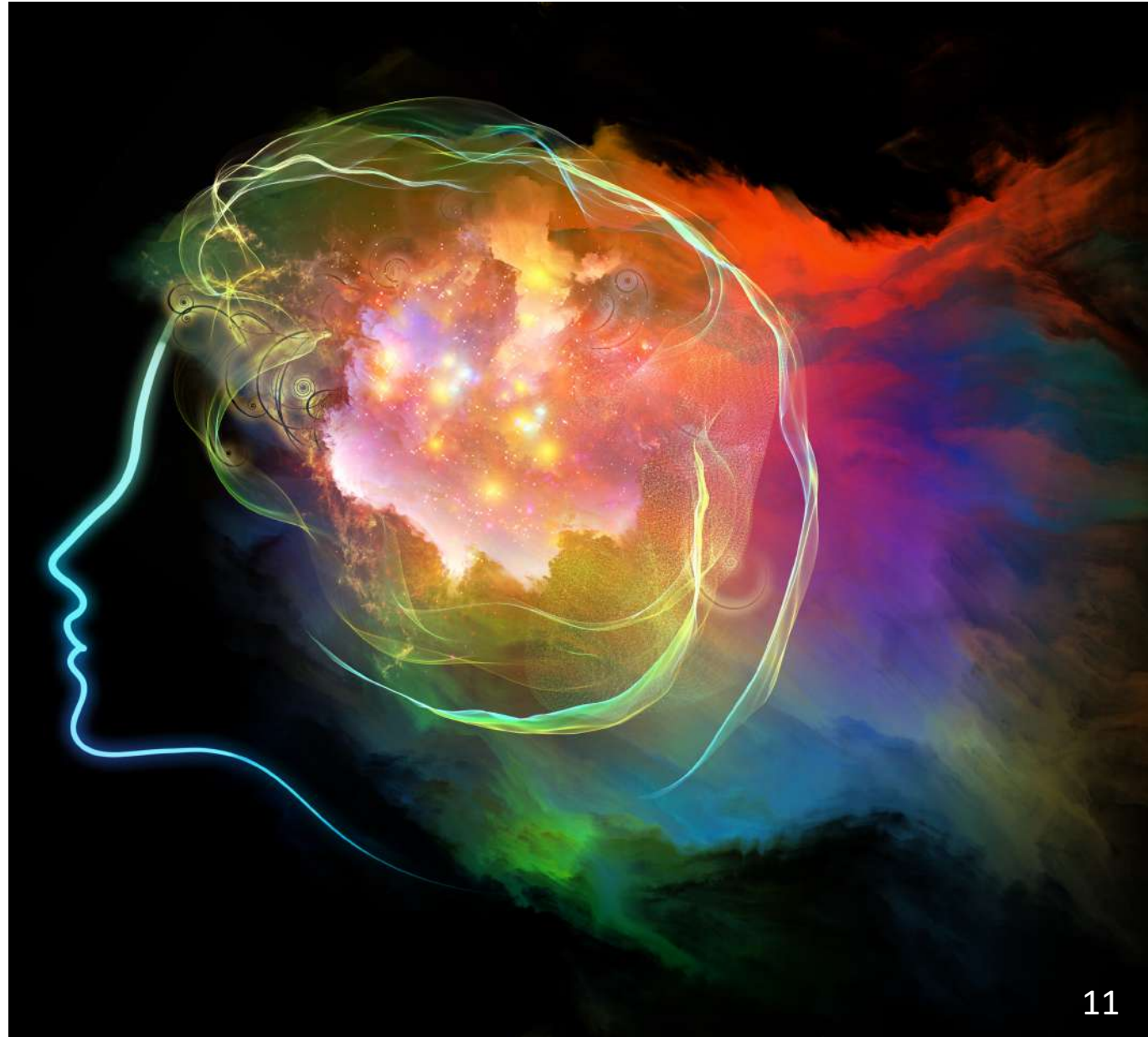
"Data shows that over 30% of service users have a learning difficulty or learning challenges. However, we heard that this figure is likely to be an underestimate and that the true scale of the issue is not known, as prisons rely heavily on service users declaring themselves to have learning needs. The current screening process is not adequate to identify service users with additional leaning needs.

We recommend that the Ministry of Justice introduce a consistent assessment process for every service user when they enter the prison estate. We believe that there is a strong case for every service user to receive an assessment for learning needs from an educational psychologist, or at the very least a more intensive form of screening, and we recommend that the Ministry of Justice prepares a cost appraisal for implementing such an approach."

