ROCKET SCIENCE

Neurodiversity and violence

Evidence Review for West Yorkshire Combined Authority Violence Reduction Unit

March 2022

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1. Executive summary

Rocket Science was commissioned by West Yorkshire Combined Authority (WYCA) Violence Reduction Unit (VRU) in December 2021 to conduct research into neurodiverse young people's experience of violence. Specific research questions this review has sought to address include:

1. How do young people with neurodiversity experience violence, as victims or perpetrators?
2. What are the risk and protective factors for young people with neurodiversity and serious violence/exploitation?
3. How, and to what extent, do inequalities, social and environmental determinants contribute to the prevalence of young people with neurodiversity experiencing serious violence and exploitation?
4. What evidence-based interventions are available to prevent young people with neurodiversity entering the criminal justice system?

The review brings together evidence from published research and consultations with perspectives from both experts in the field of neurodiversity and young people who are neurodiverse. Drawing firm conclusions is difficult given the breadth of neurodiversity, its under-diagnosis and a lack of awareness of across systems and services. However, it is apparent that whilst the risk factors for involvement in violence are the same for neurotypical and neuroatypical young people those who are neurodiverse are more likely to experience some risk factors, particularly in relation to social isolation and exposure to traumatic life events as a result of their diversity.

The evidence indicates that neurodiverse young people with special educational needs in West Yorkshire experience substantially higher rates of exclusion from education which is likely to contribute to both increased social isolation and reduced access to screening, diagnosis, and support. The report makes a number of recommendations for WYCA particularly in relation to inclusion, monitoring, and training of staff across criminal justice and education systems.

2. Introduction and context

2.1 The review

Rocket Science was commissioned by West Yorkshire Combined Authority (WYCA) Violence Reduction Unit (VRU) in December 2021 to conduct research into neurodiverse young people's experience of violence.

This research covers:

- the existing literature on the link between neurodiversity and violence, the risks and protective factors and the impact of gender and ethnicity, social inequality, and trauma
- the risk profile of young people in West Yorkshire
- what type of interventions are currently in place across the UK to prevent neurodiverse young people from entering the criminal justice system?
- the literature on existing training provision on neurodiversity for those working in violence prevention for young people.

To gather this information Rocket Science reviewed evidence and data from the Idox Knowledge Exchange database, Google Scholar, and third sector and government websites. Sources are cited throughout.

The evidence review is set out as follows:

- The causes and experiences of young people with neurodiversity who encounter violence – this chapter examines how and when young people experience violence, whether that be as a victim or a perpetrator.
- Understanding who is at risk – this chapter examines the characteristics of neurodiverse young people, and what challenges there are to exploring these characteristics.
- Interventions and best practice for preventing neurodiverse young people entering the criminal justice system – this chapter examines which interventions are currently in place, including those aimed at parents, young people, and those who have already offended.
- Training provision on neurodiversity for those working in violence prevention for young people – this chapter examines what training provision is currently in place, including in a school or work setting.

In addition to the evidence review, we conducted primary research with experts and practitioners, as well as with neurodiverse young people themselves.

There were one to one interviews with 11 experts and practitioners from across West Yorkshire and England. Those consulted work in a range of areas including:

- Youth justice workers
- Speech and language therapists
- Individuals who coordinate community groups for neurodiverse young people
- Charity staff who provide services and support to neurodiverse young people.

We also spoke with neurodiverse young people and arranged these interviews through charity or community groups that work with them. Despite approaching more than 30 organisations to try to identify neurodiverse young people to interview, we were only able to speak to four young people for this part of the consultation

2.2 Research limitations

Engaging neurodiverse young people in the consultation has been challenging for three key reasons this is the case:

- Our main method for contacting neurodiverse individuals is via charity organisations or community support groups. However, these groups are often aimed at less-able neurodiverse young people and organisation workers we have contacted have told us the young people in their group would be unable to take part in interviews
- The community support groups we have spoken to are predominantly volunteer-led. While some individuals have been happy to pass on details of our research and request for interviews onto members via newsletters or social media posts, there is perhaps not the capacity (and perhaps motivation) to help identify individual members and ask them directly.
- One charity group told us that there has been an increase in research into neurodiverse individuals in the past few years, and they are now inundated with research requests. This group told us their members were unmotivated to take part in more research unless they could clearly see what impact their participation would bring. Amongst this group, there is a feeling they are being treated as 'guinea pigs'.

2.3 Defining violence

For the purposes of this research we use the WYCA Violence Reduction Unit's definition of violence:[1]

> "Violence and serious violence includes specific crime types where there is the use of physical force or power, threatened or actual, against oneself, another person, or against a group or community. This includes homicide, knife crime, personal robbery, gun crime and domestic abuse and we seek to understand the profile of these specific crime types across the localities in West Yorkshire. Our definition and work will focus on areas of criminality and specific groups where serious violence, or its threat or impact, is evident; this is young people, public places, the night-time economy, and gangs. In understanding the scale and extent of violence across West Yorkshire, we will also focus on how best to address the needs of victims of violence and how to respond to the perpetrators, including repeat perpetrators of violence."

It is worth noting, however, that in some of the evidence sources, severity of violence or types of crime are not defined. In such cases, where these are relevant to understanding the mechanisms that lead to violence, which may or may not include serious violence, they are still included as useful sources of information.

2.4 Defining neurodiversity

Neurodiversity is defined as the range of neurological differences that are posited to be the normal variations of human brains. This includes diagnosable conditions including ADHD, autism, dyslexia, dysgraphia, and dyscalculia. However, as an umbrella term and not a strict medical definition, there is naturally variation within this definition, with some specific conditions that sit under this, but also scope for undiagnosed neurodiversity, as well as co-occurrence with other diagnoses. The fundamental idea is that these variations should be acknowledged, appreciated, celebrated, and supported via reasonable adjustments, rather than being considered as specific 'problems' to be treated or 'cured'[2].

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[1] West Yorkshire Violence Reduction Unit Strategic Needs Assessment January 2021. Link
[2] Baron-Cohen, S (2017). Editorial Perspective: Neurodiversity – a revolutionary concept for autism and psychiatry. Journal of Child Psychology and Psychiatry, 58 (6), 744-747. Link.

The Department of Education promote this approach:

"It encourages people to view neurological differences such as autism, dyslexia, and dyspraxia as natural and normal variations of the human genome. Further, it encourages them to reject the culturally entrenched negativity which has typically surrounded those that live, learn, and view the world differently."[3]

Neurodiversity promotes the positive qualities associated with diversity and individual differences, and the term was originally used by the autistic community. While it is intended to move away from the concept of medically diagnosed disorders, for the purposes of this research, searching for evidence included search terms covering the specific diagnosable conditions within neurodiversity, and including other more general terms such as neurodevelopmental disorders, learning difficulties, and learning disabilities. Autism in particular is very prevalent as a specific diagnosis in the literature.

While specific learning difficulties or defined conditions are not always present or formally diagnosed in neurodivergent people, they provide useful sources of information and research findings that were of use to inform this evidence review. However, the reader should remember that neurodiversity is a strengths-based concept and that it focuses on normal variations of the human condition.

While there are specific learning difficulties the sit under the umbrella of neurodiversity (listed in Table 1), these are not required to be present and have a formal diagnosis for young people to be neurodivergent. Diagnosis can take a long time, misdiagnosis is not uncommon, and co-occurrence of types of neurodivergence are often seen[4,5]. In order to understand the evidence underpinning neurodiversity and violence, studies that focused on specific diagnoses or conditions were used to gain insight, but while reviewing the evidence and considering interventions, it must be remembered that undiagnosed neurodiversity is also relevant to these findings.

[3] Department for Education (2016). Teaching for Neurodiversity A Guide to Specific Learning Difficulties. Link.
[4] ADHD Aware (2021). Getting an NHS ADHD Diagnosis. Link.
[5] ADHD Aware (2021). Neurodiversity and other conditions. Link.

Table 1 Types of neurodiversity

Condition	Definition[6]
ADHD	Attention deficit hyperactivity disorder (ADHD) is a condition that affects people's behaviour. People with ADHD can seem restless, may have trouble concentrating and may act on impulse. Most cases are diagnosed when children are 3 to 7 years old, but sometimes it's diagnosed later in childhood. People with ADHD may also have additional problems, such as sleep and anxiety disorders.
Autism (also Autism spectrum conditions, autism spectrum disorders)	Autistic people and those on the autistic spectrum may: • find it hard to communicate and interact with other people • find it hard to understand how other people think or feel • find things like bright lights or loud noises overwhelming, stressful or uncomfortable • get anxious or upset about unfamiliar situations and social events • take longer to understand information • do or think the same things over and over Autism is not a medical condition with treatments or a "cure". But some people need support to help them with certain things. Autism is a spectrum. This means everybody with autism is different. Some autistic people need little or no support. Others may need help from a parent or carer every day.
Dyslexia	Dyslexia is a common learning difficulty that can cause problems with reading, writing, and spelling. It's a specific learning difficulty, which means it causes problems with certain abilities used for learning, such as reading and writing. Unlike a learning disability, intelligence isn't affected. It's estimated up to 1 in every 10 people in the UK has some degree of dyslexia.

[6] Unless otherwise stated, all of these definitions come from: NHS (2019) Health A-Z. Link.

	People with dyslexia often have good skills in other areas, such as creative thinking and problem solving.
Dyscalculia[7]	Simply defined as difficulty learning or understanding maths, dyscalculia is a specific and persistent difficulty in understanding numbers which can lead to a diverse range of difficulties with mathematics. It will be unexpected in relation to age, level of education and experience and occurs across all ages and abilities. Mathematics difficulties are best thought of as a continuum, not a distinct category, and they have many causal factors. Dyscalculia falls at one end of the spectrum and will be distinguishable from other maths issues due to the severity of difficulties with number sense, it can occur singly but often co-occurs with other specific learning difficulties, mathematics anxiety and medical conditions.
Dysgraphia[8]	The recognition and diagnosis of dysgraphia is a contentious issue. Use of the term is increasingly common, with some suggestion that dysgraphia belongs to the same family of developmental disorders as dyspraxia and dyslexia, although it is not listed as a specific learning difficulty in the SEND Code of Practice. Some people consider that dysgraphia goes hand in hand with dyspraxia; however, because at the current time there is not a recognised list of agreed core symptoms/indicators, the Dyspraxia Foundation prefers to use the term 'handwriting difficulties'. The absence of clarity in terms can cause confusion for families seeking a diagnosis it may be advisable to avoid using dysgraphia in the way that other developmental disorders' labels are used.
Dyspraxia	Developmental co-ordination disorder (DCD), also known as dyspraxia, is a condition affecting physical co-ordination. It causes a child to perform less well than expected in daily activities for their age and appear to move clumsily.

