CHILDREN AND YOUNG PEOPLE IN CONFLICT WITH THE LAW: POLICY, PRACTICE AND LEGISLATION

Section 18: Brain Development and Neurodiversity

June 2026

Children and Young People's Centre for Justice

Featured artwork created by children and young people with justice experience

Contents

1. Introduction

A key role all professionals working with children and young people in conflict with the law is identifying, understanding, and supporting needs related to any harmful behaviours. This has increasingly encompassed an understanding of the link between these behaviours and earlier experiences, development, and mental health (see sections of this guide on Trauma and Adversity, Approaches to Working with Children, and Mental Health).

It is now also well understood that those in conflict with the law have higher rates of neurodevelopmental issues than evident in the general population (Williams et al., 2021). As such it is crucial that practitioners have a good understanding of these conditions, and how to identify and best work with them to reduce stress and improve outcomes for children and young people. It is important to highlight that having a neurodevelopmental condition does not increase conflict with the law behaviours: whilst *some* traits, or *some* conditions may, the impact may be on considerations as to whether individuals have the drive or capacity to hide behaviours, and understanding of what constitutes an offence. Regardless of any correlation, of key importance is the ability of practitioners to understand how any condition or traits may present for the individual and intersect with conflict with the law behaviours and other contributory factors.

The needs of children and young people who come into conflict with the law are often very complex, and it can be challenging, or more accurately impossible, for practitioners to establish causal links between contributing factors and behaviours. Rather, assessments and responses must be approached in a way that is both trauma and developmentally informed, supporting the individual's needs and rights in a way which enhances their ability to effectively engage with any required and recommended interventions or disposals. It is suggested that a developmentally informed approach must also consider relational, behavioural, cognitive, systemic, and mental health factors, as outlined by Roles & Johnstone (2024). Their approach is further detailed in Approaches to working with children, reading of which is recommended, particularly in reference to goals for intervention and the work of Ellis et al. (2020), which considers both the child's needs and the ability of the social environment or system of care to support the child's needs.

The aim of this section is to offer related guidance to practitioners working with children and young people in conflict with the law, to support them to be curious, looking to understand traits and presentations, and what these might say about a person's experiences, characteristics, neurodevelopmental functioning, and behavioural drivers, as well as intersectionality – the relationships between various factors. It should also be read in conjunction with Section 6 of this guide on Speech, Language and Communication Needs (SLCNs), which deepens understanding of how some of these conditions, and others, may present.

This section will start by developing understanding of brain development, including impact of early experiences, and changes to the brain in adolescence. It will then discuss neurodevelopment and neurodiversity language and policy before exploring some prominent neurodevelopmental conditions, before looking at types of support available to best support children and young people with aspects of neurodiversity.

2. Brain development

Before exploring different conditions, which impact the brain, it is important to understand typical brain development and what can impact this.

2.1 Neuro plasticity and changes in adolescence

For humans to function, brain cells send messages (neurons) to each other, connecting at points (synapses) to do so. The childhood brain has many more synapses than it requires, and through developmental and environmental experiences it learns to ‘prune’ back those it does not use, whilst establishing new connections, and strengthening those used the most – essentially the brain rewiring itself. This ‘synaptic pruning’ is most pronounced in the early years but also significant during adolescence, thought to promote the establishment of more adult-type brain patterns (Spear, 2013).

Neural plasticity is the collective name of these rewiring and pruning processes. It is impacted by both developmental and experiential demands, as whether connections are used or not, and consequently strengthened or lost, depends on our individual experiences and environment.

This video Experiences Build Brain Architecture, part of a series from the Harvard Center on the Developing Child, shows how our experiences influence brain development, which is essentially from the bottom up: basic neural functions developing in our younger years, followed by more complex circuits and skills. Whilst genes provide a blueprint for early brain development, it is the connections we use over time in response to care giver and environmental demands that influence synaptic strengthening and behavioural patterns as we grow.

Early brain development
The first significant growth period for a child’s brain is in utero up to age three. Perry et al. (1995) outlined the potential impact of early years neglect and trauma on the functional capacity of the neural systems mediating our cognitive, emotional, social, and physiological functioning. This can result in a variety of difficulties, for example, delayed language, issues with fine and large motor skills, impulsivity, dysphoria (unhappiness), and hyperactivity. It appears that the longer the child is in an adverse environment, and the earlier and more pervasive their experience, the more pervasive and enduring the impact is. Findings have indicated that there can be some recovery of functional capacity when children are removed from adverse environments, though lesser time spent in an adverse environment seems to lead to more robust recovery (Perry, 2002; Perry et al., 1995).

Adolescent brain development and maturation
Adolescence is now known to be a critical period of neurological development, when the pruning process accelerates until well into the mind 20s. Adolescent pruning is at a lower rate than early childhood and is thought to be more based on environmental demands.

The brain is split into multiple areas each responsible for certain functions. Neural plasticity occurs in different parts of the brain at different times, thought to help explain adolescent typical behaviours, and varying rates of maturation (Dow-Edwards et al., 2019). Neural plasticity in the parts of the brain governing motor and sensory functions, slows down much before adolescence i.e. our movement and experience of senses mature early, pruning in adolescence mainly continuing in the pre-frontal cortex, the area which governs our emotional responses (such as empathy, insight and response flexibility) and cognitive functions (like critical thinking, inhibition and judgement).

Neuroscience study into the adolescent brain over the last 30 years shows that the pre-frontal cortex, the part of the brain responsible of executive function, continues to mature and be impacted by experiences into the 30's (Dow-Edwards et al., 2019). The adolescent brain is not mature, reliant still on external influences, impacting responsibility.

Delays in the maturation of these areas may explain why adolescents continue to display developmental immaturities such as how goals or plans influence behaviour, the ability to maintain calm and process information before responding, response inhibition (supressing inappropriate reactions), and other cognitive functions (Spear, 2013). This means that children may not be as in control of their actions at some times as they are at others, act impulsively and take risks.

Risk Taking

Adolescent studies on the part of the brain that responds to rewards, the ventral striatum, show an exaggerated response to rewards, and a much lower level of response to anticipatory rewards, or cues for rewards, than both adults and children, a characteristic also linked to increased risk-taking behaviours (Schneider et al., 2012). The disparity between the more developed limbic system of the brain, responsible for emotional and behavioural responses, and the lesser developed prefrontal control system may also account for adolescent risk taking. Teenagers can make rational decisions, but this ability is impaired in more emotional/stressful situations (e.g., in the presence of peers or with the prospect of an immediate reward), when rewards and emotions will have greater influence on behaviours than rational decision-making processes (Konrad et al., 2013).

Adolescent risk taking can also be attributed to a lesser neuro response to things that could trigger adverse or harmful outcomes, such as threats or consequences, than in adults, responses only generated when penalties are particularly high (Spear, 2013). This could explain why they appear more motivated by easily attainable rewards than they are deterred by future penalties, and why they may be unable to appreciate the risks associated with reward behaviours.

Teenage mindset

Peer acceptance and status are important to adolescents (Crone & Dahl, 2012), with popularity shown to be positively related to risky behaviour (Mayeux et al., 2008) indicating peer acceptance influences behaviours. It has been shown that peer observation increases risky decision making in 16- to 18-year-olds whilst the simple presence of a peer does not (Somerville et al., 2018). This age group are more conscious than any other of their reputation amongst peers, linked to increased reward seeking given that activation in this part of the brain peaks in adolescence and then reduces up to around age 30 (Braams et al., 2015). Studies on the influence of peers and mothers have shown that whilst peer influence increased risk-taking behaviours, the mothers' presence reduced it (Chein et al., 2011; Telzer et al., 2015), indicating social influence can also result in more positive decision making. This has implications for interventions, such as the promotion of increased time with those who are regarded as positive influences in social/education/family spheres, and targeted work to improve relationships with those positive persons whose acceptance the child desires and values.

2.2 Impact of stress and early life adversity on neurodevelopment

Neurodevelopmental research has shown that environmental factors influence neurodevelopment. Analysing various studies looking at the relationship between socio-economic status (SES) and brain development, Tooley et al. (2021), note correlation between SES and the thickness of the cortex, suggesting that those of higher SES have thicker cortex for longer suggesting a more protracted period of brain development, allowing the development of a wider range of connections from which to prune, with this process occurring at an earlier stage of brain maturation in those from lower SES, potentially due to the higher association of this group to chronic stress, which can accelerate brain development to manage perceived environmental threats. One study quoted highlighted that increased exposure to cognitive enrichment – gained from the more complex and stimulating environments associated with higher SES – mediated the impact lower SES has been seen to have on brain development and ability to cope with stress (Rosen et al., 2018). This has potential implications for practice both in terms of promoting the importance of varied cognitive stimuli in early years, but also the repeated exposure to and reinforcement of positive experiences, thinking processes and behaviours in adolescence, prolonging plasticity.

The hippocampus is part of the limbic system of the brain, essential to new learning and memory function Carrion & Wong's (2012) analysis of various studies on youth with Post Traumatic Stress Syndrome (PTSS) noted deficits in hippocampus structure and functioning in this group. Their findings suggested increased levels of the stress hormone cortisol, associated with impairments in memory processing that may underlie learning difficulties and PTSS, associated with maladaptive processing of traumatic memories (memories can be hard to recall or recalled inaccurately). They also found stress impacted the pre-frontal cortex, part of the frontal lobe, essential to response associations such as shifting of attention and forming stimuli, fundamental cognitive processes which promote learning (Carrion & Wong, 2012).

Breslin et al. (2024) in noting evidence on the association between early life adversity and reduced hippocampal volume in adults, looked to establish whether early experiences can predict changes in hippocampal volume over time, using neuroimaging (MRI) and self/ parent assessment data over time, from the US Adolescent Brain Cognitive Development Study. They found that early adversity impacted adolescent hippocampal development (impact increased along with the number of adversities). This supports other findings that stress and adversities in the pre-school years have most impact on later brain development (Humphreys et al., 2019; Luby et al., 2019). Luby et al (2019)'s 15-year study using MRI imaging adding to the growing evidence of the role as the supportive caregiver as a protective or buffering factor mitigating the risk.

2.2 Implications for practice

Care planning for all children and young people must involve careful consideration of brain development. We must set realistic expectations, recognising failure to follow parental direction, plan-ahead, and think consequentially are not things they have full control over, even if they appear rational at times. Consequences which are not immediate, such as offence grounds or criminal convictions which can impact future careers or travel, likely won't deter behaviours, with more immediate rewards/negative impacts more likely to motivate. Assessment of early life experiences and socio-economic status is also important to consider when assessing the brain development trajectory of individuals, and targeting interventions, with consideration of how to increase exposure to varied and positive experiences and relationships important both in individual, familial, and structural interventions i.e. enriched learning experiences, promotion of nurturing carer relationships, and efforts to mediate the impact of poverty, deprivation and associated stress

3. Neurodiversity and conflict with the law

Neurodevelopmental conditions, acquired brain injuries, and learning capacity impact brain functioning and should be given consideration in assessment and care planning for those in conflict with the law. An understanding of the language and policy context is first required.