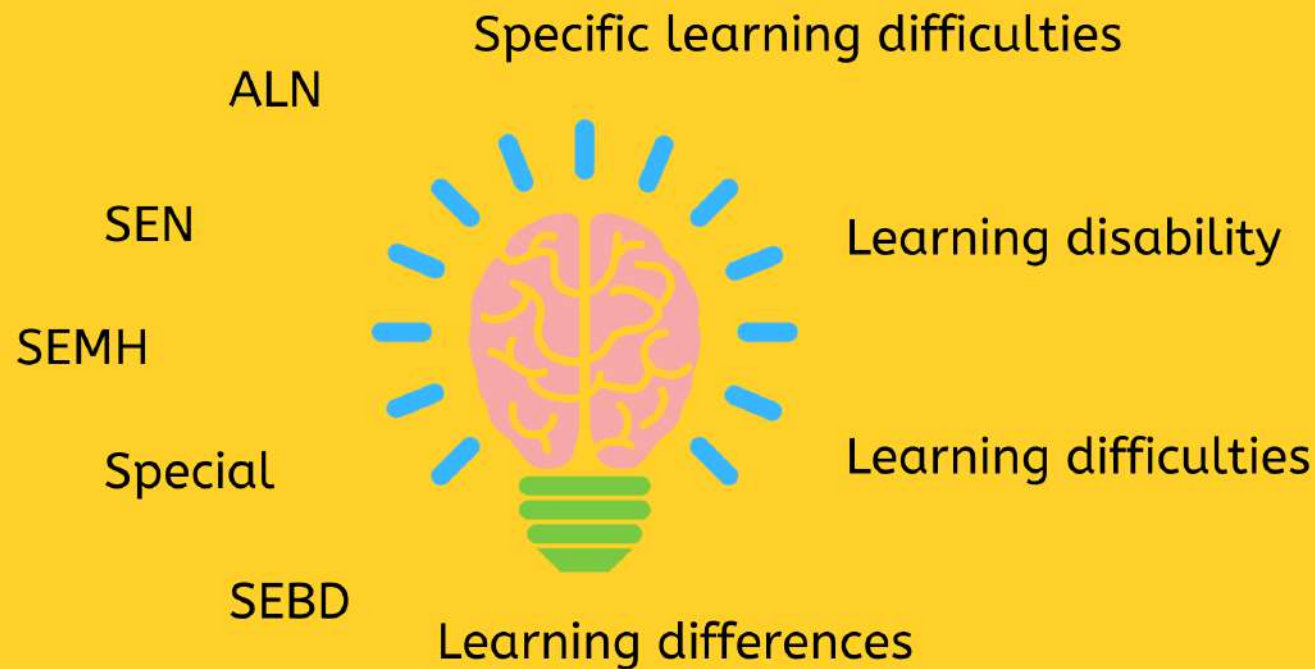
Neurodiversity

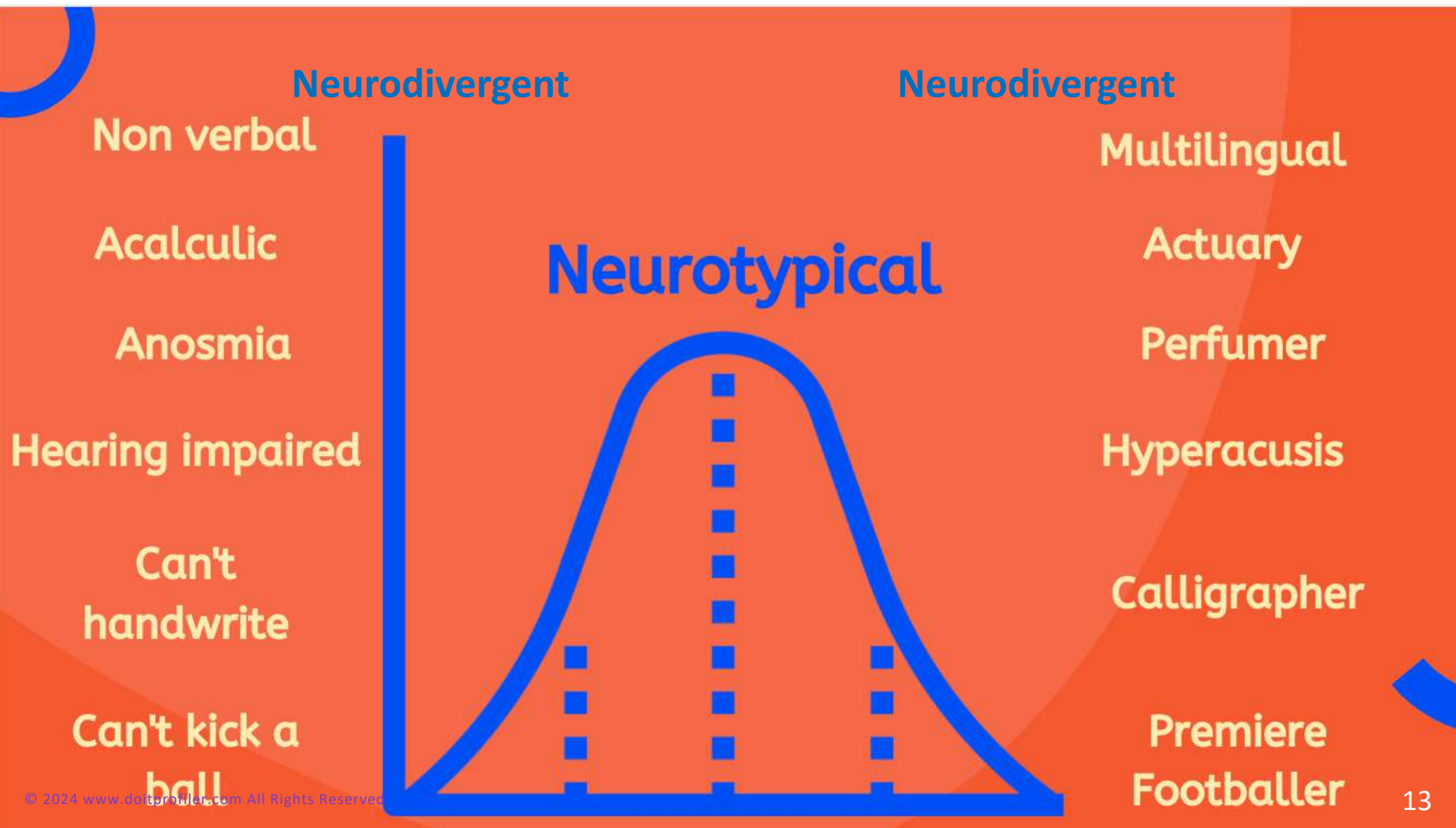
Our brains (**neuro-**) naturally vary from person to person (are **diverse**) and are a part of human variation.