[7] BDA/SASC (2019). Dyscalculia definition. Link.
[8] Department for Education (2016). Teaching for Neurodiversity A Guide to Specific Learning Difficulties. Link.

	DCD is thought to be around 3 or 4 times more common in boys than girls, and the condition sometimes runs in families. Early developmental milestones of crawling, walking, self-feeding, and dressing may be delayed in young children with DCD. Drawing, writing and performance in sports are also usually behind what is expected for their age. A definite diagnosis of DCD does not usually happen until a child with the condition is 5 years old or more. Most healthcare professionals use the term developmental co-ordination disorder (DCD) to describe the condition. This term is generally preferred by healthcare professionals because dyspraxia can have several meanings. Some healthcare professionals may also use the term specific developmental disorder of motor function (SDDMF) to refer to DCD.

3. Evidence review

Research questions

How do young people with neurodiversity experience serious violence as victims, bystanders, and perpetrators?

- What types of violence do young people with neurodiversity experience?
- Which other parties are involved in these experiences?
- At what age do these experiences start and why?

What are the risk and protective factors for young people with neurodiversity and serious violence/exploitation?

- To what extent does gender and ethnicity influence the relationship between neurodiversity and serious violence/exploitation?
- How, and to what extent, do inequalities, social and environmental determinants contribute to the prevalence of young people with neurodiversity experiencing serious violence and exploitation?
- How do experiences of trauma and adversity influence the relationship between neurodiversity and serious violence/exploitation?

Rocket Science reviewed evidence from the Idox Knowledge Exchange database, Google Scholar, and third-sector and government websites. The evidence review draws on these various sources and presents key information to answer these research questions.

Key search terms used in the search included: intellectual disabilities, communication disorders, autism, attention-deficit disorder, neurodevelopmental disorders, and specific learning disorders such as dyslexia, dysgraphia, and dyscalculia. The search looked for evidence of people with various neurodivergent conditions experiencing serious violence as victims, bystanders, and perpetrators, and around the risk and protective factors that are present and the impact of these experiences.

We also searched for examples of interventions and best practice to prevent young people with these conditions from entering the criminal justice system. This initial search raised further questions around the prevalence of neurodiversity, including in the prison population and also the impact on access to services of neurodiversity. Further searches of literature were conducted on these queries.

The inclusion criteria were broad, to capture the widest relevant literature. While we looked for recent literature, some of the searches provided limited resources and so literature sources up to 15 years old were included. Examples from outside the UK were also included if the context was applicable to the UK system.

3.1 How do young people with neurodiversity experience violence?

"Children with neurodevelopmental impairments/conditions appear to be at higher risk than their non-disabled peers of all forms of violence, including abuse and neglect by parents/carers, peers and others."[9]

Young people with neurodiversity can experience serious violence in a range of ways. The routes to violence can differ depending on whether they are victims or perpetrators. In terms of victimisation, key routes are vulnerability to exploitation and so called "mate crime", as well as being victims of disability hate crime. As perpetrators, again there is a link to exploitation, but also issues of self-medication and drug abuse, and displaying behaviours that challenge, and 'acting out' as a frustration response, which can include violent behaviours against themselves or others. With some issues, particularly CCE (Child Criminal Exploitation), there can be overlap between the experiences as both victims/bystanders and perpetrators.

Childhood Criminal Exploitation, mate crime, cuckooing.

Childhood criminal exploitation (CCE), including through County Lines, deliberately targets children who are vulnerable and can be influenced to behave in ways that a gang or other criminal group wants[10]. The reasons a young person might be more vulnerable to this is through school exclusion, problems at home, and having special educational needs, which can include neurodiversity[11]. While the impact of neurodiversity can vary from individual to individual, and also depending on the type of neurodiversity, one key risk factor is when young people are less able to understand social context or are more trusting of others than a neurotypical child might be[12]. A route to CCE for a young person with autism, for example, might be that they are 'befriended' by someone from a criminal gang, and then that 'friendship' is exploited in order to extort money or get them to partake in criminal activity.

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[9] Department of Health and Social Care (2013). Chief Medical Officer annual report 2012: children and young people's health. Chapter 9: Children with neurodevelopmental disabilities. Link.
[10] Just for Kids Law (2020) Excluded, exploited, forgotten: Childhood criminal exploitation and school exclusions. Link.
[11] NSPCC (2022). Criminal Exploitation and Gangs. Link.
[12] Simmonds *et al* (2018). A life without Fear? A Call for Collective Action against Learning Disability Hate Crime. Link.

Exploitation through this so-called 'mate crime' is a type of learning disability hate crime and can involve victims being specifically targeted for financial exploitation. This may be done by individuals or as part of a wider criminal enterprise[12].

Domestic violence and abuse (victims and perpetrators)

People with learning disabilities and/or autism are more likely to suffer from domestic violence and abuse than other people and are less likely to report it when they do. This is particularly true for those living independently[13]. Data are not consistently recorded and reported for the intersection of neurodiversity and domestic violence, but national figures from 2021 suggest that 8.2% of all domestic violence and abuse cases that were referred to the Multi-Agency Risk Assessment Conference (MARAC) involved a victim who had a disability[14] (including physical disabilities but excluding types of neurodiversity that are not categorised as learning disabilities).

One study also found gendered differences, with women more than twice as likely to be victims of partner abuse if they have a long-term illness or disability (compared to their non-disabled peers). Men are 72% more likely to be victims of partner abuse if they have a long-term illness or disability (compared to their non-disabled peers). Also, women who screen positive for autism are nearly three times more likely to have experienced sexual abuse as women who don't have autism[13]. The reasons for this are unclear, but it is speculated these could range from difficulty understanding social norms, poor ability to recognise dangerous situations, or that it could be linked to engaging in high risk behaviours, such as substance abuse[15].

A study in Buckinghamshire focused on the experiences of neurodiverse adults and has key recommendations that would be applicable to all age groups. For example, much of the data on learning disabilities and domestic violence and abuse presents an unclear picture: stakeholders working with people with learning disabilities report that they are more at risk of domestic violence and abuse, but this is not showing up in statistics collected on victims of domestic violence and abuse. This has led to the conclusion that there is likely to be much less reporting of domestic violence and abuse by people with learning disabilities[13].

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[13] Buckinghamshire Council (2020). Hidden Hurts: Domestic violence abuse research – Victims and perpetrators of DVA with learning disabilities and/or autism. Link.
[14] Safe Lives (2021). Latest Marac National Dataset. Link.
[15] Gotby *et al* (2018). Childhood neurodevelopmental disorders and risk of coercive sexual victimization in childhood and adolescence – a population-based prospective twin study. Journal of Child Psychology and Psychiatry, 59(9),pp957-965. Link.

The response for this increased risk of domestic violence and abuse included poorer understanding of the social 'rules' for relationships, and less ability to understand or recognise good/bad behaviour within romantic relationships; limited opportunities to start a relationship, and feelings of isolation, which can lead to pursuing a bad relationship in preference to no relationship; often may be reliant on others to help them with everyday tasks, which can make it harder for someone with a learning disability to leave an abusive relationship[13].

One of the factors contributing to vulnerability is when they are children and teenagers, people with learning disabilities are more likely to have been excluded from sex and relationships education (SRE). This may be through parents removing them from these classes, worried that their children won't understand or don't need SRE, or schools not deeming it important to teach SRE to children with special educational needs and disabilities, which will include some neurodivergent conditions[16]. Neurodivergent young people are therefore less likely to have learned about informed consent or healthy interpersonal interaction in romantic relationships[13]. It is therefore important that teachers, parents and carers of young people with learning disabilities ensure that they receive an appropriate level of sex and relationships education for them to be aware of healthy relationships, and how to have autonomy and empower them to make their own choices about romantic relationships in later life[13]. Relationships Education and Sex and Relationship Education (SRE) are now statutory aspects of a PSHE curriculum, since 2020[17], however, prior to this their inclusion in the curriculum could be avoided, and delivery was variable across different schools, with teachers lacking skills and confidence in teaching these topics[18]. SRE can be tailored to the appropriate level of understanding for children and young people with learning disabilities (eg using the available resources from NSPCC[19] and PSHE Association[20]).

[16] Williams, Rachel (2015). Pupils with learning difficulties are being denied their right to sex education. The Guardian, 23 March 2015. Link.
[17] Department for Education (2021). Relationships Education, Relationships and Sex Education (RSE) and Health Education: Statutory guidance for governing bodies, proprietors, head teachers, principals, senior leadership teams, teachers. Link.
[18] Ofsted (2013). Not yet good enough: personal, social, health and economic education in schools Personal, social and health education in English schools in 2012. Link.
[19] NSPCC Learning. (2021). Love Life: resources for young people with learning disabilities. Link.
[20] PSHE Association (2020). PHSHE Education Planning Framework for Pupils with SEND. Link.

Negative Life Experience

The Vulnerability Experiences Quotient (VEQ) was developed to measure the frequency of negative life experiences, including experience of violence, in autistic adults and explore their association with depression and anxiety. The VEQ includes 60 different types of negative life experiences including those during childhood, and autistic adults reported higher rates in all these childhood events[21]. These are listed below in Table 2.