3.1 Neurodevelopmental language

The Scottish Government's National Neurodevelopmental Specification for Children and Young People (2021) provides guidance on neurodevelopmental terminology:

- **Neurocognitive functions** are selective aspects of brain functions - the ability to learn and use language, the ability to regulate attention, emotions, impulses (including movements and spontaneous utterances), social behaviours, and process sensory stimuli. Like height, these traits may be significantly genetically influenced, and are present from birth. Like height, the statistical normal range changes, dependant on age. The societal norm for a selective neurocognitive function is defined by the general population and may be variably and narrowly defined.
- A **Neurodevelopmental disorder** is a term reserved for those who present with a 'functional' impairment in day-to-day life due to difference in one or more neurocognitive function which lie at the extreme of, or out with the normal range.
- **Neurodiversity** is the statistical normal range of a function in a population at a particular age. Diversity is a trait of the whole group, not a specific individual.
- **Neurotypical** describes individuals where a selective neurocognitive function falls within the prevalent societal norm.
- **Neurodivergent** describes individuals where a selective neurocognitive function falls out with the prevalent range.

This language by some is evolving to be more inclusive. **Allist** is a term used to describe those elsewise deemed ‘neurotypical’ and deviates from a model seeing ‘deficit’ to one seeing ‘difference’, with the language of **neurotypes** and **neuro-difference** becoming more popular as a way of seeing certain conditions as a difference not a deficit, with it preferable to describe ‘changes’ or ‘impact’ rather than ‘impairment’. Similarly using ‘condition’ over ‘disorder’ is less stigmatising (though disorder is the medical term). Whether to use **person-first or identity-first language** is another consideration, best practice is to choose the term preferred by the person you are referring to. Person-first language puts the person before their disability, whereas identity-first language puts a person’s disability before the person.

Examples are:

- **person-first:** ‘people with learning disabilities’, ‘person with a neurodivergency’, e.g. ‘Kevin has autism’ – describing the condition as something someone has.
- **identity-first**: ‘neurodivergent person’, ‘ADHDer’, or ‘autistic’, e.g. ‘Kevin is autistic’ – using the condition as an adjective to describe the person.

Person first language may be preferred by those who see their condition as just one part of what makes them who they are, whereas identity first language may be preferred by those who see their condition of disability as a key part of their identity. This issue and examples are discussed in the Scottish Government’s Learning Disabilities, Autism and Neurodivergence Bill: consultation (which will be explored later). It is crucial to speak to the person or group of people you are working with to find out how they would themselves and their neurotype to be described.

3.2 Neurodiversity and conflict with the law

If neurodevelopmental needs are not identified and met appropriately then longer-term problems can arise, such as mental ill-health and involvement in the justice system (Scottish Government, 2021). The NAIT Adult Neurodevelopmental Pathways Report (2023) by Scottish Government/NAIT stated that whilst estimates were that 10-15% of the adult population in Scotland had a neurodevelopmental condition, up to 70% of them seek mental health support, and comprise a significant proportion of adults involved in mental health and criminal justice services.

In 2025 the Michael Sieff Foundation published an independent review on children with special education needs or disabilities (SEND) in England and Wales in the justice system: Justice for children with SEND and neurodivergence (2025), referred to as the Sieff Report. It discussed how the system can fail to prevent children with SEND entering the justice system, noting that 80% of children in the justice system have SEND. It made various recommendations on improving children’s first contact with the justice system, and improving the court system that have relevance to Scottish practice, in particular looking at how experiences and outcomes for children in conflict with the law can be improved without legislation, showcasing economic benefits. It highlights that:

- SENDs exacerbate challenges in communication, emotional regulation, and social interaction,

- children with SEND therefore more vulnerable to conflict with the law
- insufficient support systems are a barrier for children with SEND avoiding this conflict
- lack of appropriate supports over SEND lead to school exclusion and further vulnerability to conflict with the law.

A 2025 report Double-Disadvantage? by the Sutton Trust explored the link between SEND and socio-economic disadvantage, highlighting children in England and Wales entitled to free school meals are over-represented in every category of SEND, and also have lower attainment outcomes. The significant overlap between adversity, trauma and neurodivergence is also notable and should be a consideration of any assessment and intervention with children and young people (Kirby, 2021; The Michael Sieff Foundation, 2025)

The DSM-5 describes neurodevelopmental 'disorders' as “a group of conditions with onset in the developmental period. These typically manifest early in development, often before the child enters grade school, and are characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning” (American Psychiatric Association, 2013).

Neurodevelopmental conditions can range from global impairments, such as global developmental delay, to specific limitations such as language disorder. Conditions can frequently co-occur, and symptoms can include excesses as well as deficits. Recent research in England and Wales estimates around a half of prisoners have a neurodevelopmental condition (CJJI, 2021).

The Committee of the Rights of the Child observes that children may lack criminal responsibility on account of neurodevelopmental issues:

> “Children with developmental delays or neurodevelopmental disorders or disabilities (for example, autism spectrum disorders, foetal alcohol spectrum disorders or acquired brain injuries) should not be in the child justice system at all, even if they have reached the minimum age of criminal responsibility. If not automatically excluded, such children should be individually assessed.”
> (United Nations Human Rights Committee, 2019).

If a practitioner from any discipline working with a child or young person in conflict with the law suspects a neurodevelopmental condition may be present, further assessment should be sought, and until such time as this is complete discussion of possible traits and how they impact the individual in terms of behaviour, decision making and maturity, should inform any assessment of need and be shared with relevant professionals (e.g. Social Worker, Lawyer, Court Clerk) in the justice process. Reports and assessments on a person with diagnosed or suspected neurodivergence must be informed by the NAIT Neuro-Affirming Reports Guide.

The Neurodivergence in Criminal Justice Network (NCJN) is an established network of researchers, practitioners and experts by experience who work towards improving criminal justice for neurodivergent people. They support the building of contacts and access to reliable knowledge on related issues to bring about better outcomes, and have a wealth of knowledge in their resource library to support neurodivergent people generally in the justice system, but also in relation to specific conditions, some of which are discussed in the next section.

In January 2022 the Scottish Sentencing Council (SSC) issued the Sentencing young people guideline, applicable to all those aged under 25 at the point of conviction. It is informed by the evidence base on brain development research (highlighting the adolescent brain doesn't mature until at least the mid-twenties), Scottish law, and the UNCRC. The guideline states the **rehabilitation of young people must be a consideration** in sentencing for all young people, and a primary consideration for children, whose identity is not as fixed as that of an adult, meaning they have greater capacity for change.

The purpose of a sentence **may** also include punishment, public protection, disapproval, and opportunity to make amends, in accordance with other applicable guidelines; Principles and purposes of sentencing and the Sentencing process.

The guideline directs that in assessing culpability, the court should have regard to the intellectual and emotional maturity of the young person at the time the offence was committed, based on the research, already discussed and presented in the SSC commissioned comprehensive cognitive maturity literature review, showing that young people are not fully developed and have likely not attained full maturity.

The guideline therefore requires assessment of maturity within the Justice Social Work Report (JSWR) used to inform sentencing, with specialist assessment requested or specialist input included where this is required and available, highlighting any outstanding assessment needs or unknowns. Practitioners can provide their own assessment of a child or young person's maturity when contributing to a JSWR. This assessment should also inform any completed for a child or young person at any stage of the justice process, to inform understanding of behaviours and also approaches with and interventions recommended for the individual.

The SSC has produced these Sentencing young people guideline videos on Maturity, Rehabilitation, and Individualised Approach to accompany the guideline, explaining key themes.

4. Legislative and policy context

4.1 Human rights law

Child and human rights are discussed fully in Section 3 of this guide.

The United Nations Convention on the Rights of the Child (UNCRC) (1990) sets out the civil, political, economic, social and cultural rights of every child. The UNCRC is binding under international law and carries a clear obligation for governments to ensure its full implementation. The UNCRC, with caveats, is now embedded in Scot's law, under the UNCRC (Incorporation) (Scotland) Act 2024.

Within the 54 UNCRC Articles, two are of note when looking at the neurodevelopmental needs of children in conflict with the law, the relevant points below:

> **Article 24** (health and health services): States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
>
> **Article 40** (juvenile justice): State Parties must develop child specific systems and processes. This youth justice system must consider the child's age, promote their reintegration, and support them in assuming a constructive role in society. States must establish a minimum age of criminal responsibility.

Meeting the child's right to integration requires for all professionals involved in the youth justice system to be knowledgeable about child development and promoting child wellbeing.

In supporting the application of Article 40, General Comment No.24 (2019) on children's rights in the justice system also observes that children's criminal responsibility is impacted by neurodevelopmental issues. It states that:

> "Children with developmental delays or neurodevelopmental disorders or disabilities (for example, autism spectrum disorders, foetal alcohol spectrum disorders or acquired brain injuries) should not be in the child justice system at all, even if they have reached the minimum age of criminal responsibility. If not automatically excluded, such children should be individually assessed"
>
> *(CRC, 2019 para. 28)*

Practitioners must be aware of how to identify and support neurodevelopmental conditions, and skilled in advocating for timely assessment and meeting their needs out-with formal justice systems where possible.

Getting It Right for Every Child (GIRFEC) is the holistic, rights-based assessment and care planning approach to all work with children in Scotland. It's ecological systems approach embraces the idea that children and their development are impacted by a variety of family, social, psychological, and community factors. It promotes the importance of nurturing primary carer relationships and whole-family supports, as-well as timely access to specialist mental health supports in promoting optimum mental health and wellbeing.

The Whole System Approach (WSA) launched in 2011 is the Scottish Government's approach to working with children and young people in conflict with the law. It is underpinned by GIRFEC, prioritising children's rights and focussing on meeting their needs at every stage of the justice system. This requires an understanding of children's needs and any underlying conditions impacting behaviours. As with Scotland's youth justice policy, Justice for children and young people: vision and priorities 2024-26 (the Vision), application of the WSA is recommended for those aged up to 26 where appropriate. Upholding Rights is one of the Vision's overarching priorities, stating:

> "All children and young people should be able to access services and support that they need to help recovery from the impacts of psychological trauma, including abuse and neglect. In order to achieve this consideration needs to be given to

> additional support needs, including neurodivergent conditions, and speech, language and communication needs, to improve their life chances"
>
> (Scottish Government, 2024, p. 10)

Sufficient access to timely, appropriate neurodevelopmental assessment and supports is required to meet the needs of children and young people. Those in conflict with the law are often most at risk of having other rights seriously impacted, for example by involvement with complex legal systems, or having their liberty deprived, so must have access to services.

4.2 Neurodevelopmental services

The Children and Young People's Mental Health and Wellbeing Joint Delivery Board (JDB) - a coalition between Scottish Government, COSLA, third and public sector partners and children and families - operated between 2021 and 2023 to address the need to improve mental health services for children and young people. Eight key deliverables were identified which included enhancing community-based support for mental wellbeing and developing a training programme to increase skills and knowledge of all those working with children and young people. A summary of their work focus, achievements, and future recommendations can be found in their Final Report (2023).

Two significant key deliverables were development and implementation of national Child and Adolescent Mental Health Services (CAMHS) and Neurodevelopmental service specifications. Neurodevelopmental referrals and assessments had previously been under CAMHs, and there was no specific service specification.

Neurodevelopmental Services:
Specialist neurodevelopmental services are covered by the National Neurodevelopmental Specification for Children and Young People (2021). Specific neurodevelopmental pathways, separate to but sitting alongside CAMHS (discussed below), aim to provide appropriate and timely support, although CAMHS will support children where mental health problems co-occur.

The specification sets out the principles and minimum standards of care expected "for children and young people who have neurodevelopmental profiles with support needs and require more support than currently available" (Scottish Government, 2021, p. 1).