We all think, move, act, process information and communicate differently.

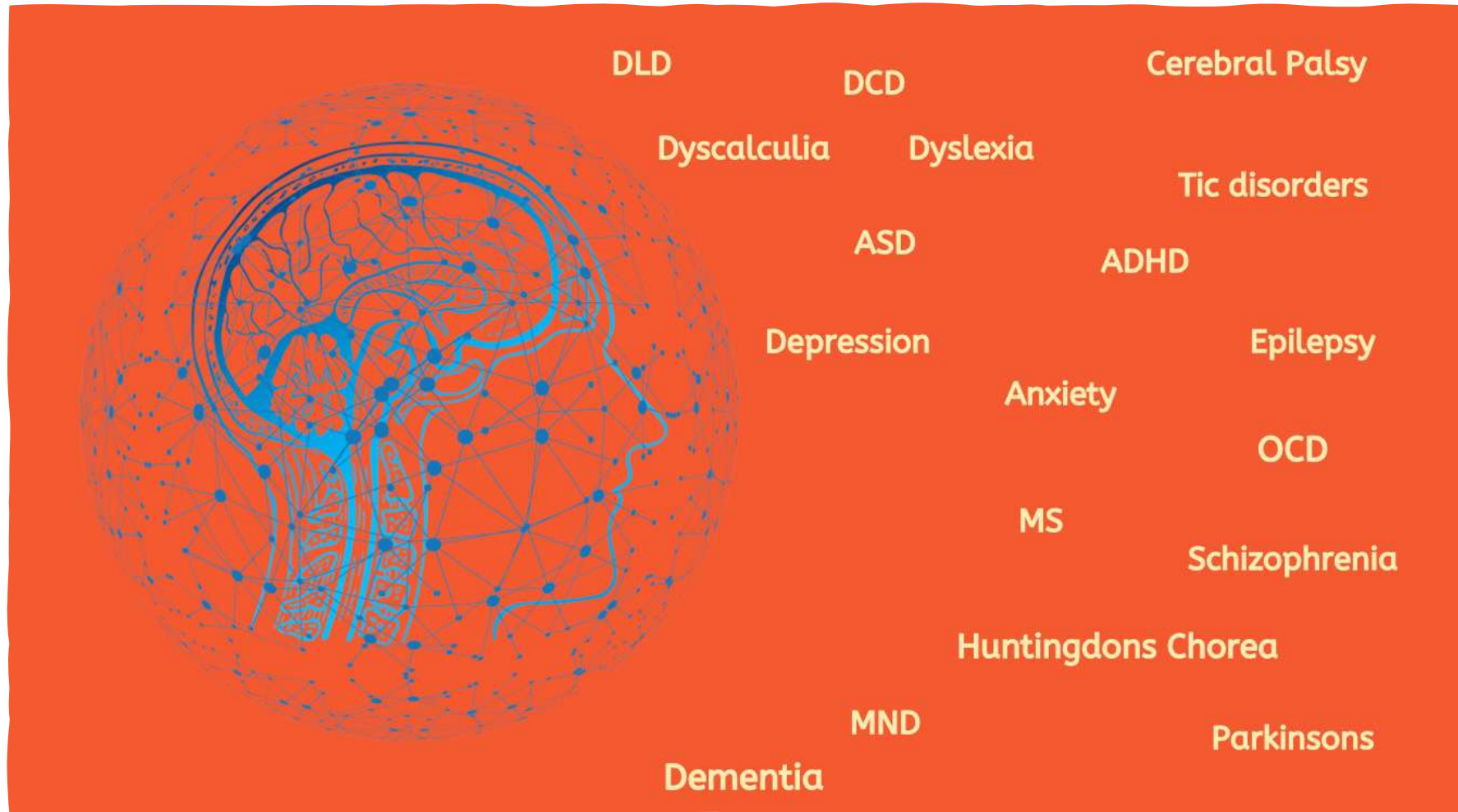


Different terms have and are being used in different countries

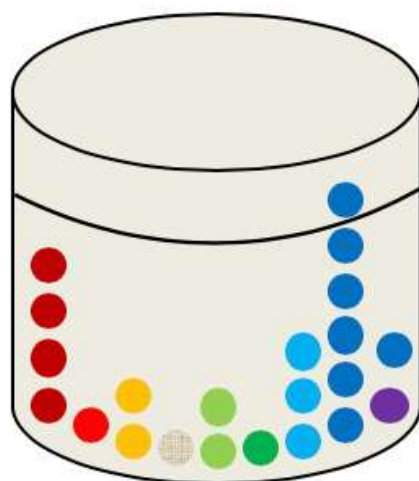




Conditions under the neurodivergent ‘umbrella’