Table 2 Experience of types of negative life experiences in childhood

Negative life experiences during childhood	% Of autistic participants who have experienced it	% Of control participants who have experienced it
As a child, other children bullied me	87%	33%
As a child, an adult hurt me badly enough that it left marks on my body	29%	16%
As a child, other children left me out of activities	85%	46%
As a child, children spread rumours about me or talked about me behind my back	77%	45%
As a child, another child hurt me badly enough that it left marks on my body (e.g. bruises or scratches)	51%	25%
As a child, an adult touched me in a sexual way, or tried to make me touch them in a sexual way	30%	20%
As a child, children called me names or insulted me	85%	57%
As a child, an adult humiliated, embarrassed, or scared me	79%	52%
As a child, an adult swore at me or called me names like stupid, ugly, or lazy	63%	33%

As can be seen adults with autism were substantially more likely to recall a range of different abuses as a child compared to non-autistic adults. The study concluded that these experiences partially explained higher rates of anxiety and depression and that improved services are required to reduce vulnerability and improve life satisfaction.

[21] Griffiths, S *et al*, The Vulnerability Experiences Quotient (VEQ): A Study of Vulnerability, Mental Health, and Life Satisfaction in Autistic Adults, 2019, Link

Hate crime

People who look or behave differently to others often find themselves victims of violent crimes. Data on hate crime compiled by the Office for National Statistics estimated that there were around 50,000 disability hate crimes in England and Wales between 2019 and 2020[22] (a higher number than reported for sexual orientation, gender identity or religion based hate crimes). Such disability hate crime can be exacerbated by a lack of support systems (or access to support systems)[23] and issues like poor relationships with, or lack of trust in, the police[24]. However, the current levels of disability hate crime are difficult to quantify[25], due to under-reporting by victims, but also failures in correctly identifying or recording these incidents in police or other data sets.

Recommendations by the Simmonds report[25] include for standardised reporting of disability hate crime (DHC), and reporting of statistics on DHC, training on learning disability hate crime for staff within the justice system, training on learning disability hate crime in schools (monitored by Ofsted), and for Police and Crime Commissioners to review victim support services to ensure they're fit for purpose for people with learning disabilities.

Lack of reporting

Lack of reporting is an issue across the types of violence that neurodiverse young people experience. This can come from a lack of understanding that they are victims (eg as in 'mate crime'), but also the regular occurrences of things like bullying mean that it can become a norm in their lives. This can lead to a lack of reporting either from past experiences of that making little difference to their experience or simply because they become used to living in fear of violence or abuse[26]. It may also be limited by lack of trust in the police or other services[24] .

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[22] ONS (2020). Hate crime, England and Wales, 2019 to 2020. Link.
[23] Ralph *et al* (2016). Disability hate crime: persecuted for difference. British Journal of Special Education 43(3), pp215-232 Link.
[24] Buckinghamshire Council (2020). Hidden Hurts: Domestic violence abuse research – Victims and perpetrators of DVA with learning disabilities and/or autism. Link.
[25] Simmonds *et al* (2018). A life without fear? A call for collective action against learning disability hate crime. Mental Health Foundation. Link.
[26] Simmonds *et al* (2018). A life without Fear? A Call for Collective Action against Learning Disability Hate Crime. Link

3.2 Neurodiverse young people as perpetrators of crime

Specific factors that can be typical of neurodiversity (though not present universally in neurodiverse young people) can put them at increased risk of offending[27] include:

- hyperactivity and impulsivity
- cognitive and language impairment
- alienation
- poor emotional regulation.

A number of these correlate with identified risk factors for youth violence including hyperactivity[28], poor emotional regulation, particularly in relation to anger[29] and social rejection by peers[30]

There also can be secondary risk factors, where some neurodiverse young people may have poor educational attendance or attainment, be drawn into drug abuse, which are in turn risk factors for offending[31].

Frustration, acting out, and behaviours that challenge

Children and young people with ADHD and/or autism are more likely to display behavioural difficulties[32] which can be a route into violence, through 'acting out' or lashing out physically when in a state of frustration or trying to communicate their needs.

Violent and aggressive behaviours can manifest as a result of frustration, feeling misunderstood, not being able to communicate need in another way, and is typically the symptom of a problem and not the problem itself. Yet it can pose risks to both the young people and those who are working with them[33].

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[27] Hughes *et al* (2012). Nobody made the connection: the prevalence of neurodisability in young people who offend. Link..
[28] Herrenkohl *et al*. (2000). Developmental risk factors for youth violence. J Adolesc Health. 26(3):176-86. doi: 10.1016/s1054-139x(99)00065-8. PMID: 10706165 Link
[29] DeLisi M, Caudill JW, Trulson CR, Marquart JW, Vaughn MG, & Beaver KM (2010). Angry inmates are violent inmates: A Poisson regression approach to youthful offenders. *Journal of Forensic Psychology Practice*, 10(5), 419–439. 10.1080/15228932.2010.489861. Link
[30] Risk and Protective Factors |Violence Prevention|Injury Center|CDC
[31] Children's Commissioner (2021) Still Not Safe: the public health response to youth violence. Link.
[32] Hamblin, E. (2016). Gender and children and young people's emotional and mental health: manifestations and responses. Link.
[33] NICE (2019). Reducing the risk of violent and aggressive behaviours: A quick guide for registered managers of mental health services for young people. Link.

Gender differences

There are also gendered differences in challenging behaviour and acting out, with behavioural problems diagnosed and reported more commonly in boys than girls, for both young people with neurodiverse conditions, and those who do not have a neurodiversity diagnosis[34]. The specific behavioural intersection between neurodiversity and gender is under explored in published research.

One gendered difference in presentation of neurodiversity is the occurrence of 'masking' behaviours, which are more commonly seen in girls than boys[35]. These behaviours, where people with neurodiverse conditions, particularly autism, mimic the socially expected behaviours in order to fit in with their peers and conform to the expectations of those around them, thought to be due to social pressure to fit in. This has been found to require a large amount of energy and emotional input, and is associated with increased anxiety, and can delay diagnosis of autism in girls[36] or result in diagnosis of anxiety and depression. The impact on violence or behavioural issues is not known.

Both autism and ADHD are thought to be under-recognised in girls[37] and this, along with masking, means that that is more likely that girls will have unmet needs with regard to their neurodiversity. This means that they may not receive additional support at school or in other settings, which might lead to any 'inappropriate' behaviour being seen as an act of misbehaviour or aggression and receiving a different response than if their neurodiversity was diagnosed and supported.

Self-medication and unhealthy coping mechanisms

There have been studies specifically into the connection between ADHD and drug abuse and alcoholism in adults[38], and some evidence shows that children with ADHD are more likely to start abusing alcohol in their teenage years. The relationship is thought to be a mix of increased impulsivity

[34] Chaplin, T. M., & Aldao, A. (2013). Gender differences in emotion expression in children: A meta-analytic review. Psychological Bulletin, 139(4), 735–765. Link.
[35] Davis, T. L. (1995). Gender differences in masking negative emotions: Ability or motivation? Developmental Psychology, 31(4), 660–667. Link.
[36] Cage, E., Troxell-Whitman, Z. (2019). Understanding the reasons, contexts and costs of camouflaging for autistic adults. Journal of Autism and Developmental Disorders, 49, 1899–1911. Link.
[37] Hamblin, E. (2016). Gender and children and young people's emotional and mental health: manifestations and responses. Link.
[38] Wilens, T. (2006). Attention Deficit Hyperactivity Disorder and Substance Use Disorders. The American Journal of Psychiatry. 163(12). Link.

and risk taking behaviour[39] and also self-medication to 'deal with' ADHD symptoms[38]. Substance use and early use of alcohol. drugs and tobacco are a recognised risk factor for youth violence[40].

ADHD and violence

There is an emerging body of evidence that cites links between ADHD and violence, including as a risk factor for domestic violence[41]. Studies have found that children who experienced violence as victims or witnesses scored higher numbers of indicators for ADHD (on a screening test to identify potential ADHD in lieu of a formal diagnosis) than their peers, particularly for those who had been both victims and witnesses[42]. However, the causation and mechanisms that underpin this relationship are not well understood. There is also a link between ADHD and indicators of psychopathy, but again how this comes about is not yet established in research.

3.3 Risks factors and demographics

Research from Public Health England[43] found that children with learning disabilities, including neurodiversity, were:

- more likely to be living in low income households and to be exposed to recurrent poverty
- at increased risk of exposure to violence including bullying, physical, sexual, emotional abuse, or neglect
- more likely to be exposed to inconsistent parenting and more chaotic family environments
- more likely to be exposed to a greater number and wider range of potentially adverse life events.

These factors are associated with risk of violence and also with poorer health behaviours and outcomes including (but not limited to) substance use, which again is a risk factor for violence.

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[39] Urcelay G.P., Dalley J.W. (2011) Linking ADHD, Impulsivity, and Drug Abuse: A Neuropsychological Perspective. In: Stanford C., Tannock R. (eds) Behavioral Neuroscience of Attention Deficit Hyperactivity Disorder and Its Treatment. Current Topics in Behavioral Neurosciences, vol 9. Link.
[40] Youth violence (who.int)
[41] Wymbs *et al* (2015). ADHD Symptoms as Risk Factors for Intimate Partner Violence Perpetration and Victimization. Journal of Interpersonal Violence. 32 (5) pp 659-681. Link.
[42] Lewis, T. *et al*. (2015). The association between youth violence exposure and attention-deficit/hyperactivity disorder (ADHD) symptoms in a sample of fifth graders. *American Journal of Orthopsychiatry*, *85*(5), 504–513. Link.
[43] Public Health England (2015). The determinants of health inequities experienced by children with learning disabilities. Link.

There is also thought to be a link between the socio-economic status of households and resilience or vulnerability to the effects of exposure to these risks[43]. However, there is little research on resilience in neurodiverse young people specifically. However, due to an increased chance of poor executive functioning (mental skills that include working memory, flexible thinking, and self-control), self-regulation and problem solving, it is likely that they will have less resilience than their neurotypical peers when faced with adversity. Thus, both the household socio-economic status and the behavioural and social functioning limitations of some neurodiversity can both put young people at increased risk of violence. Socio-economic status is also described as one of several wider determinants of neurodevelopmental disability[44].

Where children and young people have additional needs, for example due to neurodiversity, it is where these needs are unmet that they are at particular risk of poor outcomes, particularly poor educational attendance, and attainment. These are in turn risk factors for violence, crime, and CCE, particularly where behavioural or attainment challenges have led to school exclusions[45] [46].