Neurodevelopmental services should be available for all children aged 0-18 years, as well as young adults aged 18-24, or 26 for care experienced individuals (Scottish Government, 2021). Within the document it is recognised that missed diagnoses and unmet needs can lead to ongoing problems in later life, including long-term mental ill health, as well as contact with the justice system. It also acknowledges that certain children and young people will require more robust transition plans, including those in contact with the justice system. The Children's Neurodevelopment Pathway Workbook has been produced to support the development and implementation of local neurodevelopmental pathways for children and young people (National Autism Implementation Team, 2021).

In September 2024 the National Autism Implementation Team (NAIT) and Scottish Government co-produced the Children's Neurodevelopmental Pathway Practice Framework: A workbook for assessment, diagnosis and planning (Rutherford et al., 2024). It highlights further terminology, including the term '**neuro-affirming practice'**: a strength-based approach to neurodevelopmental differences which is strengths and rights-based, where practitioners provide supports and adaptations that support the individual to be their authentic self, without trying to 'fix' or 'cure' their neurotype. The practice framework is rooted in GIRFEC, promotes key messages for neurodevelopmental pathways teams, covering guidance on referral, assessment, triage and diagnostic processes, among others, with appendices including Summary of Evidence Tables for common neurodivergent conditions; Autism Spectrum Disorder (ASD), Attention Deficit and Hyperactivity Disorder (ADHD), Intellectual Disability (ID), Developmental Language Disorder (DDL), Developmental Co-ordination Disorder, and Fetal Alcohol Spectrum Disorder (FASD). This resource is essential reading for anyone working with children and young people. It highlighted that, as of September 2024, seven local authorities had a distinct neurodevelopmental pathway, with data at that time showing 16.8% of children in Scottish schools to be neurodivergent, and that with the average diagnostic rate nationally sitting then at 86%, showing that when neurodivergence is suspected it is highly likely to be present (Rutherford et al., 2024, p. 65) Further data from the Scottish Parliament on Neurodevelopmental Pathways and Waiting Times in Scotland shows the variations in neurodevelopmental service delivery in Scotland's health boards.

The Mental Health and Wellbeing Strategy (2023) recognised mental health as a continuum comprising a range of needs, with some impacted disproportionately due to external factors such as poverty and inequality. The strategy states that though particular conditions such as learning disabilities and neurodevelopmental conditions are not 'mental health' specific, the workforce for these conditions and pathways mainly operate within the mental health landscape, and their needs therefore be reflected in the accompanying Strategy Delivery Plan and Workforce Action Plan.

It also acknowledged the significant increase in children and adults seeking a diagnosis and requiring support for neurodevelopmental needs and stated strengthening support and care for those needing this support as a priority (featuring as priority 9 of the Delivery Plan). Given identified service crossover we include a brief overview of children's mental health services.

Child and Adolescent Mental Health Services (CAMHS):
The CAMHS National Service Specification (2020) outlines referral criteria, minimum service standards, and the provisions children, young people and their families can expect. Services offered and referral criteria are detailed within the Mental Health section of this guide. The below diagram illustrates where CAMHS sits within the Children and Young People's Mental Health and Wellbeing model.

Diagram 1: CAMHS within the agreed Children and Young People's Mental Health and Wellbeing model:

Forensic Mental Health Services:
Forensic CAMHS (FCAMHS) "supports a range of agencies and professionals in addressing the mental health and risk management needs of young people presenting with high-risk behaviours. This is conducted through clinical consultations and specialist assessments. This will often include young people in the criminal justice system, prison and secure care. This service should be delivered on a regional basis with links to and from the National Secure Inpatient Psychiatric Service (Scottish Government, 2020), and plans to roll this out nationally are in motion (currently only available in Greater Glasgow and Clyde).

4.3 Scottish legislation

There is a fuller discussion on mental health legislation and its functions in the Mental Health section of this guide. It is mentioned here however due to the current scope of the term 'mental disorder', used within the relevant mental health legislation. The Mental Health (Care and Treatment) (Scotland) Act 2003 defines mental disorder, under s.328, as those with 'mental illness, **learning disability** or personality disorder'. The 2003 Act increased the rights and protection of people with mental disorders, including children, and provides options to allow for the appropriate assessment and treatment at various stages of the legal process.

The Scottish Mental Health Law Review (SMHLR) reports reviewing the 2003 Act indicated they would take account of the recommendations made in 2019 by the Independent Review of Learning Disability and Autism in the Mental Health Act (Rome Review). One of the fundamental recommendations from this review is that learning disability and autism (included in the definition of learning disability) be removed from the definition of mental disorder; another is that Scotland works towards a law that removes discrimination in detention and compulsory treatment on the basis of disability - in line with the United Nations Conventions on the Rights of Persons with Disabilities (UNCRPD).

The SMHLR final report was published in September 2022. Recommendations are varied and will take time to implement, though in relation to children and for the purposes of this section they cover:

- principles of respecting the rights of the child;
- autism, intellectual disability and other neurodevelopmental differences; and
- relationships between parents and children.

The Scottish Government's 2024 Learning Disabilities, Autism and Neurodivergence (LDAN) Bill: consultation sought views on legislative proposals to better represent the specific rights and needs of those with learning disabilities and neurodivergent conditions. The consultation called for earlier and improved identification of individuals with cognitive or neurological impairment, and fuller access to accessible and inclusive information within criminal and civil justice systems to aid understanding and participation. The consultation analysis published in August 2024 highlighted the need for cross-sector staff training on learning disabilities and neurodivergency, particularly around inclusive communication, for accessible and appropriately trained advocacy, and for accountability for non-adherence to any resultant strategies or legal requirements. It was also highlighted that many of the required changes to promote the rights and improve experiences and outcomes for those with neurodivergent conditions or learning disabilities could and should be made without legislative requirements, with many aims of the proposed legislation coming under the remit of existing legislation and rights documents. The Scottish Government is considering the findings and has not included the LDAN Bill on subsequent programme for Government.

5. Neurodiversity classification and diagnosis

The American Psychiatric Association, via the Diagnostic and Statistical Manual of Mental Disorders (DSM), and the World Health Organisation, via the International Classification of Diseases (ICD) produce classification systems (current versions are the DSM-5-TR and ICD-11 respectively). These systems offer descriptions and diagnostic criteria for health conditions (disorder is the term often used in manuals but 'condition' being less stigmatising is the preferred term in this guide). In 2022 the Scottish Government announced it would be implementing the ICD-11 Mental, Behavioural and Neurodevelopmental (MBND) chapter across health services, on account of its use of international diagnostic criteria and promotion of the life-span approach, "based on common underlying causes or contributing factors, including cultural considerations, to the development of a disease or condition".

Both systems help define and diagnose certain conditions; however, the task of identification is more complex. Diagnosis may be important, for example for sense of identity, clarity, or access to essential treatment and services, however as-well as discerning if a problem is simply present or absent, there is a need to consider severity, presentation, and impact for the individual in assessment to inform approaches.

These classification systems do not offer guidance on how to understand or prioritise difficulties when an individual meets the diagnostic criteria for multiple conditions. Nor do they comment on how different difficulties develop, or are maintained, or how they interact with each other over time. This is important to bear in mind, as we know that complexity and co-occurrence of conditions is common in many children and young people in conflict with the law. They may also be sub-threshold on a number of different diagnoses, which can have implications in terms of reduced access to intervention and prevention of further escalation (DeJong, 2010).

It is recommended when considering the mental health of children and young people in conflict with the law that a biologically, socially, and psychologically informed case formulation, which can account for all presenting concerns together, as well as speculate on their development and maintenance, is used (Johnstone & Gregory, 2015). It is beneficial for practitioners to pay attention to clinical features that cut across diagnoses (e.g. emotional dysregulation may drive mood difficulties, violent behaviour, and interpersonal difficulties etc.) as these are likely to be a key intervention focus. Practitioners who have knowledge about a child or young person, their history, and experiences, can make a significant contribution to assessment and compiling a profile of the child, which can help guide referrals and supports, and potentially diagnosis. Non-specialist practitioners are not able to diagnose conditions, however discussion of diagnostic features is included here as having knowledge of what behaviours and traits can be attributed to certain conditions can help guide how to support a child and also when to consult or refer to specialist services.

This section should be read in conjunction with Section 6 Speech, Language and Communication Needs (SLCN).

6. Neurodevelopmental differences

This section provides an overview of the neurodevelopmental conditions that are experienced most frequently by children and young people, and signposts to best practice information in relation to these.

The ICD-11 MBND chapter has a section on what it describes as Neurodevelopmental Disorders, including only conditions whose *core features* are neurodevelopmental, including ASD, ADHD, and Learning Disability. It states, "*Neurodevelopmental Disorders* are behavioural and cognitive disorders arising during the developmental period that involve significant difficulties in the acquisition and execution of specific intellectual, motor, language, or social functions." – the developmental period is considered to be before the age of 18. Whilst the assumption is that conditions are present from birth, the I-11 highlights environmental factors such as lack of stimulation may be contributory factors and should be considered in assessment.

6.1 Neurodiversity and mental health

Neurodevelopmental Conditions are no longer classed as mental health conditions, though mental health conditions/traits, Disruptive, Impulse Control and Conduct Disorders, and those associated with trauma or stress, may co-occur with neurodevelopmental conditions, or have overlapping traits. As such it is important to consider all possible reasons for behaviour in assessment, intervention, and when considering specialist consult or referral. This will have a bearing when working with children in conflict with the law where there are suspicions there may be a neurodevelopmental difference, given the timely importance of understanding and working with individuals to cease harmful behaviours. As such it is recommended that the Mental Health Section of this guide is read.

6.2 Attention Deficit Hyperactivity Disorder

Attention Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental condition with symptoms broadly characterised by impaired attention, hyperactivity, and impulsivity. It is understood to be caused by impairment of executive (cognitive) functioning (Brown et al., 2009) i.e. everyday mental skills like working memory, flexible thinking, and inhibition or self-control. It affects cognitive, behaviour, physical and interpersonal domains (Carr, 2006). It can be split into two behavioural categories; inattentiveness (difficulty retaining focus and concentration) and hyperactivity and impulsiveness; though not all individuals display the hyperactivity/ impulsiveness, referred to as having ADD (Brown et al., 2009), with 50% - 75% having the combined type according to NICE. Difficulties may include planning and organising, time management and perception, remembering what someone has said, following instructions, losing things, being easily distracted or diverted from a thought or task.

Prevalence globally is around 2-7%, increasing over time, but remaining relatively undiagnosed particularly in girls and older children, with a further 5% displaying symptoms but which are just under the diagnostic threshold (Sayal et al., 2018). A more recent umbrella review of ADHD in children and adolescents, comprising studies involving over 3 million participants, found prevalence in this age group to be 8%, with relatively comparable prevalence globally (Ayano et al., 2024). ADHD is over-represented in those in conflict with the law, though much UK data is limited to secure settings: ADHD is estimated to impact 3-5% of the UK general adult population, yet around a quarter of prisoners (CJJI, 2021). A New Zealand study, (Anns et al., 2023), found young adults with ADHD to be overrepresented at all states of the criminal justice system, with (Cherkasova et al., 2022) meta-analysis and review of seven longitudinal American studies showing significant impairments in areas of educational and occupational functioning, mental and physical health, as well as higher rates of substance misuse, antisocial behaviours and unsafe driving - indicative of increased conflict with the law. Retz et al. (2021) narrative review discusses the increased prevalence of ADHD in conflict with the law populations globally.