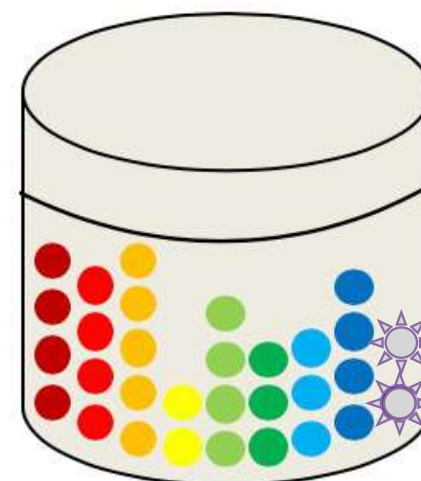


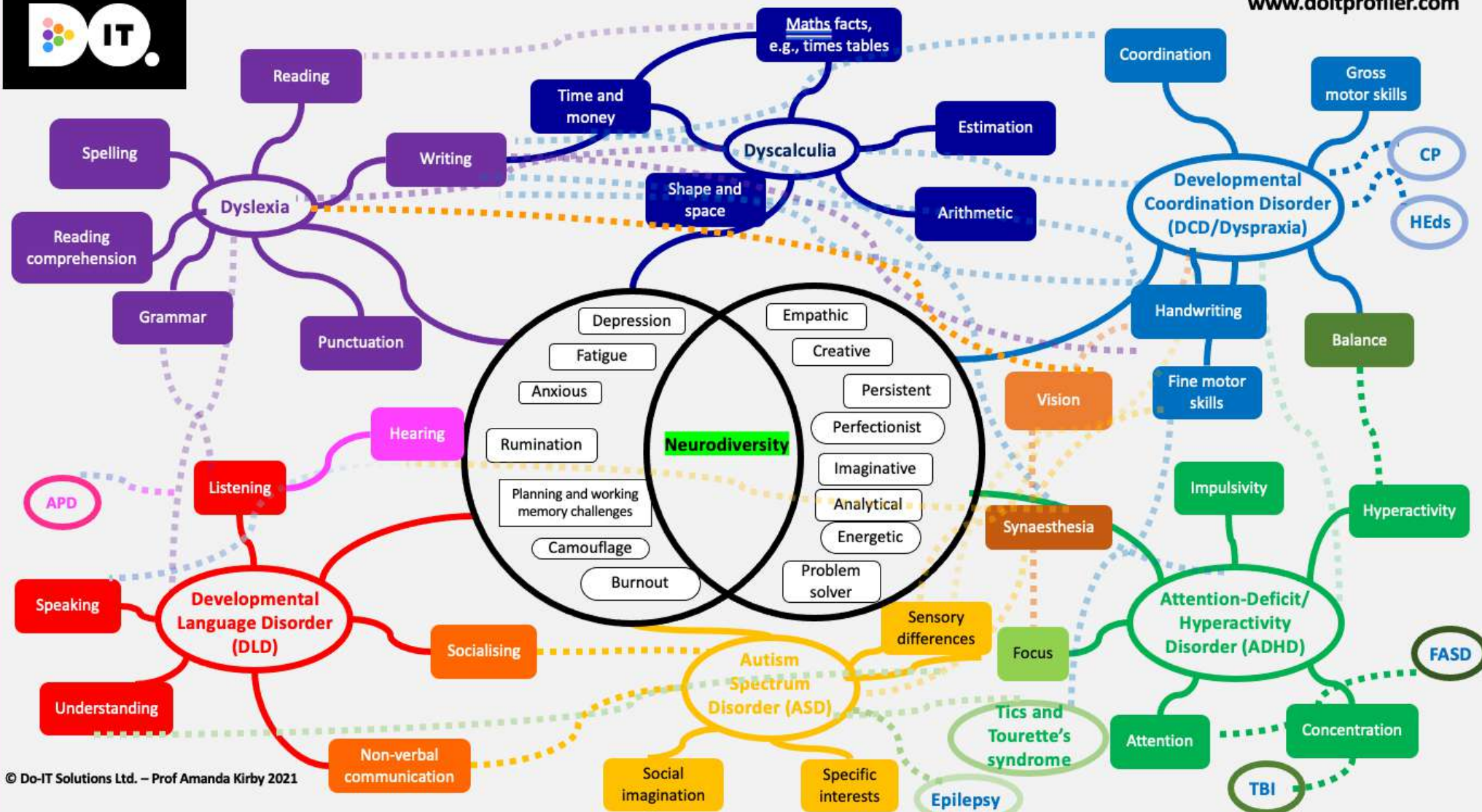
Number of balls indicates the severity of the challenge in that area. Some are easier to see!