In summary, the risk factors for neurodiversity, crime and violence are complex and interlinked. They include direct risks from features of some neurodiverse conditions (eg impulsivity, lack of social context, wanting to fit in etc), as well as indirectly for example through increased risk of school exclusions or substance abuse, which in turn increase the risk of violence and crime. Family situation is known to be a risk or protective factor for crime and violence, and socio-economic factors can be a risk or protective factor for both neurodiversity and violence.

3.4 Identification and diagnosis of neurodiversity

There is a relatively limited level of research and statistical analysis on neurodiverse conditions, particularly research that looks at multiple diagnoses[47], despite the narrative that comorbidity of conditions within neurodiversity is common. The research highlights that it is estimated that more than half a million people in England have autism, equivalent to more than 1% of the population and notes that there has been a 25-fold increase in the diagnosis of autism in the last 30 years[47].

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[44] Sørensen, HT.,Sabroe, S., Olson, J., Rothman, KJ., Gillman, MW., Fischer, P. (1997) Birth weight and cognitive function in young adult life: historical cohort study. BMJ;315: 401–403
[45] Just for Kids Law (2020) Excluded, exploited, forgotten: Childhood criminal exploitation and school exclusions. Link.
[46] Children's Commissioner (2021) Still Not Safe: the public health response to youth violence. Link.
[47] Parkin, E, *et al* (2019). Autism: overview of UK policy and services. House of Commons Library briefing paper no. 7172. Link.

One of the main challenges highlighted by the research in this area is the inconsistency of diagnosis, late diagnosis, and misdiagnosis. Some of the resources also highlight that it is not unusual for people who are diagnosed with autism to be diagnosed with a mental health condition such as depression or anxiety, but data evidencing this is limited[48]. It is also reported that misdiagnosis and late diagnosis disproportionately affect women and girls, with historic narratives that autism and ADHD in particularly are "male" conditions that are not expected or looked for in females[49] [50].

There are particular challenges with missed or misdiagnosis depending on severity of symptoms, and the development of masking and coping mechanisms to account for the differences in this population. Where an individual is managing their daily life, a diagnosis is likely to be missed, despite the potentially profound impacts that their neurodiversity may be having on that daily life. There is also known cases of self-medication including through caffeine, alcohol, and illegal drugs[51]. As neurodiversity is about spectrum disorders, it is difficult to have a binary threshold of criteria for a diagnosis, and where differences or deficits in ability can be "worked around" by an individual, they are likely to be missed in formal diagnosis, even when that person is presenting to primary care with issues that may be misdiagnosed as anxiety and depression.

Delays in diagnosis, misdiagnosis and missed diagnosis can all cause further issues for young people. Firstly, stress and anxiety for the young person and their family, but also delayed or missed access to vital support[52]. The presence or absence of a neurodiverse condition is often a key access or barrier to support for both the young person and their family[53], which can be essential for minimising any negative impacts of their condition on their outcomes. The reasons for delays in diagnosis can be complex, but missed or delayed diagnoses can be problematic[54]. There is also a known issue that many people in the prison population can be identified as neurodivergent, but often without having received a formal diagnosis (see section 4.3), suggesting that undiagnosed neurodiversity may have a link to violence and crime.

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[48] National Autistic Society (2021). Good practice guide for professionals delivering talking therapies for autistic adults and children. Link.
[49] Zener, D. (2019). Journey to diagnosis for women with autism. Advances in Autism, 5 (1), pp 2-13. Link.
[50] Quinn and Madhoo (2014). A Review of Attention-Deficit/Hyperactivity Disorder in Women and Girls: Uncovering This Hidden Diagnosis. Link.
[51] Johnson *et al* (2020). Misdiagnosis and missed diagnosis of adult attention-deficit hyperactivity disorder. BJPsych Advances, 27 (1), pp. 60-61. Link.
[52] Elder, JH *et al* (2017). Clinical impact of early diagnosis of autism on the prognosis and parent-child relationships. Journal of Psychology Research and Behaviour Management, 10, 283-292. Link.
[53] Crane, L. *et al.* (2015). Experiences of autism diagnosis: A survey of over 1000 parents in the United Kingdom. Autism, 20(2) 153-162. Link.
[54] Huang, Y. *et al.* (2021). Factors associated with age at autism diagnosis in a community sample of Australian adults. Autism Research 14 (12), 267-2687. Link.

3.5 Access to services

Much of the literature on neurodiversity calls for an improvement in research and statistical analysis on the number of people with neurodiverse conditions in order to better understand how they access and engage with services[48]. This is essential to ensure that provision is sufficient to support everyone who needs assistance. Likewise, there is a strong demand for services to be designed and delivered in a way that includes and is tailored to the specific needs of people with neurodivergent conditions[48] [55] which currently they are not designed for.

Technological advances in particular are important for being able to improve access to services and support people in education and work whose specific conditions present challenges for accessing services that are designed for neurotypical people[56]. The concept of neurodiversity is underpinned that all people, including neurotypical people, will benefit from schools and workplaces that are accessible to, and supportive and inclusive of neurodiversity[57].

3.6 Special educational needs and school exclusions

School exclusions are specifically linked to vulnerability to CCE, and neurodiverse young people are overrepresented in data on school exclusions[58]. National statistics on school exclusions for 2019/20[59] show that:

- The permanent exclusion rate for pupils with an education, health, and care (EHC) plan is 0.10%, and for pupils with SEN with no EHC plan (SEN support) is 0.20%, compared to 0.04% for those without SEN.
- Within West Yorkshire a similar trend is seen in suspension rates. Pupils with SEN and no EHC plan experience more suspensions than those with an EHC plan or without SEN
- The suspension rate is also higher: 11.70% for EHC pupils and 10.98% for SEN support pupils, compared to 2.43% for those without SEN.

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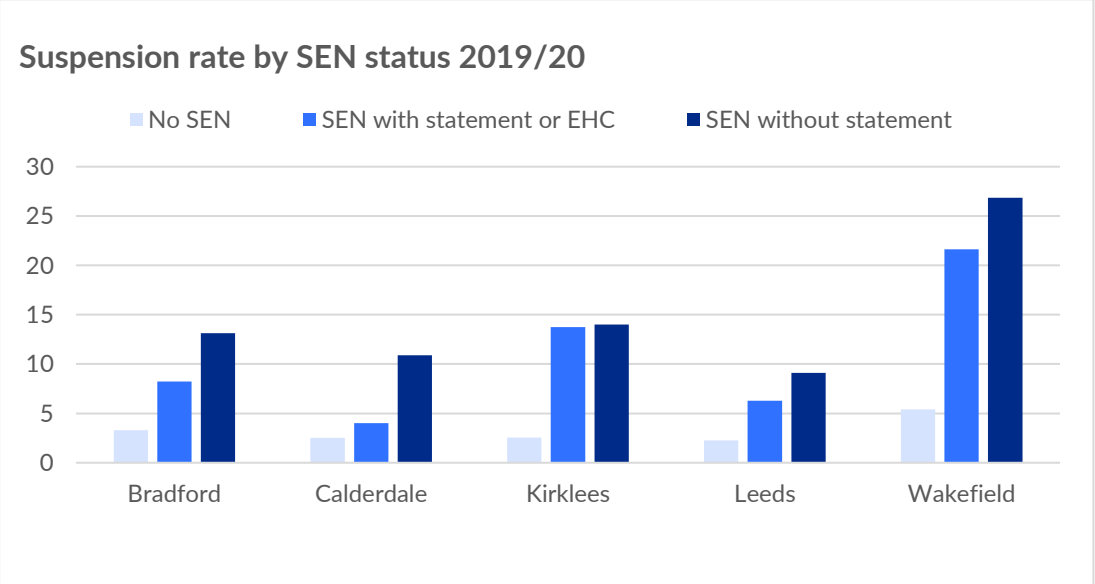
[55] HM Government (2021). The national strategy for autistic children, young people, and adults: 2021-2026. Link.
[56] Carroll, J. *et al.* (2020). Current understanding, support systems and technology-led interventions for specific learning difficulties: evidence reviews. Government Office for Science. Link.
[57] Institute of Leadership and Management (ILM) (2020). Workplace neurodiversity: the power of difference - part 1: lived experiences of neurodivergents. Link.
[58] Graham *et al* (2019). School exclusion: a literature review on the continued disproportionate exclusion of certain children. Department for Education. Link.
[59] Department for Education (2021). Permanent exclusions and suspensions in England: Academic Year 2019/20. Link.

- The highest rates are amongst those with a primary type of need recorded as social, emotional, and mental health, at 0.61% for exclusions and 33.04% for suspensions/fixed-period exclusions.
- This is in line with previous years.

Figure 1 Suspension rate by SEN status



Source: Department for Education, Permanent exclusions, and suspensions in England

Therefore, meeting the additional needs of neurodiverse young people to allow them to stay in school is a key protective mechanism for the prevention of violence.

West Yorkshire Context

Analysis of data for schools in West Yorkshire is set out in this section and shows the variability in SEN levels, exclusion, and suspension rates by local authority area and also by the type of school. Note that the figures for SEN is the overall total for pupils with an EHCP and pupils with SEN support.

Almost 60,000 (15.5% of all school pupils) of school pupils in West Yorkshire have SEN (see Figure 2). With the exception of Autistic Spectrum Disorder (5,398 pupils [1.4% of all pupils]), the primary types of special educational needs used by the Department for Education do not clearly match with neurodiversity conditions, so it is difficult to determine overall prevalence of neurodiversity amongst young people solely from SEN levels.

Exclusion rates (see Figure 3) for pupils with SEN were five times higher than for pupils without SEN (0.16% as opposed to 0.03%). Exclusion rates across West Yorkshire are slightly lower than the England average for both pupils with SEN (0.16% as opposed to 0.18%) and pupils without SEN (0.03% as opposed to 0.04%). Wakefield and Kirklees have notably higher exclusion rates than Leeds, particularly for pupils with SEN (Wakefield - 0.37% and Kirklees - 0.28% as opposed to no excluded pupils with SEN in Leeds in 2019-20)

Suspension rates (see Figure 4) for pupils with SEN (12.9%) were over four times as high as suspension rates for pupils without SEN (3.0%) in 2019-20 across West Yorkshire. Both these figures are slightly higher than the overall England rates (with SEN – 11.2%; without SEN – 2.4%). Wakefield has particularly high rates of suspensions for both pupils with SEN (25.8%) and pupils without SEN (5.4%), with both figures being more than double the England-wide rates.