ADHD has been said to correlate with violent behaviour (Farrington et al., 2017; Lundström et al., 2014), which could occur when, for example, impulsivity or the development of a negative self-view or sensitivity to perceived rejection, trigger a reaction. It also has an impact on how individuals cope with the restrictions of incarceration, with increased aggressive incidents including self-harm reported, and higher rates of continued offending (Retz et al., 2021; Young et al., 2009). Lundström et al. (2014) sibling study also highlighted that the association they found between ADHD and criminality was to some extent due to how the family impacted the child's development, concluding that interventions aimed at reducing conflict with the law in adolescence should involve the individual and their family. Co-occurrence with disruptive behaviour disorders has been found to be a predictor of negative functional outcomes, and a suggested area of intervention focus (Cherkasova et al., 2022; Retz et al., 2021).

Some ADHD traits peek mid-adolescence, due to disparities in timings of brain development. It has been shown that in those with ADHD there is around a three-year delay in the maturation of frontal and temporal grey matter, where neurons and synapses are located, although ADHD brains do catch up by early adulthood (Shaw et al., 2007). This could explain why hyperactivity and impulsivity generally reduce during adolescence (Dow-Edwards et al., 2019).

The DSM-5 states diagnosis requires persistent symptoms having begun before age 12, comprise six or more symptoms of inattention and/or hyperactivity for children up to 16 and 5 or more for children up to age 17 and adults, and to exist across different domains such as at home and in school. The ICD-11 ADHD states that whilst there is often significant evidence of hyperactivity and inattentiveness before age 12, and typically before early to mid-childhood, these may not always be evident and come to clinical attention until later in life. ADHD can co-occur with a Conduct Disorder (CD), dyslexia, depression, or anxiety. Problems with learning, sleep, self-esteem, and school achievement often become apparent as the child develops. Rejection Sensitivity Disorder (RSD) is common with ADHD, characterised by a fear of rejection. Adolescents with ADHD are overly reactive and perceiving of social rejection cues, and more likely to miss positive social cues (Babinski et al., 2019). Despite inattentiveness in some settings those with ADHD can also display ‘hyper-focus’ – full absorption in an activity whilst appearing to ‘tune out’ of all else when engrossed in an activity, a beneficial trait when positive areas of interest are identified given task performance in this state improves (Ashinoff & Abu-Akel, 2021).

Where there are indicators of childhood maltreatment along with ADHD traits, both ADHD and traumatic stress should be considered in assessment. Symptoms can be similar, but treatment very different (Johnstone, 2017). Professional neurodevelopmental assessment should be sought but may take time, or a child may not consent, therefore “Understanding of support needs can be enhanced by diagnosis but should not wait for diagnosis” (Scottish Government, 2021, p. 1).

Evidence-based interventions for ADHD generally include high intensity school interventions, parent training, education, and medication. Studies have shown earlier drug treatment of ADHD to have more effective long-term positive behavioural change (Dow-Edwards et al., 2019; Sayal et al., 2018), highlighting the importance of the early identification of symptoms and assessment. NICE guidelines on Attention deficit hyperactivity disorder: Diagnosis and management were reviewed and updated in 2019. As highlighted by ICM-11, certain traits, like impulsivity and hyperactivity tend to be most evident in structured situations requiring self-control. Changes to our expectations of children and young people and the environments in which they interact however provide more inclusive ways to support someone with ADHD; keeping sessions short, offering breaks and opportunities to be active, providing or not objecting to use of fidget spinners or similar, being aware information may need to be repeated and doing so without becoming annoyed with the person, providing text reminders for appointments etc. can help those with ADHD and others navigate the neurotypical world. Multiple studies have shown that in education settings, interventions that involve structured classroom environment, behavioural reinforcement, organisational skills training and collaborative interventions between school and family can enhance attention engagement and self-regulation, and better enable pupils with ADHD to cope with and participate in all aspects of school life. A recent scoping review on the impact of classroom environments and activities on children with ADHD found different types of intervention assist in different ways (Mealings & Buchholz, 2026). The scope for assisting children’s learning and coping is significant given the levels of exclusion and negative educational experiences for pupils with ADHD without effective intervention or modification of approaches (Day, 2025; Qaderi & Malmqvist, 2026; Russell et al., 2023), and link between lack of meaningful activity and conflict with the law.

Involving the child or young person, supporting them to work out what works for them (strengths/ limitations, preferred mode of communication etc) and consented sharing of this with key people and services involved can improve outcomes and relationships in all settings and is recommended. See: ADHD in the Classroom: 12 Strategies That Actually Work.

6.3 Autism Spectrum Disorder

The ICD 11 on Autism spectrum disorder states *"Autism spectrum disorder is characterised by persistent deficits in the ability to initiate and to sustain reciprocal social interaction and social communication, and by a range of restricted, repetitive, and inflexible patterns of behaviour, interests or activities that are clearly atypical or excessive for the individual's age and sociocultural context".*

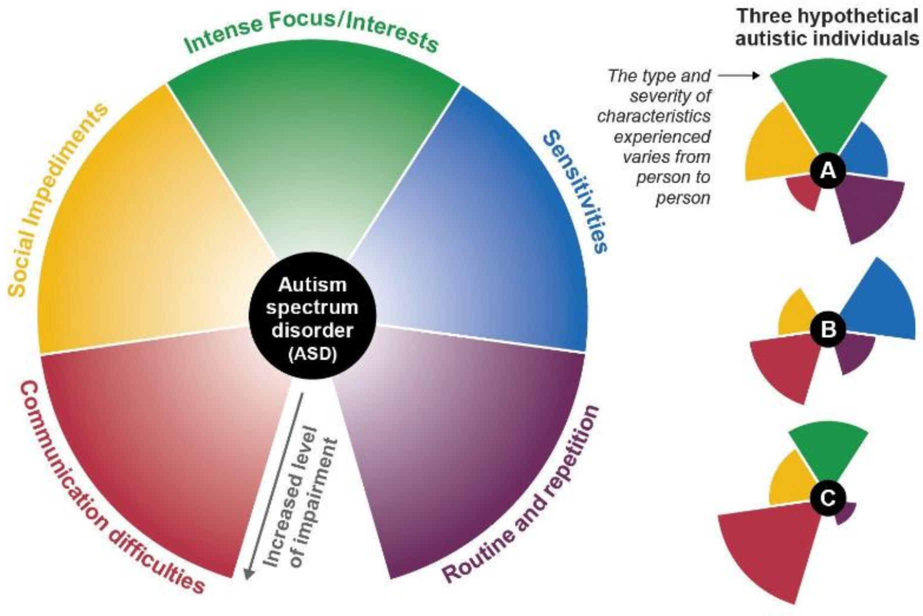
The onset of ASD occurs during the developmental period, typically in early childhood, but symptoms may not fully manifest until later, when social demands exceed capacities. Impact of symptoms/ traits must sufficiently impact personal, family, social, educational, occupational or other important areas of functioning. They are usually a pervasive feature of the individual's functioning, observable in all settings, although they may vary according to social, educational, or other contexts. As a group, individuals with ASD exhibit a full range of intellectual functioning and language abilities. ICD 11 goes on to describe specific diagnostic requirements.

Although described as a 'spectrum', classified at three levels by the DSM-5-TR (APA, 2013), however without accompanying guidance as to how to classify each level, it is more appropriate and helpful to consider those with ASD as individuals with a particular profile of strengths and limitations – essentially establishing their particular variation in ASD characteristics or traits to understand what supports and considerations they require within their given contexts. ICD-11 also discusses co-occurrence with learning disability (discussed below), and functional language impairment and need to consider separate diagnosis if observed.

How an individual is impacted by ASD can vary, from mild to significant, meaning those with a diagnosis of, or suspected of having, autism can experience it, and therefore present, very differently.

A helpful visual tool to illustrate this was developed by the United States Accountability Office (GAO), highlighting that each autism characteristic may vary in type and degree from person to person, and can fluctuate over time. The combination of characteristics results in a highly individualized condition, as illustrated below:

GAO grouped the characteristics associated with autism into five broad categories, with some overlap between categories.



Source: GAO analysis of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5). | GAO-17-109

(GAO, 2016, pp. 5–6)

As the images show, a behaviour/trait which is a key indicator for autism assessment for one person, may not be evident in another person with autism.

To meet diagnostic criteria, an individual will have to be seen to have difficulties with both social communication, reciprocal communication, and restricted or repetitive behaviours (American Psychiatric Association, 2013). Diagnosis must be made via a multi-disciplinary assessment, which might include speech and language therapists, occupational therapists, nursing, psychiatry, paediatricians, or psychologists. Some people with ASD often have difficulty reading other people, take things very literally, and may spend time alone and find it hard to make friends. These individuals may lack theory of mind - the ability to understand the mental states of others, and whilst this may be interpreted as a lack of empathy in the moment through a neurotypical lens, it does not mean that those with ASD lack empathy (NAS, 2023), they may also just process and/or convey their understanding differently.

ASD impacts all aspects of the child or young person’s life and, as with any child, it is crucial to understanding *their* risks and needs. Some features of ASD, for example: ability to regulate of emotions or taking on the perspective of others, are shared by complex traumatic stress responses. Other features, such as perceived lack of empathy or relationship difficulties are shared by distress behaviours of those who have experienced poor attachments and/or trauma, or extremely unusual but severe and concerning personality traits. Given the high instance of childhood maltreatment and adversity in the population of children and young people in conflict with the law, practitioners may on occasion need to make complex differentiations between social and linguistic patterns resulting from poor attachment relationships and insufficient positive opportunities, traumatic stress and ASD, and on rarer occasions, emerging personality traits (Johnstone, 2017). In these cases, advice and in-depth assessment should be sought via local specialist mental health or neurodevelopmental services.

Displays of distress/violence in those with ASD may occur when they are denied access to their special interest, in the context of change, or in response to sensory overload/feelings of being overwhelmed (NAS, 2023). ‘Autistic burnout’ is a term often used for the emotional overwhelm experienced by autistic people at times, often due to the pressures of masking behaviours they know not to be usual, stresses of a neurotypical world and associated expectations, and responses to change or stress (Raymaker et al, 2020). Acceptance and support, reducing the load, individualised supports, and soothing activities like stimming can help reduce the impact of burnout. See the NAS’s Meltdowns - a guide for all audiences for advice on how best to response. Neither ASD or OCD is not associated with violence or a risk factor for violent behaviour (Lundström et al., 2014).

People with autism are not overly represented within the justice system, although evidence suggests certain profiles of ASD may have implications when a person with autism is involved in certain offence behaviours. For example, whilst there is no empirical causal link, there is suggestion that certain facets of ASD (such as need for order routines and predictability, cognitive styles, and obsessionality, repetition and collecting) may render an individual vulnerable to an interest in terrorist activities (Al-Attar, 2020) and terrorist recruitment (Soares et al., 2022), with individualised assessments and formulations taking into account the individual’s autism profile essential. Al-Attar (2018) provides guidance to those interviewing people with autism involving the consideration of the seven facets of autism and how they relate to the alleged terrorism offence. Other considerations such as co-occurrence with mental health issues and social adversities should always also be considered, as with any holistic assessment.