Have to meet a certain level to 'count' and get a diagnosis for challenges or meet the criteria for services

Different colours indicate different types of challenge, e.g. reading, attention, social, motor, home life, behaviours







Consider the prevalence of overlap

60% of people with ASD have DCD
30% of people with ASD have ADHD
30% of people with ADHD have DCD



Why Do We Find it so Hard to Calculate the Burden of Neurodevelopmental Disorders

M. Cleaton, A. Kirby • Published 2018 • Medicine



- **Dual Focus on Adversity and Neurodevelopmental Conditions**

The findings emphasize the need to address both adverse childhood experiences (ACEs) and neurodevelopmental conditions (NDCs) in psychiatric evaluations. Focusing solely on trauma risks overlooking neurodevelopmental factors that can shape a child's environment, leading to misdiagnosis and missed opportunities for early intervention.

- **Impact of ACEs and NDCs on Health Outcomes**

Both ACEs and NDCs independently increase the risk of poor mental and physical health outcomes. When co-occurring, they have additive effects, leading to a heightened risk of severe psychiatric issues and poor health outcomes later in life. This suggests that interventions should target both factors to improve long-term health trajectories.

- **Holistic Psychiatric Assessments**

The "Double Jeopardy" model proposes a shift from highly specialized mental health assessments to more holistic approaches that consider both ACEs and NDCs.



The 'diagnosis' or label a person gets may be dependent on the services they have accessed
- now or in the past





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Forensic Science International: Mind and Law

Volume 4, December 2023, 100123



School to prison pipelines: Associations between school exclusion, neurodisability and age of first conviction in male prisoners

Hope Kent^a  , Amanda Kirby^b, Lee Hogarth^a, George Leckie^c, Rosie Cornish^d, Huw Williams^a



Neurodiversity and homelessness

Neurodiversity and homelessness

> [Int J Prison Health](#). 2023 Jan 24. doi: 10.1108/IJPH-08-2022-0051. Online ahead of print.

Looked after children in prison as adults: life adversity and neurodisability

Hope Kent¹, Amanda Kirby², George Leckie³, Rosie Cornish⁴, Lee Hogarth¹, W Huw Williams¹



****There are social biases which mean we keep missing people again and again****

Less likely to have a ND diagnosis if:

- Adverse Childhood Events present in past
- Been excluded from school - **e.g., 2 out of 3 males have been excluded**
- Looked After Children/In Care
- Females



****There are social biases which mean we keep missing people again and again****

BUT more likely to be neurodivergent

- Lower Socio –Economic- Status /Poverty
- Children in low-income households are also more likely to have cognitive deficits, such as impaired working memory and language skills when compared to children in middle-income households (Jakovljevic et al. 2016)

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Forensic Science International: Mind and Law

Volume 4, December 2023, 100123



School to prison pipelines: Associations between school exclusion, neurodisability and age of first conviction in male prisoners

Hope Kent^a  , Amanda Kirby^b, Lee Hogarth^a, George Leckie^c, Rosie Cornish^d,
Huw Williams^a



Using Do-IT Profiler with 11,000 male service users we have found that:
service users who were excluded from school were on average
8 and a half years younger at first conviction
than service users who were never excluded from school.

Service users who had been excluded from school also had
lower scores for **reading and attention**.

Challenges and barriers are not stable but can change over time



> [PLoS One](#). 2024 Jan 3;19(1):e0296078. doi: 10.1371/journal.pone.0296078. eCollection 2024.

Profiles of vulnerability for suicide and self-harm in UK prisoners: Neurodisability, mood disturbance, substance use, and bullying

Hope Kent ¹, Bella Magner-Parsons ¹, George Leckie ², Tuna Dulgar ¹, Anggita Lusiandari ¹, Lee Hogarth ¹, Huw Williams ¹, Amanda Kirby ³

Affiliations + expand

PMID: 38170719 PMCID: [PMC10763929](#) DOI: [10.1371/journal.pone.0296078](#)

Key findings



- **Suicide and self-harm risk:** Prisoners with a history of suicide attempts are at higher risk of repeating these behaviours in prison. In this study of 665 male prisoners in a Welsh prison, 12% had previously attempted suicide, 11% had a history of self-harm, and 8% had both.
- **Risk factors for suicide attempts:** Prisoners with past brain injuries or substance use problems were more likely to have attempted suicide before.
- **Risk factors for self-harm:** Prisoners who were bullied in school were more likely to have a history of self-harm.

Key findings



- The study found that higher levels of functional neurodisability (such as cognitive impairments) **AND** mood problems were linked to both past suicide attempts and self-harm.

Implications for prisons:

Screening prisoners for a wider range of needs, such as brain injuries or mood disorders, could help prisons provide more tailored and compassionate care, potentially preventing future suicides or self-harm.