Almost 60,000 (15.5%) of school pupils in West Yorkshire have SEN; 5,400 (1.4%) pupils have Autism as their primary need

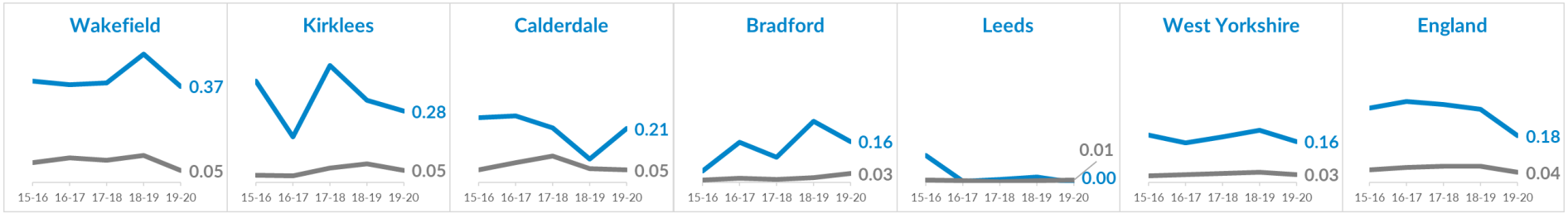
Figure 2: SEN rates by primary type of need and by local authority – 2020-21 Academic Year

			Figures for individual Local Authorities									
Primary type of need	**West Yorkshire**		Bradford		Calderdale		Kirklees		Leeds		Wakefield	
Speech, Language and Communications needs	**14,469**	**3.7%**	3,903	3.9%	951	2.6%	2,185	3.2%	5,592	4.4%	1,838	3.4%
Moderate Learning Difficulty	**13,165**	**3.4%**	3,875	3.9%	1,545	4.2%	2,223	3.3%	4,054	3.2%	1,468	2.7%
Social, Emotional and Mental Health	**11,317**	**2.9%**	3,211	3.2%	984	2.7%	1,972	2.9%	3,534	2.8%	1,616	3.0%
Specific Learning Difficulty	**5,434**	**1.4%**	1,189	1.2%	834	2.3%	878	1.3%	2,068	1.6%	465	0.9%
Autistic Spectrum Disorder	**5,398**	**1.4%**	1,562	1.6%	460	1.2%	503	0.7%	1,672	1.3%	1,201	2.2%
Other Difficulty/Disability	**1,946**	**0.5%**	439	0.4%	213	0.6%	367	0.5%	623	0.5%	304	0.6%
Physical Disability	**1,896**	**0.5%**	675	0.7%	186	0.5%	266	0.4%	424	0.3%	345	0.6%
SEN support but no specialist assessment of type o	**1,857**	**0.5%**	200	0.2%	121	0.3%	678	1.0%	315	0.2%	543	1.0%
Severe Learning Difficulty	**1,516**	**0.4%**	437	0.4%	210	0.6%	205	0.3%	405	0.3%	259	0.5%
Hearing Impairment	**1,443**	**0.4%**	427	0.4%	108	0.3%	214	0.3%	478	0.4%	216	0.4%
Visual Impairment	**800**	**0.2%**	244	0.2%	86	0.2%	145	0.2%	202	0.2%	123	0.2%
Profound & Multiple Learning Difficulty	**640**	**0.2%**	224	0.2%	58	0.2%	159	0.2%	136	0.1%	63	0.1%
Multi- Sensory Impairment	**112**	**0.0%**	27	0.0%	10	0.0%	34	0.1%	29	0.0%	12	0.0%
Total SEN	**59,993**	**15.5%**	**16,413**	**16.3%**	**5,766**	**15.7%**	**9,829**	**14.6%**	**19,532**	**15.3%**	**8,453**	**15.6%**
No SEN	**326,482**		84,076		31,038		57,539		108,164		45,665	
Total - all school pupils	**386,475**		100,489		36,804		67,368		127,696		54,118	

Source: Department for Education (2021). Special educational needs in England: Academic Year 2020/21. Link.

Pupils with SEN have much higher rates of school exclusion and suspension

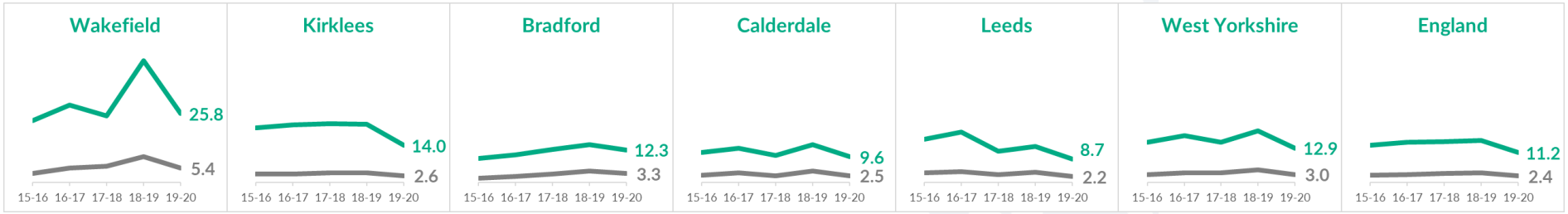
Figure 3: SEN exclusion rates for five years 2015-16 to 2019—20 compared to exclusion rates for pupils without SEN by West Yorkshire local authority



Exclusion rates for pupils with SEN (% for 2019-20 highlighted in chart)

Exclusion rates for pupils without SEN (% for 2019-20 highlighted in chart

Figure 4: SEN suspension rates for five years 2015-16 to 2019—20 compared to suspension rates for pupils without SEN by West Yorkshire local authority



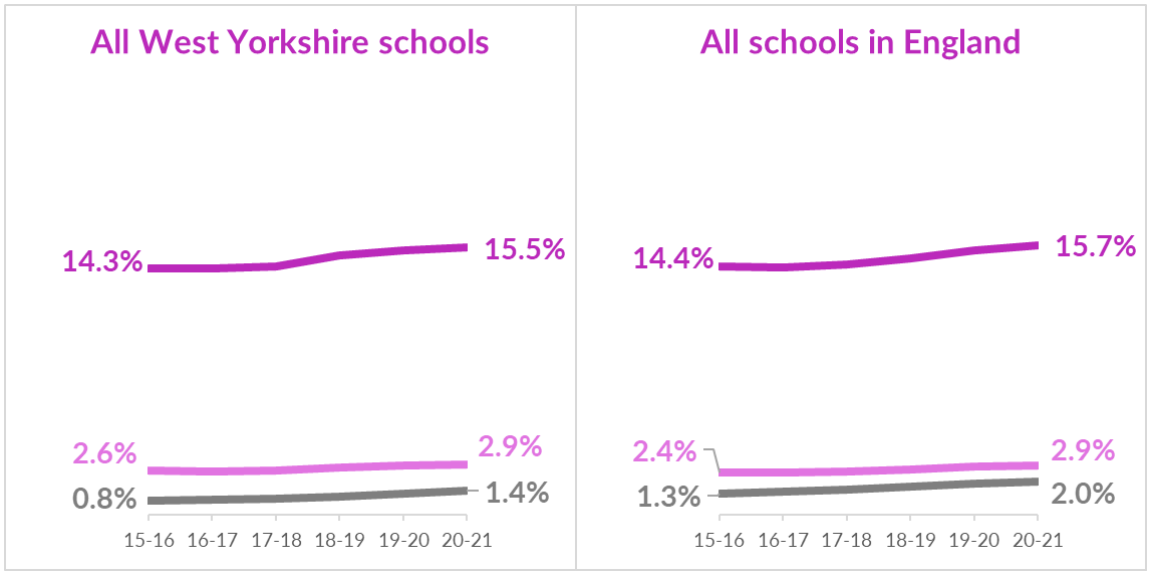
Suspension rates for pupils with SEN (% for 2019-20 highlighted in chart)

Suspension rates for pupils without SEN (% for 2019-20 highlighted in chart

Source: Department for Education (2021). Permanent exclusions and suspensions in England: Academic Year 2019/20. Link.

The proportion of pupils with SEN is increasing

Figure 5: Proportion of pupils with SEN by year 2015-16 to 2020-21



Source: Department for Education (2021). Special Educational Needs in England: Academic Year 2020/21. Link.

The number / proportion of pupils with SEN in West Yorkshire increased from 53,190 (14.3%) to 59,993 (15.5%) between 2015-16 and 2020-21. There has been a large increase in pupils with ASD as their primary SEN need from 3,039 (0.8% of all pupils) in 2015-16 to 5,398 (1.4%) in 2020-21. There has also been an increase in the number of pupils with Social, Emotional and Mental Health (SEMH) as their primary SEN need from 9,519 (2.6%) in 2015-16 to 11,317 (2.9%) in 2020-21.