Those with ASD may also be vulnerable to carrying out non-violent, inappropriate sexual behaviour, possibly due to facets of ASD such as impaired impulse control and obsessional interests (Creaby-Attwood & Allely, 2017). Mogavero (2016) also discusses delayed social maturity and reduced exposure to normative sexual experiences and knowledge of those with ASD as potential contributing factors to inappropriate sexual behaviour, with features such as fixations and repetitive behaviour patterns impacting harmful sexual behaviour, generally without intent to harm or malice, highlighting the need for the justice system to identify and address these needs. Allely and Dubin (2018), in exploring the possession of child pornography in those with ASD, points to this behaviour being explained by symptomology, stating the behaviour is not a reflection of sexual deviance, and therefore recommend education and mental health interventions to best serve the interests of justice. Assessment, formulation and assessment of risk should be informed by consideration of ASD and how it impacts the individual’s needs and behaviours, and maturity, as related closely to culpability and intervention scope. This will involve input from those with clinical expertise.

Understanding the relevance of ASD for the individual is crucial, particularly in relation to legal issues, as ASD may undermine a child’s ability to understand and engage with processes, and to develop and share informed views. As discussed, some autistic people experience impaired intellectual functioning and/or language development, whilst others may not have, or present as having, difficulties in these areas. Often autistic people have fixations and interests which can manifest as hyperfocus which can be a strength when developing talents and interests (Ashinoff & Abu-Akel, 2021). Given autism may co-occur with a variety of other conditions, clinical assessment is recommended when traits are observed, with robust description of traits, triggers and impact assisting this.

Where there is a query of ASD, it should be carefully considered and local ASD-specific services, neurodevelopmental teams, or CAMHS, may have a role in assessment. CAMHS may be more appropriate for children and young people where there are complexities, and other diagnostic considerations may need to be eliminated or formulated alongside an ASD diagnosis. NICE have produced a range of guidelines, there is also a SIGN guideline containing further information, whilst the National Autistic Society has guidance on working with individuals with ASD who are also engaged in criminal proceedings.

Behavioural interventions in response to specific concerns associated with ASD, such as anxiety, sleep difficulties, or communication problems, may be beneficial. Most interventions relating to ASD however will likely be undertaken by parents/carers, and other key people, or by implementing systemic or environmental changes around the child or young person, to promote communication and environments which support integration, safety, and communication see Section 6.

The Scottish Strategy for Autism: evaluation (2021) details findings, future focus and investment needs and priorities to continue to address inequalities experienced by those with Autism. The Scottish Government funded National Autism Implementation Team (NAIT) provides resources and guidance on implementation of evidence informed practice, including an Autism Based Practice Toolkit.

6.4 Foetal Alcohol Spectrum Disorder

Foetal Alcohol Spectrum Disorder (FASD) refers to a range of physical, emotional and developmental problems caused by maternal alcohol consumption during pregnancy, causing damage to the developing baby's brain. The physical structure of the brain is impacted by alcohol exposure in utero, impacting general intelligence executive functioning (affecting working memory and response inhibition), language development, learning and memory, adaptive functioning (life skills/problem solving) and mental disorders (Mattson et al., 2019). The FAS ICD-11 refers to FASD as Fetal Alcohol Syndrome, classing it as a 'developmental anomaly.

This link to the Fetal Alcohol Advisory Support & Training Team (FAASTT) includes a short video on FASD. The FAASTT is funded by Scottish Government with a national remit to provide and facilitate training, consultation and research in order to enhance the capacity, knowledge and confidence of Scotland's health and social care workforce in their work with those affected by Fetal Alcohol Spectrum Disorders (FASD). FAASTT estimate that in Scotland 1 in 7 babies are born at risk of FASD and an estimated prevalence of 3.25-5%.

Although higher consumption of alcohol correlates with higher levels of impact, any alcohol use in pregnancy has been seen to have psychological and behavioural impacts, including impulsivity and attention deficit (Lees et al., 2020). The level of impact is dependent on how much and how often the mother drank during pregnancy, and at what point during the pregnancy alcohol was consumed (Coriale et al., 2013).

Characteristics of FASD therefore vary, can be attributed to alternate aetiologies, or co-exist with other diagnosis. It is estimated 50% of those with FASD also have ADHD, with higher rates of intellectual disability and mental health issues evident than in the general population (Weyrauch et al., 2017). A comparative review by (Kambeitz et al., 2019) of around 200 patients found that FASD and subsequence exposure to early adverse childhood experiences (ACEs) are associated with increased risk of co-occurring neurodevelopmental disorders, significantly ADHD, oral comprehension deficits, sleep disturbance and cognitive impairment.

FASD can be difficult to diagnose, particularly if little is known about in utero experiences, though according to the NHS individuals with FASD may have issues with:

- movement, balance, vision and hearing
- learning, such as problems with thinking, concentration, and memory
- managing emotions and developing social skills
- hyperactivity and impulse control
- communication, such as problems with speech
- the joints, muscles, bones, and organs, such as the kidneys and heart.

Profiles of FASD, how it presents in and impacts individuals, can vary significantly (McLachlan, 2024) again supporting the case for creation of individual profiles to support interventions. These must involve the views of the child or young person, those of adolescents with FASD often unrepresented, with Eodanable et al. (2024) small-scale study highlighting the importance of understanding their FASD in the young people's self-understanding and self-acceptance.

Regarding expressive communication, whilst both language production and comprehension can be affected, it appears common for expressive language to be less so (Coriale et al., 2013). Children and young people may therefore present as more capable than they are, which is significant when they come into conflict with the law and in contact with various systems, and intervention/disposal recommendations need to be made in accordance with their capacities. Medical advice should be sought when FASD is suspected, along with a mental health and speech, language and communication needs (SLCNs) assessment to check for co-existing conditions and ensure communication can be adapted accordingly.

Impairments are permanent, however an understanding of a child or young person's difficulties can allow them to be better supported, minimising the impact on their life - albeit in some cases it is severe. Cognitive deficits can lead to 'secondary disabilities' such as academic difficulties, emotional and behavioural problems, and coming into conflict with the law, with early diagnosis, parental supports/education, and multidisciplinary support planning linked to better outcomes in this regard (Coriale et al., 2013).

The SIGN 156 (2019) Children and young people exposed prenatally to alcohol. Scottish Guidelines to aid healthcare professionals in diagnosing Fetal Alcohol Spectrum Disorder

(FASD) offers best evidence guidance on assessment and treatment of FASD. Pathways may vary locally, and whilst these will come under new Neurodevelopmental Pathways eventually, practitioners should familiarise themselves with current local pathways, which may currently be via CAMHS initially.

The FASD Network UK provides a variety of online resources for children, young people and adults with FASD, carers, and professionals, including Tips for Individuals which provides strategies to cope with different aspects of FASD. As well as having a variety of resources (including videos) and research on their website, the FAASTT also run their online FASD Hub to support anyone working with or impacted by FASD, including a dedicated section for adults and young people, and links to national supports.

6.5 Acquired Brain Injury

An Acquired Brain Injury (ABI) is any injury to the brain post birth, falling into two categories. A Traumatic Brain Injury is caused by a traumatic external incident injuring the brain, such as caused during sports, road accidents, falls or through violence. A Non-Traumatic Brain Injury (Non-TBI) comes from internal disease processes, such as a stroke, infection, abnormal growth (such as a tumour), or lack of oxygen to the brain (Goldman et al., 2022). Around half the prison population are estimated to have an ABI, higher amongst women linked to experiences of domestic violence (CJJI, 2021). ABIs can cause damage to the area of the brain impacted, which can affect brain functions of the affected area(s).

ABIs are more prevalent in males and younger people in poverty, with alcohol use one of the biggest risk factors (Kisser et al., 2017), for which young males from urban areas are particularly at risk (Cancelliere et al., 2017) follows that the children in the CHS who are involved in alcohol use and/or violence are at increased risk of TBIs. TBIs include concussion (which can be mild to severe), skull fractures, a brain bruise or bleed, and penetrating brain injuries - often caused by assaults (Goldman et al., 2022). Impairment to the functions of the brain affected is common and can also lead to further internal damage such as swelling or infections, again impairing function. TBI impact is extremely varied, given the complexities of the brain. A leading cause of death, they also cause seizures, hearing and vision problems, disorientation, and cognitive impairment, impaired ability to recall words and process information, and often impulsivity and impaired judgement (Goldman et al., 2022). ABIs impact skill in day-to-day functioning, with the realisation of this commonly negatively impacting self-esteem, associated fear of failure potentially triggering depression and anxiety (Max et al., 1997).

If a child is known to have experienced an ABI, or is involved in alcohol use and violence, good practice is to inquire as to lasting impact or prevalence of any of the above symptoms to establish if an ABI could be impacting behaviours or ability to communicate/engage. Medical treatments and care management are varied, though levels of pre-ABI family functioning are linked to recovery, so consideration of family work to improve functioning and relationships should be given. CYCJ's Information Sheet on Brain Injury and the Criminal Justice System provides further information of the high prevalence of brain injury in children and young people in conflict with the law, and the implications this has for their navigating the justice system, and how their experiences can be improved. The brain injury association Headway has a many good resources for people affected by head injury, and those working with them, which further detail types of injury effects of brain injury, which may be useful to use with anyone who may have a brain injury. It also has a section specifically for Criminal Justice System Professionals, full of useful resources.

6.6 Learning disability

Learning disability in UK terminology is referred to as ‘intellectual disability’ internationally (and by the DSM-5). Learning disabilities are life-long conditions affecting development, causing difficulty with learning and everyday activities. They occur when a person has certain limitations in their cognitive functioning and social and emotional skills.

A learning disability impacts all aspects of life, but to varying degrees. Learning disabilities are usually present from birth or early childhood. The cause isn’t always clear, but they can be caused by issues pre-birth, such a genetic conditions (like Down’s syndrome), infections in utero/birth, and exposure to toxins like drugs and alcohol in utero.

The ICM-11 describes learning disability as a Disorder of Intellectual Development (DID), which it splits into broad categories of mild, moderate, severe, profound, and provisional, with descriptors for each, relating to how intellectual and adaptive functioning (practical life skills) deviate from average. It also discusses diagnostic boundaries with many other conditions discussed in this section. The ICM-11 also details Developmental Learning Disorder (DLD) where there is a deficiency in the acquisition of academic skills (overall or in certain areas) not impacted by external environments, and where a diagnosis of DID is not more appropriate. Widely, the term ‘learning difficulty’ is also used, generally encompassing learning disability but also generalised intellectual impairment that may not been diagnostic criteria.

This video IDID A2H - Identification of Intellectual Disabilities Framework explains the differences in the terminology (this was made pre ICD 11 and still contains reference to IQ which are not now used), while the Framework helps create a needs based plan to assist with decision making, looking at academic, behavioural, cognitive, developmental, environmental and ‘other factors’ (which includes other conditions) domains. Those with a learning disability may need help to understand information, learn new skills, and cope independently. Sometimes those with a learning disability will also have a *specific learning difficulty.* These are diagnosable conditions which make specific skills harder to accomplish. Examples include; dyslexia (impacting reading), Dyspraxia (impacting co-ordination), and dyscalculia (impacting numbers). These conditions, and how to support them, are covered in Section 6 of this guide on speech, language and communication needs (SLCNs).

As well as vulnerable to being victims of crime, those with learning disabilities are over-represented in the conflict with the law population. Data from England and Wales suggests 29% of the offender population have a learning disability (or challenge), with this rising to 36% or men and 39% of women in custody (CJJI, 2021). Goethals (2024) notes higher prevalence down to associated lack of ability to manipulate abstract concepts, as well as poor academic performance (also linked closely to offending). Mattie et al. (2023) provide a useful discussion on ‘intellectual ability’ – abstract skills such as reasoning and problem solving – and ‘adaptive functioning’ – more concrete, practical skills and abilities which can develop over time -, highlighting intellectual disability involves limitations in both.