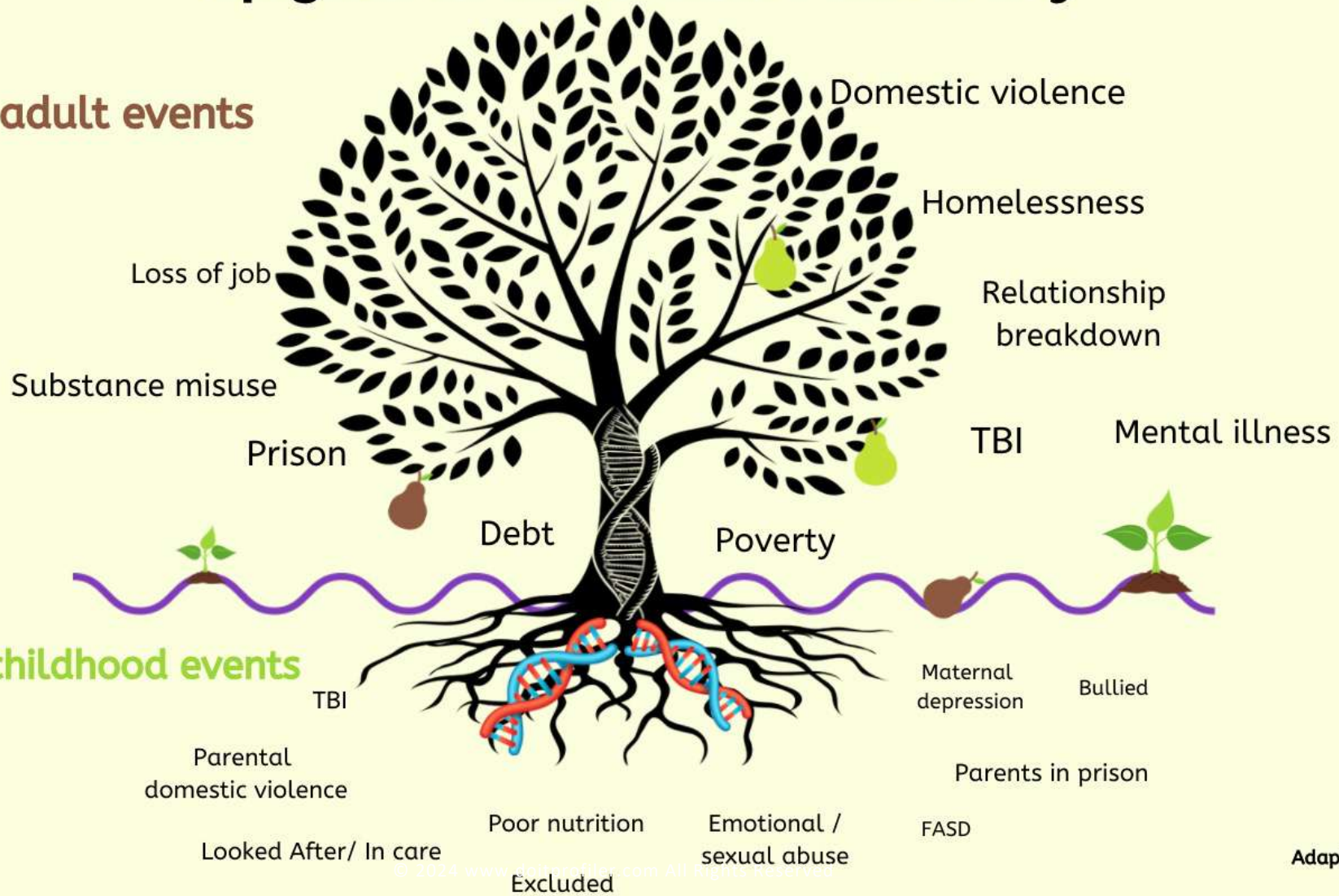
What happens if/when we don't identify and support people?



- Revolving door
- Impact on mental and physical health
-and

Epigenetic cumulative adversity

Adverse adult events



Adapted from Elis and Dietz,
2017

Editorial | [Open Access](#) | [Published: 26 September 2022](#)

Double jeopardy: implications of neurodevelopmental conditions and adverse childhood experiences for child health

[Ruchika Gajwani](#) & [Helen Minnis](#) 

[European Child & Adolescent Psychiatry](#) (2022) | [Cite this article](#)

9 Accesses | 25 Altmetric | [Metrics](#)

<https://link.springer.com/article/10.1007/s00787-022-02081-9>



Addressing the Inverse Care Law in Developmental Coordination Disorder and related Neurodevelopmental Disorders

Kirby, et al, 2018

Neurodiversity + Adversity = Greater combined impact

$$1 + 1 = 3$$

DOI: 10.4172/2472-1786.100073 • Corpus ID: 149594530

Why Do We Find it so Hard to Calculate the Burden of Neurodevelopmental Disorders