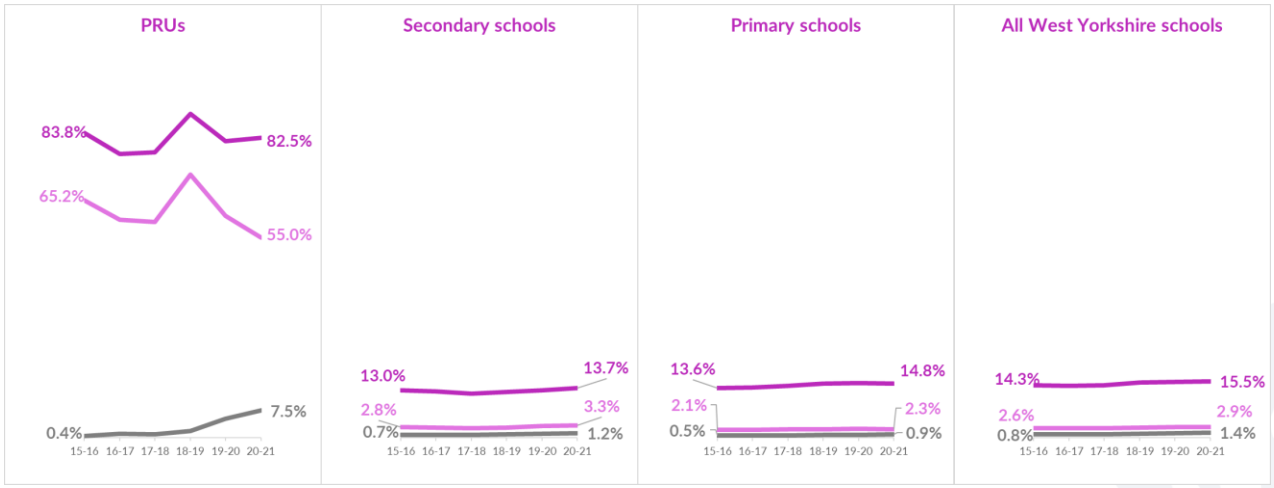
When looking at different types of setting school setting (Figure 6), **there are markedly higher rates of pupils with SEN at Pupil Referral Units (PRUs) than other school settings.** 343 out of 416 pupils (82.5%) had SEN and 229 of these (55.0% of all pupils) had SEMH as their primary need. Numbers of pupils with ASD as their primary SEN need have increased steeply from 0.4% (2 out of 463 pupils) in 2015-16 to 7.5% (31 out of 416 pupils) in 2020-21.

Similarly, **levels of school suspensions are much higher at PRUs than other school settings** (Figure 7), with 615 suspensions from 528 pupils (116%) in 2019-20 – in other words, pupils at PRUs were suspended on average at least once in the 2019-20 year. This compares to 17,501 suspensions out of 384,548 pupils (4.55%) in all schools in West Yorkshire.

One report on patterns and trends of school exclusions and their impact on a young person's vulnerability to serious violent crime in West Yorkshire[60] noted *'a strong relationship between serious violent offending and attending an AP [Alternative Provision] / PRUs/ Special Units.'*

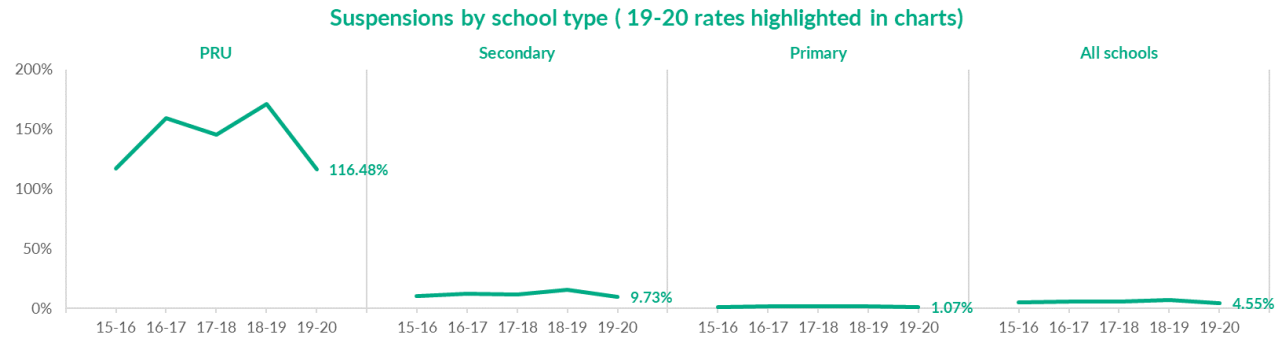
There is a much higher proportion of pupils with SEN at PRUs, as well as much higher levels of school suspensions at PRUs

Figure 6: Proportion of pupils with SEN by year 2015-16 to 2020-21 and type of school



Source: Department for Education (2021). Special Educational Needs in England: Academic Year 2020/21. Link.

Figure 7: Levels of suspensions by year 2015-16 to 2019-20 and type of school



Source: Department for Education (2021). Permanent exclusions and suspensions in England: Academic Year 2019/20. Link.

[60] p53, Lumley and Rahman (2021). Education Inclusion. Crest Advisory in partnership with West Yorkshire VRU. Link.

3.7 Safeguarding

There is limited information on the effectiveness of safeguarding services for children with neurodevelopmental conditions, and concerns have been raised about the responses, and lack of understanding, by professionals to violence and abuse in relation to disabled children[61].
The statutory requirement for safeguarding includes details on meeting the particular needs of children who have special educational needs (whether or not they have a statutory Education, Health, and Care Plan), and those with disabilities and specific additional needs[62]. These additional provisions are likely to include many neurodiverse young people, particularly where that is recognised and diagnosed. Where neurodiversity is undiagnosed, this additional need may not be recognised.

While additional guidance exists[63] on the practice of safeguarding children and young people with disabilities, the context of neurodiversity is not covered in any detail within this guidance. This guidance has also not been updated to align with the 2018 safeguarding guidance[64]. There are, however, additional needs for safeguarding children with neurodiversity. For example, the indicators of abuse can appear to be the same and some indicators of autism, meaning that abuse may be harder to detect in some neurodivergent young people[65].

There is no clear guidance available on the particular challenges for safeguarding any other type of neurodiversity.

[61] Department of Health and Social Care (2013). Chief Medical Officer annual report 2012: children and young people's health. Chapter 9: Children with neurodevelopmental disabilities. Link.
[62] HM Government (2018). Working Together to Safeguard Children. Link.
[63] Department for children, schools and families (2009). Safeguarding Disabled Children. Link.
[64] HM Government (2018). Working Together to Safeguard Children. Link.
[65] National Autistic Society (2019). Safeguarding young people on the autism spectrum. Link.

4. Understanding who is at risk – identification and diagnosis

4.1 Introduction

Outside of the SEN data described in section 3.6, prevalence information in relation to neurodiversity at both national and local authority level is lacking.

The Council for Disabled Children note that completion of the Community Services Dataset is low and explicitly exclude it from their own datasets in relation to SEN.

We are however aware of the requirement for local authorities to maintain a register of disabled children. This is not publicly available, and we have not been able to include it in this research however, if the VRU are able to access this, there is potential for a greater understanding of need across the combined authorities.

4.2 Challenges when examining prevalence of neurodiverse young people

Under diagnosis

Reporting and data on the prevalence of neurodiverse young people is hindered by shortfalls in diagnoses. Children may miss a diagnosis due to a lack of parental engagement with health and educational services or due to being excluded from school, while children from lower socio-economic groups are more likely to get a diagnosis of social, emotional, and mental health (SEMH) needs rather than a diagnosis of autism or speech, language or communicated challenges[66]. Further research into this area found that children of mothers with higher education status were twice as likely to be diagnosed with autism than children of mothers with lower levels of education[67]. Researchers concluded this data supports the argument there is inequality in service provision across the UK, highlighting the possibility of problems accessing autism diagnosis services and a lack of engagement with healthcare services and access to information regarding autism.

[66] Her Majesty's Inspectorate of Probation, Neurodiversity – a whole-child approach for youth justice, 2021, Link
[67] https://eprints.whiterose.ac.uk/150808/1/Kelly_B_Autism_and_SES_Autism_Journal_2017_1_.pdf

Lack of consistent reporting

Reporting of neurodiversity is inconsistent across public services, which makes understanding the true picture difficult. Some data sources simply do not include information on the prevalence of neurodiverse conditions. For example, the children's commissioner's local authority vulnerability profiles, which includes information on a range of indicators, does not provide data on the prevalence of any neurodiverse condition or neurodiversity more widely[68]. This problem persists at an international level. One international meta-analysis of the prevalence of sexual violence against people with disabilities concluded there is not enough research to interpret the risk between autism and sexual violence, suggesting a barrier to reporting could be due to an inability to express the trauma they have experienced relative to others[69].

Some research studies group neurodiverse conditions with learning disabilities when examining prevalence of violence or looks solely at adults, further hindering a more thorough examination of the experiences of violence and prevalence of neurodiverse young people. One report, which found that 73% of individuals with a learning disability or autism had experienced hate crime, concluded that separate disability hate statistics for learning disabilities, autism, and other disabilities would improve the lives of those who live with one[70]. The report concluded separate disability statistics would allow police to distinguish between different learning disabilities or neurodiverse conditions which allows for the identification of patterns in crime which can then be addressed.

There can also be a lack of understanding that neurodiverse young people are victims (e.g. as in 'mate crime'), but also regular occurrences of things like bullying mean that it can become a norm in their lives. This can lead to a lack of reporting either from past experiences of that making little difference to their experience or simply because they have become used to living in fear of violence or abuse[71]. It can also be limited by lack of trust in the police or other services, which is thought to sometimes be an issue[72].

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[68] Children's Commissioner, Local vulnerability profiles, 2020, Link
[69] Amborski, A, *et al*, Sexual Violence Against Persons with Disabilities: A Meta-Analysis, 2021, Link
[70] Dimensions, I'm with Sam, 2016, Link
[71] NSPCC (2022). Criminal Exploitation and Gangs. Link.
[72] Simmonds *et al* (2018). A life without Fear? A Call for Collective Action against Learning Disability Hate Crime. Link.

Co-occurrence

One challenge when examining prevalence is co-occurrence – the simultaneous presence of two or more conditions. For example, around 40% of autistic people have a learning disability which could include difficulties such as adapting behaviour, interacting with others, or controlling behaviour[73]. Co-occurrence, alongside the lack of reliable, consistent, or systematic data collection, is cited as a reason why it is not currently known for sure what proportion of individuals have a neurodiverse condition.

In 2012 it was reported by the Chief Medical Officer that 3-4% of all children in England were neurodiverse, making this group of young people the largest group of disabled children.[74]. In 2016 HMP/YOI Feltham report a local population of 4.6% of autistic people and it is noted by Liaison and Diversion services that a disproportionately high number of people with a learning disability, autism or both are identified in police custody[75].

The Public Health Learning Disabilities Observatory highlighted in 2015 that there is no definitive record of people with learning disabilities in England and this is still true with no available datasets to accurately estimate prevalence at a local level outside of those previously reported in relation to the education system.