Those with a learning disability a more likely to have strengths taking in basic information and learning skills that are repetitive and practical over those that require abstract thinking and applicability (Salekin et al., 2010). Focus on observable, specific practical abilities can mask underlying difficulties these individuals have navigating the justice system, and where these are concerns regards intellectual ability, specialist support may be required to assess capacity to understand and participate in legal proceedings (Salekin et al., 2010). Rendall et al. (2021) explore the capacities of those with intellectual disabilities in police cautioning (communicating rights) and police interviews, referencing evidence that those affected are more likely to answer in the affirmative and say they understand when faced with complex information. This particular research used a standard and adapted (improved 'listenability' techniques) police caution and found participants had considerable difficulty understanding both versions – all participants stated they understood the caution despite 80% scoring 0 for comprehension of the caution, which they note reveals a fundamental problem with providing the caution verbally (Rendall et al., 2021).

The Global report on children with developmental disabilities reported on the prevalence of developmental disabilities globally, and made a call to action to tackle stigma and exclusion faced by the 317 million children and adolescents globally affected (encompassing more than neurodevelopmental conditions covered in this guide). It highlights the importance of systems and approaches grounded in UNCRC and UNCRPD and their rights to optimal health and participation and the creation of systems which promote these.

It proposes 10 priority actions to accelerate changes towards inclusive environments and responsive multisectoral care systems for children with developmental disabilities, promoting '*universal design'* where services and products are designed to be used by all to the greatest extent possible. Action Area 6 focusses on the strengthening of services throughout the life-course, and the 'twin-track' approach of making services *universally inclusive*, whilst strengthening systems in all sectors to provide *specialised services* responding to the specific needs of children with developmental disabilities and their families. Particular attention should be paid to strengthening early identification and access to care, noting importance of support during transition periods.

The report references evidence indicating strong associations between lower household wealth and low maternal education and the risk of intellectual disability (and functional impairment in learning) (p.16). When comparing the various functional impairments of children age 5-17 in the poorest 20% and richest 20% of households, across numerous countries, Emerson and Llewellyn (2022) looked at the link between household wealth and the functional impairments associated with disability. They found that for 'remembering, hearing and learning' the risk of impairment doubled, with much higher rates of speech, concentration, and behavioural impairments also noted (amongst others).

As is often the case, this highlights the link between poverty and life chances, and the need for structural and environmental interventions, as well as the impact these difficulties have on children's learning and development, as-well as their ability to comprehend and participate in universal systems, let alone complex justice ones, with it noted those with learning disability are vulnerable suspects, and often lack support and legal representation from early stages of the process (Goethals, 2024; Salekin et al., 2010).

The SOLD Network - ARC Scotland actively works to improve equal access to justice with those with communication support needs who have been involved with or at risk of offending. Two key resources are A Practice Guide for Defence Solicitors in Scotland: representing clients with communication support needs and Practice Guide for Support Workers.

7. Support for neurodevelopmental conditions

As has been highlighted within the discussion on specific conditions there is guidance as to how to best respond to manage certain traits and characteristics of specified conditions, however these must be individually informed given conditions manifest differently for anyone affected, with the best interests of the individual being a key consideration, with their views taken into account when considering how best to respond. Equally, whether a referral for specialist services is required, or a service provided following any such assessment, will also be an individual consideration.

7.1 Universal support

There are however some key support principles that can guide interactions with and responses to children and young people impacted by neurodevelopmental conditions, mental health or trauma.

Ensure safety: Work to ensure that the child or young person exists in a safe environment (physically and psychologically) – required before any further interventions can be considered.

Listen: Often practitioners feel the need to ‘do’ something when someone is distressed, even when there is no clear solution. Listen with curiosity and empathy, the person may just need to be heard and have their situation acknowledged.

Ask questions: Asking non-stigmatising questions or showing curiosity in response to what the child or young person is sharing, can foster a sense of being understood, noticed, and cared for.

Normalise: Feeling different may perpetuate the difficulties someone is experiencing, and it is important to remind them that experiencing strong emotions or distress is normal, especially in difficult contexts, or in the context of their condition.

Build relationships: Often children and young people in conflict with the law have had significant adversity in their interpersonal relationships from an early age. This may impact their trusting others and feeling safe in relationships’. Day-to-day interactions have the potential to act as interventions, in that anything that models how to be open, trusting, reliable, playful, consistent, or responsible in relationships is of great benefit over time.

Promote attachment: Safe and secure relationships are protective in terms of mental health and wellbeing. This may involve strengthening family relationships or promoting social interaction and inclusion.

Build competency: Supporting and encouraging a child or young person to build competence in an area of interest to them can promote wellbeing, self-efficacy and confidence.

Regulate: Certain conditions, and/or experiences, impact ability to regulate behaviour and/or emotions. Regulation difficulties may be secondary to a neurodevelopmental concern (e.g. ASD, ADHD), attachment difficulties, or trauma, or some combination of all three. What the child or young person will need is supported to regulate themselves, which at first or at times of crisis may require intense support. It can help to support the person to identify emotions or reactions though reflection and suggested alternative responses, e.g. "*It looks to me like you are overwhelmed, which I can understand, I would be too if I were you. I have seen you get upset like this before when feeling that way". "Remember taking some time in a quiet space can work, shall we go outside for a walk?".*

Research indicates that having '**One Good Adult'** is highly related to a range of factors that protect against poor mental health, such as perceived support from family and friends, life satisfaction, self-esteem, seeking social support for problems, optimism and using planning strategies to cope with problems (Dooley & Fitzgerald, 2012). *With Scotland* have produced a range of potentially useful resources. Their report on using the social work relationship to promote recovery may be particularly useful to practitioners (Mitchell, 2012). The Distress Brief Intervention (DBI) programme, which supports people presenting to frontline services in distress, is now also available nationally to those above the age of 16.

Assessment of Needs:
Assessment of mental or neuro-developmental health needs for children will from part of any multi-agency wellbeing assessment under the Getting it Right for Every Child (GIRFEC) policy, applicable to all children in Scotland. Alternatively, some children, and young people over the age of 18 who are less likely to be subject to a multi-agency plan, may have their needs picked up as part of a single agency assessment. Many children and young people's presentations can be managed by adhering to the above guidance and by understanding their individual needs and how best to meet these, informed by knowledge of varying mental health and neuro-developmental conditions, such as those covered earlier. Guidance may also be sought from specialist neuro-developmental services, although when it is apparent that the following of general support principles and specialist guidance are not sufficient, referral to a specialist service may be required.

Services for those under and over 18 differ, with 16- and 17-year-olds potentially supported under either process, depending on local arrangements, culture, and wider contexts.

As with any assessment additional procedures must be involved when there are concerns that a child or young person is at risk of harm and requires additional protections and safeguarding, potentially on account of features of mental health or neuro-divergent conditions. For children, the National Guidance for Child Protection in Scotland 2021 - updated 2023 should be followed, where necessary. It supports practitioners to respond appropriately to concerns, covering a range of specific needs and concerns which could necessitate a child protection response: “Child protection procedures are initiated when police, social work or health determine that a child may have been significantly harmed or may be at risk of significant harm.” (p.91).

Adults can be supported under the Adult Support and Protection (Scotland) Act 2007, which contains measures to identify, protect and support individuals who are at risk of being harmed by themselves or others. The accompanying Adult Support and Protection (Scotland) Act 2007: Code of Practice (2022) provides information to practitioners as to the practical application of the legislation. Under s.3(1), the Act defines ‘adults at risk’ as anyone over 16 who meets the following three-point criteria:

- They are unable to safeguard their own well-being, property, rights, or other interests,
- They are at risk of harm, and
- Because they are affected by disability, mental disorder, illness or physical or mental infirmity they are more vulnerable to being harmed than adults who are not so affected.

Children between the ages of 16 and 18 who require support and protection can currently be supported under child or adult protection procedures, and services will need to consider which legal framework best fits each person’s needs and circumstances (Scottish Government, 2023c, p. 9). The Institute for Research and Innovation in Social Services (Iriss) guide to Understanding age in Child Protection guidance and Adult Support and Protection legislation (2024) and accompanying guidance and legislation table which provide insight into the variations of the two systems, informed by input form professionals who navigate them, with the table designed as a practical tool for practitioners to help establish which procedures to use in which circumstances. This may also be informed by available service provisions.

7.2 Referrals to specialist neurodevelopmental services

Neurodivergent conditions such as ASD, ADHD and FASD have traditionally been dealt with by CAMHS teams, which provide support to under 18s with mental health issues, as detailed in the Mental Health Section. Concerns developed however round the waiting times for Neurodevelopmental assessments when subject to prioritisation protocols alongside mental health conditions. As such it was recommended that there be a separate neurodevelopmental pathway developed, albeit CAMHS may remain the preferred referral where there are concurrent mental health concerns.

The recent ADHD and autism pathways and support (December 2025) by the Scottish Parliament Health, Social Care and Sport Committee, was commissioned to improve understanding of; the increased waiting times for diagnosis and management of ADHD and autism and the drivers behind this; how these conditions are diagnosed and managed; the impact of delays on individuals; and to explore solutions to improve service capacity, referral pathways and supports.

The report made multiple recommendations on key stages; Accessing pathways to support, treatment thresholds and gatekeeping, Open referral, Waiting times, Assessment process, Diagnosis, Private diagnosis and shared care, and Transitions, Role of the Third Sector, Whole society approach, and Data. The dramatic increase in referrals for assessment of ADHD and autism, and the inability of the current system to meet these demands is widely acknowledged. This briefing on Neurodevelopmental Pathways and Waiting Times in Scotland stated that as of March 2025 over 42,000 children and 23,000 adults were waiting for neurodevelopmental assessments in Scotland. It concluded a need to overhaul and standardise the system to assure consistency of service delivery, prioritising diagnosis for conditions which could benefit from treatments (such as medication) not available without diagnosis, and the need to promote information and supports for 'waiting well' – ensuring people impacted by neurodivergent conditions don't have to wait for assessment and diagnosis before accessing support and guidance. This must involve the support of the third sector and developing universally inclusive services and approaches that reduce the need for specific adaptations, and also more standardised approaches to shared care with the private sector to allow the health profession to cope with the treatment demands of those who receive a diagnosis.

The Committee stated regret at the pause in plans for the LDAN Bill, which it felt would greatly contribute towards a whole society approach to support those with neurodivergent people, and called on it to publish draft provisions. After considering the report, on 18th May 2026 the Scottish Government published a series of documents, Working together towards a Learning Disabilities, Autism and Neurodivergence Bill: March 2026 Current proposals for potential Bill provisions, detailing their proposals for content of an LDAN Bill, based on responses to the consultation and LDAN Bill Advisory Panel meetings in 2025.

This response states the Bill would make clear which conditions will and will not be covered by its provisions, with work is ongoing to establish which would be covered. The Bill includes proposals for improved accountability via development of a national strategy and local delivery plans, informed by national guidance, though falls short of creating an LDAN Commissioner. It highlights a need for increased awareness and mandatory training on related issues and supports across all sectors. A specific Justice section states intended scope for:

- Supporting people by ensuring they feel safe to come forward and receive appropriate support.
- **Improving awareness and understanding in the justice system** of needs and behaviours among accused persons and offenders, supported by **mandatory training and improved identification processes.**
- Increasing access to advocacy and support: **helping people to better navigate the justice system and exercise their rights.**
- Reducing offending and re-offending: by **providing more effective supports and services to neurodivergent offenders and offenders with learning disabilities**.