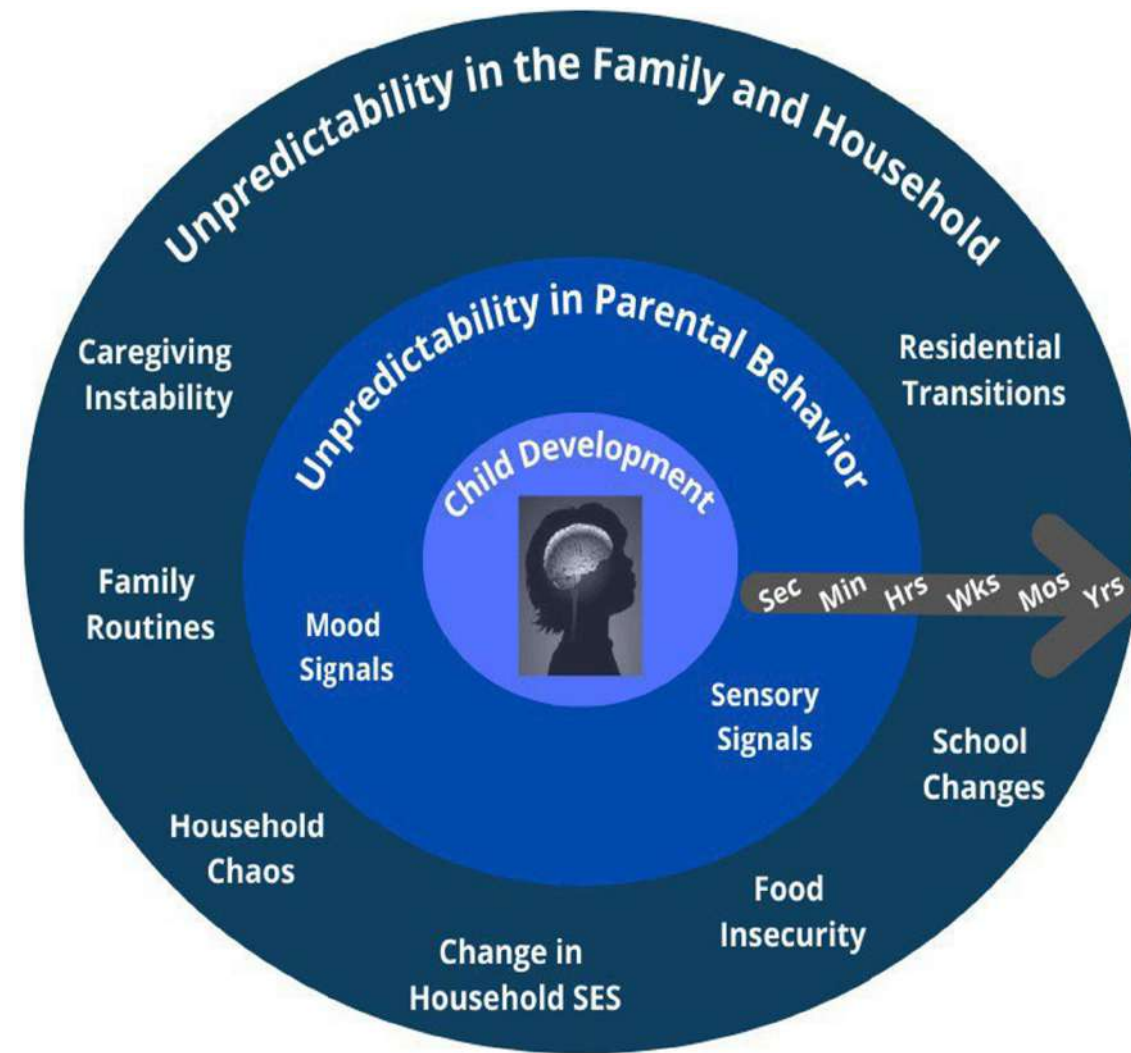
[M. Cleaton](#), [A. Kirby](#) • Published 2018 • Medicine

<https://www.semanticscholar.org/paper/Why-Do-We-Find-it-so-Hard-to-Calculate-the-Burden-Cleaton-Kirby/dc532fc622b8acd3390648831d6948936145e835>

Amanda Kirby 2024 copyright

The power of **predictability** – the more we keep to one path.. the better it is.

There have been several large scale studies that have shown that children who experience more transitions show higher levels of externalising behavioural problems and impulsivity and lower school readiness (Doom, Vanzomeren-Dohm, & Simpson, [2016](#); Doom, Young, Farrell, Roisman, & Simpson, [2022](#); Fomby & Mollborn, [2017](#); Li, Sturge-Apple, Jones-Gordils, & Davies, [2022](#)).



Multi-system children

Childhood attention-deficit hyperactivity disorder: socioeconomic inequalities in symptoms, impact, diagnosis and medication

Anna Pearce  Paul Henery, S. Vittal Katikireddi, Ruth Dundas, Alastair H. Leyland, Dasha Nicholls, Russell M. Viner, Lynda Fenton, Steven Hope

First published: 18 March 2024 | <https://doi.org/10.1111/camh.12707>

- Children in **stable family** arrangements fare better than children who experience multiple caregiver changes.
- Children who **move less frequently fare better** than children who experience chronic housing insecurity.
- Children whose families adhere to **regular routines** fare better than children whose households are less structured.