4.3 Neurodiversity in the criminal justice system

This problem persists within the criminal justice system (CJS), however estimates put the figure of neurodiverse individuals within the CJS at around 50%. While neurodivergent individuals are more likely to be victims than perpetrators of crime, there are some issues with their treatment by the CJS, often through lack of awareness or lack of understanding about their condition or behaviour[76].

Studies on neurodiversity in prison populations have associated ADHD in particular with prison populations. One study that conducted a meta-analysis of ADHD prevalence in the prison population showed that it was five times more common in the youth prison population, and 10 times more common in the adult prison population (compared to prevalence in the general population)[77].

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[73] Autistica, Learning disability and autism, Link
[74] https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2012-our-children-deserve-better-prevention-pays
[75] Learning-disability-and-autism.pdf (england.nhs.uk)
[76] Railey, KS. *et al.* (2021). A scoping review of autism spectrum disorder and the criminal justice system. Review Journal of Autism and Developmental Disorders, 8, 118-144. Link.
[77] Young, S *et al*. (2015). A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. Journal of Psychological Medicine. 45 (2), 247-258. Link.

Prisoners reporting symptoms of ADHD had high levels of impairment associated with them, which may suggest a link between ADHD and offending behaviour[78]. Persisting symptoms of ADHD in offenders is also associated with offending behaviour starting at a young age, and also with a higher rate of recidivism than other prisoners[79]. A study also links the hyperactivity and impulsivity features of ADHD with offending behaviour and criminal involvement[80]. Impulsivity and poor skills in emotional regulation may therefore increase the risk of young people with ADHD becoming involved in crime and the CJS.

4.4 Summary

- There is limited specific data available on the prevalence of neurodiverse conditions in the population
- Where data sets exist, they are not always consistent, and may not be publicly available
- Diagnosis of neurodiversity varies, with delays, misdiagnosis and missed diagnoses
- There is also no consistent way of reporting neurodiversity statistics.
- In addition, people can have multiple diagnoses of co-occurring types of neurodiversity, which makes the data more complex
- There is thought to be high levels of people with neurodiversity in the CJS, but these are often undiagnosed.

[78] Farooq *et al*, (2016). Prevalence of adult ADHD in an all-female prison unit. Journal of ADHD - Attention Deficit and Hyperactivity Disorders, 8 (2). Link.
[79] Young, S and Thome, J (2011). ADHD and offenders. World Journal of Biological Psychiatry 12 (1), 124-128. Link.
[80] Babinski, L *et al*. (1999). Childhood Conduct Problems, Hyperactivity -impulsivity, and Inattention as Predictors of Adult Criminal Activity. Journal of Child Psychology and Psychiatry. 40(3). Link.

5. The experience of neurodiverse young people

5.1 Introduction

As part of the consultation exercise we consulted with 4 neurodiverse young people. We found it difficult to identify and engage with neurodiverse young people who were willing to take part in our consultation (discussed in section 2.2). A summary of the findings from the young people is included in this section. In addition, we intend to continue to approach organisations to identify young people who may be willing to speak to us, to further understand their perspectives.

5.2 Experiences of violence as a victim

When asked about their experiences of violence as a victim, neurodiverse young people said that:

- Bullying was an issue
- Poor interventions from schools (addressing the immediate physical safety of the victim but not tackling the behaviour of the perpetrators) was also an area of concern.
- They lashed out physically and verbally to gain attention and support

5.3 Interactions with authorities

When asked about their interactions with 'the authorities' neurodiverse young people said that:

- Airport security – along with police, airport security are trained to do threat assessments based on behaviour deemed to be 'normal' but this might lead to someone with autism being seen as a threat if they do not act in a typical way.
- Airport security can be a lot to deal with and cause sensory overload. An autistic person can predict this and have systems for coping. But an unexpected police interaction would not come with the same opportunities to prepare or have coping mechanisms in place.
- Police acting in an aggressive manner when dealing with neurodiverse individuals can cause the situation to escalate quickly.
- Several had poor interactions with support workers, saying the support was sub-par.

5.4 Support and intervention: what could be done differently

When asked what could be done differently, neurodiverse young people suggested that:

- Quiet spaces would be helpful
- Support for families after a diagnosis of a neurodiverse condition is just as important as support for the individual
- Better awareness amongst neurotypical individuals of the experiences of sensory overload, likely responses and how to manage these situations would prevent escalation in scenarios where sensory overload was occurring. “In Year 7 you learn about sex but not ADHD”.
- Every teacher within schools is neurodiverse trained so that young people could choose who they form a bond with, rather than having only one or two neurodiverse-informed staff (which is often the case), who they may not ‘click’ with.
- Information on their condition and coping strategies is made available to all teachers so teachers are aware if they need to adopt these during class and not ask them to stop, which can escalate situations and lead to longer periods disengaged from class.
- There is increased support with transitions and suggested the use of social stories to help with the move from primary school to secondary school.

5.5 Summary

- Research with young people was limited due to accessibility of suitable interviewees
- Experiences of violence are often through bullying, though some young people have experience of perpetrating violence through lashing out to gain attention for a specific need
- There is a concern that figures in authority (such as police or airport security staff) are not trained in responding to someone with a neurodivergent condition, which could provoke misunderstanding
- Aggression from figures in authority (eg police) towards a neurodiverse person can escalate a situation very quickly
- Not all support from specific neurodiversity support workers is as good as it could be
- Training and awareness, support like quiet spaces, and information on coping strategies for people who work with or may encounter neurodiverse young people would help to improve the situation for young people.

6. Professional and expert perspectives

6.1 Introduction

In order to expand on the information that was found through published literature, Rocket Science also conduced primary research with a experts and practitioners working in neurodiversity. Details of the research tools used are included in Appendix 1 – Research tools.

In total we spoke to 11 experts and practitioners who work with neurodiverse young people. These include:

- Youth justice workers
- Speech and language therapists
- Individuals who coordinate community groups for neurodiverse young people
- Charity staff who provide services and support to neurodiverse young people.

The aim of this consultation was to build on evidence review findings and address research gaps.

6.2 Experiences of violence as a victim

Restraint

Several practitioners equated the restrictions used to address challenging behaviour in neurodiverse young people with acts of violence. One gave an example of one young autistic man she worked with who was permanently in a wheelchair and used an iPad to communicate. While at school a teacher felt he was not paying attention so removed his iPad and put the brakes on his wheelchair. The practitioner said this was equivalent to cutting someone's legs and tongue off and described it as an extreme act of violence.

Another example given was that of a young person who was injured and, in the accident, and emergency department of a local hospital. The hospital's environment unsettled the individual and he was unable to be still, which resulted in a number of security guards tackling him. The practitioner felt this behaviour towards someone already injured should be seen as an act of violence. One practitioner felt restrictive behaviour such as the examples above are seen as acceptable as they prevent situations escalating, but said this restraint is "*by and large quite a violent thing*".

Bullying and exploitation

The Vulnerability Experience Quotient research (detailed in section 3.1) found 87% of autistic adults reported being bullied as a child by another child, and multiple practitioners agreed bullying is widespread amongst neurodiverse young people. Practitioners described the behaviours of neurodiverse young people, which can include formal ways of speaking, squeezing things, or following others around, open them up to bullying from neurotypical children for being 'odd' or 'irritating'.

In other cases the gullibility of neurodiverse young people can lead to bullying, as neurotypical children can ask them questions or ask them to do certain things knowing they will take it literally, in order to raise a laugh. Practitioners mentioned this bullying can lead the victim to retaliate violently against the bully, or to depression and violence towards themselves.

Experts and practitioner agreed with evidence review findings that more malicious behaviour is carried out in the form of criminal exploitation, and that the vulnerabilities of neurodiverse young people can put them at risk of sexual exploitation and county lines activity.

> *"It's this element of a sense of belonging and the protection of a group which leads them into it,"*

> *"Lack of understanding [of what they are getting into] is an element, but less of one."*

Practitioners had also seen experiences of cuckooing, whereby the home of a vulnerable individual is used as a base for criminal activity. Examples of cuckooing witnessed by practitioners include one member whose own grandfather used their house for storing stolen goods, and another who believed he was in a relationship with a woman, but she had taken up to £15,000 from him. Practitioners noted these instances can be hard for the police to act on without a formal complaint, which often does not come as the individual does not want to lose the friendship or companionship provided by the 'cuckoo'.

Self-harm and thoughts of suicide

Several practitioners noted traumatic experiences growing up, such as experiences of bullying or exploitation, can lead to low self-esteem and depression. Practitioners said many of the young people they work with had attempted self-harm or idealised suicide. One gave the example of a young autistic man who had been flagged by the police for buying a blank firing gun, and then attacked police officers a few weeks later as they tried to arrent him. Psychiatric reports found he bought the

gun so he could get himself into a situation where he could be killed. *"He intended to try and have death by cop,"* the practitioner said.

Summary of experiences of violence as a victim

Neurodiverse young people may experience violence in various ways, particularly though:

- Restraint, especially when done by people who do not understand the needs of the neurodiverse person
- Bullying and exploitation, whether in school settings or outside of school. This includes criminal exploitation and 'cuckooing' and can lead to criminal charges against the neurodiverse person if their vulnerability is not understood and they are not correctly identified as a victim of exploitation.
- Self-harm and suicidal ideation are also noted by practitioners, due to depression in neurodiverse young people. This in turn could be caused or exacerbated by experiencing bullying or other trauma.

6.3 Experiences of violence as a perpetrator

Violence against parents or family members

Several practitioners noted the most common perpetration of violence amongst neurodiverse young people is that against family members. "*When people think about violence they think of street violence, but the biggest violence is that towards their parents*," one practitioner said. Practitioners felt this violence has reasons behind it: a lack of ability to self-regulate, that young people feel more comfortable around parents so are more likely to show emotion, and that neurodiverse young people have difficulties expressing themselves verbally. "*Even if you can speak, if you struggle with communication the one thing that works is actually thumping someone*," one practitioner said.

One practitioner said parent violence results from struggling to contain anxiety and frustration at school, but then lash out with their parents.