Significantly, it states the potential Bill could introduce a new statutory duty on relevant public bodies within the justice system to identify people with a communication support need that may arise as a result of a neurodivergence or a learning disability. Proposals are clear that justice professionals would not be required to medically assess or diagnose conditions, but would assess whether behaviour or communication indicates a need for additional support to allow individuals to fully understand and participate in processes. To meet this duty justice services could be prioritised for mandatory training. It suggests complementary work would develop a framework to support justice staff and to support recording and sharing of information to better need the needs of those in conflict with the law.

The proposal is however non-committal on future plans, stating decisions lie with the Government formed after the May 2026 Scottish Election, stating that *should* a future Government decide to continue the Bill's development, these proposals may inform the next stage. It is notable that much of what it proposed could be progressed without legislation, with the high level of consultation, including from those with lived experience, providing an evidence base for improved training and informed supports, and to continue much good work already underway to improve the experienced of justice involved people with learning disability or neurodivergent conditions.

8. Conclusion

The Parliamentary Committee report and other findings discussed in this section highlight the rights breaches experienced by children and young people with suspected or diagnosed neurodivergent conditions; from lack of access to health services and essential treatment, to their not understanding justice systems and language. The disruption to brain functioning and essential skills for communicaion and navigating social networks, environments, processes and society at large are vast and varied depending on neurodevelopmental conditions and environmental stressors such as poverty and trauma. As such practitioners and organisations working with these children and young people must adapt their wider approaches to be more universally inclusive (as discussed in Section 6 of this guide on speech, language and communicaion needs), and their individual approaches based on robust assessment informed by knowledge of neurodevelopment, and specialist assessment and formulation when need dictates.

9. References

Al-Attar, Z. (2018). Interviewing terrorism suspects and offenders with an autism spectrum disorder. *The International Journal of Forensic Mental Health*, *17*(4), 321–337. https://doi.org/10.1080/14999013.2018.1519614

Al-Attar, Z. (2020). Autism spectrum disorders and terrorism: How different features of autism can contextualise vulnerability and resilience. *Journal of Forensic Psychiatry & Psychology*, *31*(6), 926–949. https://doi.org/10.1080/14789949.2020.1812695

Allely, C., & Dubin, L. (2018). The Contributory Role of Autism Symtomogoly in Child Pornography Offending: why there is an urgent need for empirical research in this area. *Journal of Intellectual Disabilities and Offending Behaviour*.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

Anns, F., D'Souza, S., MacCormick, C., Mirfin-Veitch, B., Clasby, B., Hughes, N., Forster, W., Tuisaula, E., & Bowden, N. (2023). Risk of Criminal Justice System Interactions in Young Adults with Attention-Deficit/Hyperactivity Disorder: Findings From a National Birth Cohort. *Journal of attention disorders*, *27*, 1332–1342. https://doi.org/10.1177/10870547231177469

APA (Ed.). (2013). *American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.* American Psychiatric Association, 2013.

Ashinoff, B. K., & Abu-Akel, A. (2021). Hyperfocus: the forgotten frontier of attention. *Psychological research*, *85*(1), 1–19.

Ayano, G., Tsegay, L., Gizachew, Y., Necho, M., Yohannes, K., Demelash, S., Anbesaw, T., & Alati, R. (2024). Prevalence of ADHD in Adults: An Umbrella Review of International Studies. *European Psychiatry, 67(S1), S343–S343.* https://doi.org/https://doi.org/10.1192/j.eurpsy.2024.708

Babinski, D. E., Waschbusch, D. A., & Waxmonsky, J. G. (2019). Sex and Pubertal Status Moderate the Association Between ADHD and Depression Symptoms: An Examination From Preadolescence Through Late Adolescence. *The Journal of clinical psychiatry*, *80*(3).

Braams, B. R., van Duijvenvoorde, A. C., Peper, J. S., & Crone, E. A. (2015). Longitudinal changes in adolescent risk-taking: a comprehensive study of neural responses to rewards, pubertal development, and risk-taking behavior. . *The Journal of neuroscience: the official journal of the Society for Neuroscience*, *35*(18), 7226–7238.

Breslin, F. J., Kerr, K. L., Ratliff, E. L., Cohen, Z. P., Simmons, W. K., Morris, A. S., & Croff, J. M. (2024). Early Life Adversity Predicts Reduced Hippocampal Volume in the Adolescent Brain Cognitive Development Study. *Journal of Adolescent Health, 75(2), 275–280.*

Brown, T. E., Reichel, P. C., & Quinlan, D. M. (2009). Executive function impairments in high IQ adults with ADHD. *Journal of attention disorders*, *13*(2), 161–167.

Cancelliere, C., Coronado, V. G., Taylor, C. A., & Xu, L. (2017). Epidemiology of Isolated Versus Nonisolated Mild Traumatic Brain Injury Treated in Emergency Departments in the United States, 2006-2012: Sociodemographic Characteristics. *The Journal of head trauma rehabilitation*, *32*(4), E37–E46.

Carr, A. (2006). *The Handbook of Child and Adolescent Clinical Psychology: A Contextual Approach*. Routledge.

Carrion, V. G., & Wong, S. S. (2012). Can Traumatic Stress Alter the Brain? Understanding the Implications of Early Trauma on Brain Development and Learning. *Journal of*

Adolescent Health, *51*(2, Supplement), S23–S28. https://doi.org/https://doi.org/10.1016/j.jadohealth.2012.04.010

Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry *Developmental science*, *14*(2), F1–F10.

Cherkasova, M. V., Roy, A., Brooke S.G. Molina, Scott, G., Weiss, G., Barkley, A. R., Biederman, J., Uchida, M., Hinshaw, P. S., Owens, B. E., & Hechtman, L. (2022). Adult Outcome as Seen Through Controlled Prospective Follow-up Studies of Children With Attention-Deficit/Hyperactivity Disorder Followed Into Adulthood. *Journal of the American Academy of Child & Adolescent Psychiatry*, *61*(3), 378–391. https://doi.org/10.1016/j.jaac.2021.05.019.(https://www.sciencedirect.com/science/article/pii/S089085672100366X

CJJI. (2021). Neurodiversity in the Criminal Justice System: A review of evidence. *Criminal Justice Joint Inspection: Criminal Justice Joint Inspection*.

Coriale, G., Fiorentino, D., Di Lauro, F., Marchitelli, R., Scalese, B., Fiore, M., Maviglia, M., & Ceccanti, M. (2013). Fetal Alcohol Spectrum Disorder (FASD): neurobehavioral profile, indications for diagnosis and treatment. *Rivista di psichiatria*, *48*(5), 359–369.

CRC. (2019). General comment No. 24 (2019) on children's rights in the child justice system Convention on the Rights of the Child.

Creaby-Attwood, A., & Allely, C. (2017). *A Psycho-Legal Perspective on Sexual Offending in Individuals with Autism Spectrum Disorder* (International Journal of Law and Psychiatry, Issue. Elsevier.

Crone, E., & Dahl, R. (2012). Understanding adolescence as a period of social-affective engagement and goal flexibility. , 13(9), 636–650. *Nature Reviews. Neuroscience*, *13*(9), 636–650.

Day, A.-M. (2025). Kids 'at risk' of school exclusion and youth justice involvement? Or neurodivergent children and families in need of trauma-informed support? *Emotional and Behavioural Difficulties*, *30*(3), 196–211. https://doi.org/10.1080/13632752.2025.2499788

DeJong, M. (2010). Some reflections on the use of psychiatric diagnosis in the looked after or "in care" child population. *Clinical Child Psychology and Psychiatry*, *15*(4), 589–599. https://doi.org/10.1177/1359104510377705

Dooley, B. A., & Fitzgerald, A. (2012). *My World Survey: National Study of Youth Mental Health in Ireland*. https://researchrepository.ucd.ie/server/api/core/bitstreams/19fedd09-447f-4913-88d9-6306318d01e0/content

Dow-Edwards, D., MacMaster, F., Peterson, B., Niesink, R., Andersen, S., & Braams, B. (2019). Experience during adolescence shapes brain development: From synapses and networks to normal and pathological behavior. *Neurotoxicology and teratology*, *76*.

Ellis, B., Saxe, G., & Twiss, J. (2020). Trauma Systems Therapy: Intervening in the Interaction between the Social Environment and a Child's Emotional Regulation. *In V. Ardino (Ed.) Post-traumatic syndromes in childhood and adolescence: A handbook of research and practice (pp. 373-390). John Wiley & Sons.*

Emerson, E., & Llewellyn, G. (2022). The association between household wealth and the prevalence of child disability and specific functional limitations: Analysis of nationally representative cross-sectional surveys in 40 low- and middle-income countries. *Disabil Health J*, *15*(4), 101364. https://doi.org/10.1016/j.dhjo.2022.101364

Eodanable, M., Rhodes, S., & Cebula, K. (2024). “People talk about FASD diagnosis but barely any young people are asked about it”: Diagnosis perspectives and disability identity in adolescents with FASD. *Children and Youth Services Review*, *166*, 107979. https://doi.org/https://doi.org/10.1016/j.childyouth.2024.107979

Farrington, D. P., Gaffney, H., & Ttofi, M. M. (2017). Systematic reviews of explanatory risk factors for violence, offending, and delinquency. . *Aggression and Violent Behavior*, *33*(124-36).

GAO. (2016). *YOUTH WITH AUTISM* (Roundtable Views of Services Needed During the Transition into Adulthood, Issue. https://www.gao.gov/assets/690/680666.pdf

Goethals, K. (2024). Introduction and overview of offenders with intellectual disabilities. *European Psychiatry*, *67*(S1), S29–S29. https://doi.org/10.1192/j.eurpsy.2024.104

Goldman, L., Siddiqui, E. M., Khan A, Jahan S, Rehman MU, Mehan S, Sharma R, Budkin S, Kumar SN, Sahu A, Kumar M, & K., V. (2022). Understanding Acquired Brain Injury: A Review. *Biomedicines*, *10*(9).

Humphreys, K. L., King, L. S., Sacchet, M. D., Camacho, M. C., Colich, N. L., Ordaz, S. J., Ho, T. C., & Gotlib, I. H. (2019). Evidence for a sensitive period in the effects of early life stress on hippocampal volume. *Dev Sci*, *22*(3), e12775. https://doi.org/10.1111/desc.12775

Johnstone, L. (2017). Youth Psychopathy: a Developmental Perspective. In P. Tarbuck, P. Chitsabesan, & S. Bailey (Eds.), *Forensic Child and Adolescent Mental Health: Meeting the Needs of Young Offenders* (pp. 217–238). Cambridge University Press. https://doi.org/10.1017/9780511777127.019

Johnstone, L., & Gregory, L. (2015). Youth Violence Risk Assessment: A framework for Practice. In A. R. Joel Harvey, Heather Law (Ed.), *Young People in Forensic Mental Health Settings: Psychological Thinking and Practice* (pp. 96–122). Palgrave Macmillan.

Kambeitz, C., Klug, M. G., Greenmyer, J., Popova, S., & Burd, L. (2019). Association of adverse childhood experiences and neurodevelopmental disorders in people with fetal alcohol spectrum disorders (FASD) and non-FASD controls. *BMC Pediatr*, *19*(1), 498. https://doi.org/10.1186/s12887-019-1878-8

Kirby, A. (2021).*). Neurodiversity - a whole-child approach for youth justice*. https://cdn.websitebuilder.service.justice.gov.uk/uploads/sites/32/2021/07/Neurodiversity---a-whole-child-approach-for-youth-justice.pdf

Kisser, J., Waldstein, S. R., Evans, M. K., & Zonderman, A. B. (2017). Lifetime prevalence of traumatic brain injury in a demographically diverse community sample. *Brain Injury*, *31*(5), 620–623.