What happens if **we do identify and support people..**

- Can identify those at greater risk
- Reduce burden on services
- Target interventions
- Plan for resettlement
- But we need GP services, housing, digital access too...
- Change future generations outcomes

NEURODIVERSITY in the JUSTICE system

People with neurodivergent traits, such as learning disabilities, ADHD, autism spectrum disorders/conditions, dyslexia, dyscalculia and dyspraxia (Developmental Coordination Disorder) and speech and language challenges may have barriers to engaging for a number of reasons.

Remember every individual will be different and their home and life experiences may also vary greatly now and in the past.

Here is a list of common challenges for those going through Criminal Justice System:

- Filling in forms
- Reading and understanding documents
- Explaining things
- Following instructions or directions
- Concentrating in lessons or work parties / workshops/in court
- Managing money
- Organising and looking after possessions
- Telling the time and being time aware
- Remembering information
- Working in a group setting
- Reading, spelling, writing and understanding new information
- Understanding social norms and what the hierarchy is
- Learning a new skill
- Coping with change
- Dealing with different sensory settings e.g. noise, people

Getting started

Irrespective of a person having a diagnosis or not, the following adjustments may help people to navigate their way through the offending system.

- Ask the person what has helped them in the past.
- Consider what can be put into the person's care plan / management plan.
- Ask what situations / tasks make it harder for them, such as background noise, working in group settings, reading written information, e.g. statements.
- Be aware past experiences may make the person reticent to ask for help or support.
- The person may need more time to understand or process written or oral information. This information should be presented using different methods, such as orally or in writing. Check for understanding and don't take a nod of the head to mean a yes.
 - Provide extra time and support when filling in forms, in interview settings, or when in a new learning environment.
 - Some people may find it difficult to understand what is been requested of them and may not be able to communicate this difficulty accurately.
 - Check with them first, allow more time and use different communication methods. Invite the person to ask questions and repeat what you said to make sure it has been understood.
 - When confused or unsure of how to behave, the person may present as anxious, angry or irritable. If this happens stop and consider what may have led them to behave in this way e.g. don't understand; change in situation; not being understood, fear. Check what has changed? Person/Place/Task?

www.doitprofiler.com



Reading/Literacy/ Dyslexia

- Anything that needs to be read should be presented in an easy-read format, and the reading age of the material should be appropriate.
 - Where possible, use pictures, as well as words, to help understanding.
 - Avoid printing on bright white paper. Use cream or pale blue instead.
 - Use an easy to read font, such as Arial, Verdana, Comic Sans and size of 12+.
 - Use short sentences and leave plenty of space between lines of text.
 - Offer to read out aloud any written information. Avoid asking the individual to read out aloud in a group, unless this has been discussed beforehand.
 - Offer to help complete any written forms.
 - Where appropriate, write down instructions and use visual prompts to act as reminders.
 - Allow more time to read information. Explain the meanings of words if the individual does not understand it.

Social, Communication/ ASC

- Address the individual by name to ensure they know you are speaking to them.
- Ask the individual to repeat back what's been said to make sure they understand. If they don't, try and explain differently.
- Show, as well as tell, where you can.
- If a change is occurring, such as going to a new place (e.g. work parties, hall or wing, education or court), describe what will happen beforehand if possible.
- Break information into small chunks rather than giving a series of information at once.
- Avoid jokes and metaphors.
- Be specific in what you ask. Avoid saying 'in about 5 minutes' etc.
- Maintaining eye contact may be harder and may not indicate the individual is not listening to you.
- Create a list of words and terms used, and avoid prison jargon.
 - Discuss if there are any specific sensory issues, e.g. touch, sound, textures

Attention/ Concentration/ ADHD

- Noisy and / or busy surroundings may make it harder for the person to focus or understand important information.
- If possible, discuss what works best for the individual.
- •Encourage exercise, which may help with sleep.
- Break learning / interview sessions into short blocks to maintain concentration, for example 15 minutes long where possible.
- Have the individuals move around and stretch.
- Use timers for timed tasks. But set them at intervals, not just for the end of the task.
- Try to have clocks on display to make it easier to see the time, both digital and analogue.
- Encourage the individual to reflect what causes them to act impulsively.
- Discuss approaches to learning how to relax, e.g. mindfulness, doing puzzles, doodling, exercise.

Coordination/Dyspraxia /Developmental Coordination Disorder

- Handwriting may often be unreadable.
- Offer to write any letters or forms.
- Show the individual how to be organised with their paperwork, possessions, etc.
- Explain how to do tasks and allow more time to practice learning a new skill.
- Write a list of actions /tasks so they can see what needs to be done and cross them off as they are completed.
- Show what is expected, and tell the individual what to do. This may need to be shown several times, for example, how to tidy the cell. (You may want to have a photo of what is expected.)
- Encourage the individual to learn to type and practice a consistent signature.

Maths/Dyscalculia

- Check the person's understanding of terms, such as +, sum, add, plus, divide, etc.
- Practice basic addition, and subtractions up to 20.
- Show how to use a calculator.
- Provide support managing finances.
- Check the person can tell the time - teach this skills.
- Check the person can read and select food choices - work with peer mentors.
- Check the person understands about general hygiene - teach specific skills if required.
- Difficulties with orientation - have a key worker to discuss impact of changes when going to happen, when possible.