Konrad, K., Firk, C., & Uhlhaas, P. (2013). Brain development during adolescence: neuroscientific insights into this developmental period. *Deutsches Arzteblatt international*, *110*(25).

Lees, B., Meredith, L. R., E, K. A., Bryant, B. E., & Squeglia, L. M. (2020). Effect of alcohol use on the adolescent brain and behavior. *Pharmacology, biochemistry, and behavior*, *192*, 172–906.

Luby, J. L., Tillman, R., & Barch, D. M. (2019). Association of Timing of Adverse Childhood Experiences and Caregiver Support With Regionally Specific Brain Development in Adolescents. *JAMA Network Open*, *2*(9), e1911426–e1911426. https://doi.org/10.1001/jamanetworkopen.2019.11426

Lundström, S., Forsman, M., Larsson, H., Kerekes, N., Serlachius, E., Långström, N., & Lichtenstein, P. (2014). Childhood neurodevelopmental disorders and violent criminality: a sibling control study., *44*(11), 2707–2716. https://doi.org/10.1007/s10803-013-1873-0

Mattie, L. J., Loveall, S. J., Channell, M. M., & Rodgers, D. B. (2023). Perspectives on adaptive functioning and intellectual functioning measures for intellectual disabilities behavioral research [Perspective]. *Frontiers in Psychology*, *Volume 14 - 2023*. https://doi.org/10.3389/fpsyg.2023.1084576

Mattson, S. N., Bernes, G. A., & Doyle, L. R. (2019). Fetal Alcohol Spectrum Disorders: A Review of the Neurobehavioral Deficits Associated With Prenatal Alcohol Exposure. *Alcoholism, clinical and experimental research*, *43*(6), 1046–1062.

Max, J. E., Smith, W. L., Jr, , Sato, Y., Mattheis, P. J., Castillo, C. S., Lindgren, S. D., Robin, D. A., & Stierwalt, J. A. (1997). Traumatic brain injury in children and adolescents: psychiatric disorders in the first three months. *Journal of the American Academy of Child and Adolescent Psychiatryhttps://pubmed.ncbi.nlm.nih.gov/9000786/*, *36*(1), 94–102.

Mayeux, L., Sandstrom, M. J., & Cillessen, A. H. N. (2008). Is being popular a risky proposition? . *Journal of Research on Adolescence*, *18*(1), 49–74.

McLachlan, K. J. (2024). *Trauma-informed Criminal Justice: Towards a More Compassionate Criminal Justice System*. Springer Nature.

Mealings, K., & Buchholz, J. M. (2026). A scoping review of how classroom environments and activities affect listening, learning and wellbeing in children with ADHD by applying the L3 Assessment Framework. *European Journal of Special Needs Education, 41(3), 466–490.* . https://doi.org/https://doi.org/10.1080/08856257.2025.2536494

Mitchell, F. (2012). *Using the social work relationship to promote recovery for adolescents who have experienced abuse and neglect.* http://www.socialwork.ed.ac.uk/__data/assets/pdf_file/0007/147697/using-the-social-work-model-to-promote-recovery-for-adolescents-who-have-experienced-abuse-and-neglect1.pdf

Mogavero, M. (2016). Autism, sexual offending, and the criminal justice system. *Journal of Intellectual Disabilities and Offending Behaviour*, *7*, 116–126. https://doi.org/10.1108/JIDOB-02-2016-0004

NAS. (2023). National Autisic Society. https://www.autism.org.uk/advice-and-guidance/topics/behaviour/meltdowns/all-audiences

National Autism Implementation Team. (2021). *Children's Neurodevelopmental Pathway - the practice framework: A workbook for assessment, diagnosis and planning*. https://www.thirdspace.scot/wp-content/uploads/2021/05/Childrens-Neurodevelopmental-Pathway-and-Guidance-2021.pdf

Perry, B. D. (2002). Childhood experience and the expression of genetic potential: What childhood neglect tells us about nature and nurture. *Brain and mind*, *3*(1), 79–100.

Perry, B. D., Pollard, R. A., Blakley, T. L., Baker, W. L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation, and use dependent development of the brain: How states become traits. *Infant mental health journal*, *16*(4), 271–291.

Qaderi, J., & Malmqvist, J. (2026). When ADHD exacerbates school difficulties and leads to exclusion: a case study. *Emotional and Behavioural Difficulties*, 1–17. https://doi.org/10.1080/13632752.2026.2619357

Rendall, M., MacMahon, K., & Kidd, B. (2021). The Scottish police caution: do individuals with intellectual disabilities understand a verbally presented police caution, and can comprehension be improved? *Psychiatr Psychol Law*, *28*(1), 50–69. https://doi.org/10.1080/13218719.2020.1767710

Retz, W., Ginsberg, Y., Turner, D., Barra, S., Retz-Junginger, P., Larsson, H., & Asherson, P. (2021). Attention-Deficit/Hyperactivity Disorder (ADHD), antisociality and delinquent behavior over the lifespan. *Neurosci Biobehav Rev*, *120*, 236–248. https://doi.org/10.1016/j.neubiorev.2020.11.025

Roles, O., & Johnstone, L. (2024). Words into action : bridging the gap between theory and practice when supporting young people in care. *Scottish Journal of Residential Child Care,, 23 (1). pp. 141-152. ISSN 1478-1840*.

Rosen, M. L., Sheridan, M. A., Sambrook, K. A., Meltzoff, A. N., & McLaughlin, K. A. (2018). Socioeconomic disparities in academic achievement: a multi-modal investigation of neural mechanisms in children and adolescents. *Neuroimage*, *173*, 298–310.

Russell, A. E., Benham-Clarke, S., Ford, T., Eke, H., Price, A., Mitchell, S., Newlove-Delgado, T., Moore, D., & Janssens, A. (2023). Educational experiences of young people with ADHD in the UK: Secondary analysis of qualitative data from the CATCh-uS mixed-methods study. *Br J Educ Psychol*, *93*(4), 941–959. https://doi.org/10.1111/bjep.12613

Rutherford, M., Johnston, L., Maciver, D., Day, H., & Gray, A. (2024). *Children's NeurodevelopmentalPathway Practice Framework:A workbook for assessment,diagnosis and planning*. Third Space.scot: Autism Implementation Team Retrieved from https://www.thirdspace.scot/wp-content/uploads/2024/10/Childrens-Neurodevelopmental-Pathway-Practice-Framework-2024.pdf

Salekin, K. L., Olley, J. G., & Hedge, K. A. (2010). Offenders With Intellectual Disability: Characteristics, Prevalence, and Issues in Forensic Assessment. *Journal of Mental Health Research in Intellectual Disabilities, 3(2), 97–116.* https://doi.org/https://doi.org/10.1080/19315861003695769

Sayal, K., Prasad, V., Daley, D., Ford, T., & Coghill, D. (2018). ADHD in children and young people: prevalence, care pathways, and service provision. *The lancet. Psychiatry*, *5*(2), 175–186.

Schneider, S., Peters, J., Bromberg, U., Brassen, S., Meidl, S., Banaschewski, T., Barker, G., Conrod, P., Flor, H., Garavan, H., Heinz, A., Ittermann, B., Lathrop, M., Loth, E., Mann, K., Martinot, J., Ness, F., Paus, T., Rietschel, M., & Robbins, T. (2012). Risk taking and the adolescent reward system: a potential common link to substance abuse. *The American journal of psychiatry*, *169*(1), 39–46.

Scottish Government. (2023c). *National Guidance for Child Protection in Scotland 2021 - updated 2023*. Retrieved from gov.scot (www.gov.scot).

Scottish Government. (2020). *Child And Adolescent Mental Health Services: national service specification*. Edinburgh: Scottish Government Retrieved from https://www.gov.scot/publications/child-adolescent-mental-health-services-camhs-nhs-scotland-national-service-specification/

Scottish Government. (2021). *Children and young people - national neurodevelopmental specification: principles and standards of care*. https://www.gov.scot/publications/national-neurodevelopmental-specification-children-young-people-principles-standards-care/documents/

Scottish Government. (2024). Justice for children and young people: vision and priorities 2024-26.

Shaw, P., Eckstrand, K., Sharp, W., Blumenthal, J., Lerch, J. P., Greenstein, D., Clasen, L., Evans, A., Giedd, J., & Rapoport, J. L. (2007). Attention-deficit/hyperactivity disorder is characterized by a delay in cortical maturation. *Proceedings of the National Academy of Sciences of the United States of America*, *104*(49), 19649–19654.

Soares, N., Allely, C. S., Straub, F., & Penner, M. (2022). Autism Spectrum Disorder, Extremism, and the Role of Developmental-Behavioral Pediatric Clinicians. . *Journal of Developmental and Behavioral Pediatrics*, *43*(8), 480–488. https://doi.org/10.1097/DBP.0000000000001108

Somerville, L. H., Haddara, N., Sasse, S. F., Skwara, A. C., Moran, J. M., & Figner, B. (2018). Dissecting "Peer Presence" and "Decisions" to Deepen Understanding of Peer Influence on Adolescent Risky Choice. . *Child development*, *90*(6), 2086–2103.

Spear, L. P. (2013). Adolescent neurodevelopment. *J Adolesc Health*, *52*(2 Suppl 2), S7–13. https://doi.org/10.1016/j.jadohealth.2012.05.006

Telzer, E. H., Ichien, N. T., & Qu, Y. (2015). Mothers know best: redirecting adolescent reward sensitivity toward safe behavior during risk taking. 10(10), 1383- 91. *Social Cognitive and Affective Neuroscience*, *10*(10), 1383–1391.

The Michael Sieff Foundation. (2025). Justice for children with SEND and neurodivergence.

Tooley, U. A., Bassett, D. S., & Mackey, A. P. (2021). Environmental influences on the pace of brain development. *Nature Reviews, Neuroscience*, *22*(6), 372–384. https://doi.org/10.1038/s41583-021-00457-5

United Nations Human Rights Committee. (2019). United Nations Global Study on Children Deprived of Liberty: Commitee on the Rights of a Child. 23. https://www.ohchr.org/en/treaty-bodies/crc/united-nations-global-study-children-deprived-liberty

Weyrauch, D., Schwartz, M., Hart, B., Klug, M. G., & Burd, L. (2017). Comorbid Mental Disorders in Fetal Alcohol Spectrum Disorders: A Systematic Review. *Journal of developmental and behavioral pediatrics : JDBP*, *38*(4), 283–291.

Williams, H., Schrieff, L., Hughes, N., Tonks, J., Chitsabesan, P., & Kent, H. (2021). Neurodisability and trauma in children and young people in conflict with the law. In G. Lansdell (Ed.), *Neurodisability and the Criminal Justice System, Comparative and Therapeutic Responses* (pp. 91–109). Edward Elgar Publishing Ltd.

Young, S., Gudjonsson, G. H., Wells, J., Asherton, P., Theobald, D., Oliver, B., Scott, C., & Mooney, A. (2009). Attention Deficit Hyperactivity Disorder and Critical Incidents in a Scottish Prison Population, Personality and Individual Differences *46*(3), 265–269. https://doi.org/10.1016/j.paid.2008.10.003