"They feel they will get in trouble at school [if they lash out], but that their parents might understand. It's not just actual physical violence but also shouting saying they hate them and a lot of self-harm. It causes a lot of emotional hurt to the parents.".

Another practitioner said that an 'awful lot' of families experience this violence from neurodiverse children and turn to sedative medication in an attempt to prevent it.

Weapons and fighting

Practitioners noted several types of instances where a neurodiverse young person may end up in possession of a weapon or fighting. Wakefield Youth Justice Service reported a significant increase in knife-related instances in the past two years. The service originally thought this was related to desire for self-protection but said it was actually down to younger neurodiverse individuals not understanding the consequences of having a knife. One practitioner said,

> "*It's all about kudos and showing off. One young boy brought one into to school because he thought it looked cool… he didn't realise it could lead to this* [a criminal charge]".

In another instance a neurodiverse individual carried a knife with him to unpick his weed grinder and was caught and charged with possession of a bladed article. *"It looks like a knife crime issue, but it's actually a lack of understanding potential risk*", the practitioner said.

In another scenario a neurodiverse young man approached a younger group at night during lockdown and asked them to go home due to lockdown rules. A member of the group threatened to stab the individual, resulting him going home and returning with an air pistol, threatening them to move on. Bradford police were alerted and sent a squad of armed officers to deal with the situation. "*There's perhaps been an increase in those sorts of incidents [during lockdown] because there's a frustration that some people are breaking the rules, and no one is stopping them,"* a practitioner reported.

Several practitioners said neurodiverse young people resort to lashing out or acting violently as they can have difficulty communicating, with one practitioner reporting 60-70% of those in prison have speech or language difficulties. Multiple practitioners reported instances relating to this occurring in schools, where a teacher or teaching assistant gets too close to a student or touches a pupil who does not like physical touch, resulting in the pupil lashing out as they do not know how to explain themselves.

Sexual offences

Wakefield Youth Justice Service reported that one of their most prolific offenders, who has a neurodiverse condition, had committed sexual harm against another young person and said these cases often involve neurodiverse young people. *"We've had young people in the past on the autistic*

spectrum who don't understand consent," the practitioner explained. They also said the lack of understanding consent can lead to neurodiverse young people becoming victims of abuse without realising, meaning perpetrators sometime target those who are neurodiverse.

Radicalisation and misunderstanding social context

One autism practitioner who was interviewed in this research mentioned that there is an overrepresentation of people with autism being 'flagged' to the government's Prevent scheme that aims to identify risks of radicalisation[81]. His expert view was that this can be from a perspective that autistic adults, who may be more isolated, find social belonging in online groups, including those who are promoting terror-related information -without the individual really understanding or 'buying into' the ideology, or also a 'special interest' for someone with autism could focus on something that results in them being flagged. For example an interest in how explosives work, which is likely to be completely unrelated to the desire to use this knowledge, let alone for a particular ideology. There is however very little research into this emerging area of knowledge, and so no conclusions can be drawn from this without more information.

Summary of experiences of violence as a perpetrator

While people with neurodiversity are more likely to be victims than perpetrators of violence, there are key ways in which they can become involved in perpetration.

Violence against parents, carers, and other family members was a common theme discussed by practitioners. This was often through a young person trying to communicate a need, expressing frustration, or some other form of lashing out due to not having the emotional regulation and communication skills necessary to respond differently in that moment. There were also noted examples of young people carrying knives, either to try and impress their peers or for innocuous purposes, but without fully understanding the consequences of their actions.

There is some concern that neurodiverse young people may become involved in committing sexual offences, due to having less understanding of social norms and consent, though this also can create a risk of them becoming victims.

Apparent radicalisation is potentially also a risk factor, as young people with neurodiversity may be drawn into inappropriate content, particularly online, without actually becoming radicalised, but they can draw the attention of the authorities.

[81] The Guardian (2021). 'Staggeringly high' number of autistic people on UK Prevent scheme. Link.

6.4 Causes of violence

Not understanding social situations

Practitioners reported one of the key factors behind experiences of violence was misunderstanding social situations. Those interviewed said there are a range social complexities that neurodiverse individuals struggle with, including body language and facial expressions, as well as taking things literally. "[Understanding social scenarios] *is not a skill that comes naturally, and neurodiversity can affect the development of that skill,"* one practitioner concluded, and said that lack of skill can lead to misunderstandings, dominating conversations, interrupting, or appearing boastful. This in turn can lead to offence being taken or aggression.

One practitioner who works with women said many of the neurodiverse women she works with are often victims of abuse from their partners as they do not pick up communication clues.

> *"This is not meant as victim blaming, but they might be having an argument and her partner is getting madder and madder, but she doesn't pick this up, and doesn't escape the situation or calm things down."*

Practitioners felt this lack of understanding can result in experiences of criminal exploitation detailed above, with neurodiverse individuals unable to see that their 'so-called friends' are taking advantage. On the other hand, a lack of social understanding can also lead to further trouble when being questioned by police. "They are inept at sticking up for themselves, they can't explain their actions," one practitioner said. "If you question someone with autism why they've done something, they rarely can give a real explanation." This behaviour can make neurodiverse young people appear guilty when they are not.

Being 'different'

One reason neurodiverse young people become targets for bullying is down to their quirks. "We've always been accepting that adults can be different – you can be quirky and off and it's okay to collect sea glass stones – but we find it odd when children want to collect bus timetables," one practitioner said.

One example given is that of a neurodiverse individual who enjoyed drawing plumbing systems, and while other neurodiverse children at the playscheme he attended enjoyed his drawings, those at school teased him for it. In another situation a group of neurodiverse young people described as difficult or troublesome went on a trip together and rather than being violent, as they could be around neurotypical children, they were instead animated and able to discuss their niche interests.

"*There's no such thing as being street-wise when with like-minded souls*," one practitioner said. "*The problems arise when they're with people that don't understand their interests*."

Desire for friendship

Many neurodiverse young people have smaller friendship groups due to a lack of social understanding and being perceived as different. Practitioners reported that in a quest for friendship, neurodiverse young people then become vulnerable to exploitation.

"[Neurodiverse young people] *want friends but don't know how to get them, and they don't know the consequences of certain physical or social behaviour. They can be manipulated into doing something wrong, they don't realise what they are doing is wrong*," one practitioner said. In other cases practitioners said the individual might know what they are doing is wrong, but their desire for friendship and connection trumps that awareness.

One practitioner said exploitation can occur at an early age from not understanding what a friend is. In early years groups children may be asked what a friend is but are not able to explain it or cannot differentiate between a friend and someone seen on the street. "*They have no insight into their part of the relationship*," they explained.

Mental health

A further factor potentially leading to violent experience is mental health, with practitioners reporting a prevalence of low level mental health issues amongst the neurodiverse population. Practitioners said co-occurring anxiety is particularly prevalent and could be specific to social situations or broader issues such as homelessness, debt, and finance. Additionally, susceptibility and sensitivity to triggering environmental factors was also noted as cause of anxiety.

Practitioners reported increases in mental health issues, depression and occurrences of self-harm following the onset of COVID-19 resulting from the loss of routine. Routine is an important factor influencing mental health amongst neurodiverse young people, with practitioners highlighting school transitions as particularly pivotal.

"All children are scared when they start school, but if they start well, they will likely be happy. But if it starts off wrong then you're setting someone up for trouble, and bear in mind transitions are terribly hard for kids who like routine."

Transitions are perceived as particularly difficult due to leaving behind structure, simpler and clearer lines of reporting, known environments, and known support structures. Practitioners report the primary to secondary school and school to work transitions are particularly difficult because of this, and the former is especially difficult for neurodiverse girls.

"Girls are more socially competent and are able to adapt to difficulties and hide or mask them, but once they get into the secondary school environment there's no hiding them anymore."

Avoiding the emotional turmoil related with transitions can lead some neurodiverse offenders to re-offend according to some practitioners. The clear routine and orderliness required in prison cells make the prison environment are desirable one for some neurodiverse individuals, although the practitioner also suggested that prison can be an extremely traumatic experience for an equal number of individuals.

It was suggested that the mental health issues experienced by neurodiverse individuals can sometime be ignored, because, for example, "*people just say it's the autism*."

There was also recognition of a gender split, with practitioners reporting more anxiety in women autism. *"Trying to fit in has an emotional toll, it comes with an emotional cost and mental health impact,"* one practitioner said.

Frustration and irritation

Another factor behind mental health issues amongst neurodiverse young people is frustration or irritation at not being understood clearly or not understanding their own feelings, and practitioners said these feelings can also lead to violence.

One practitioner who worked as a psychotherapist reported that every violent outburst they witnessed was a breakdown of wellbeing and coping. Practitioners said neurodiverse individuals often want to be seen as more than the quiet individual everyone sees them as and get frustrated when this is not the case. "*They also don't understand their own emotions, so the easiest thing is to lash out at the people who are close to them. They are frustrated, and don't understand the world around them*," one practitioner said.

Frustration and irritation at not being able to communicate oneself is another key factor. A practitioner at Wakefield Youth Justice Service reported that around three-quarters of those in the system had either moderate or severe speech and language issues. Practitioners felt these issues

could be driven by a multitude of external factors alongside their condition, including missing lots of school, not being read to as children, or not owning books.

"A lot of those I work with come from deprived backgrounds and have less interest and experience of literacy. They don't experience things beyond their immediate environment so their language is much more restricted and their imagination can be limited."

Lack of training and awareness in adults

Many practitioners felt that the struggles of neurodiverse young people are exacerbated by poor awareness amongst adults on how to deal with them. Several of those interviewed gave examples of young people adopting a coping mechanism within a school environment, such as using ear defenders or wearing a safety glove but having these removed by teachers. These instances resulted in children becoming agitated and sometimes violent.

One practitioner felt the coping mechanisms employed by these students is at odds with the uniformity required in schools:

"Schools should talk about difference as a positive, but then you all have to wear your uniform in a particular way. They might do a lesson on accepting differences, but in practice what they actually do is the opposite of that."

According to practitioners, neurodiverse young people can be labelled as troublesome if a teacher does not understand or act on their sensory requirements, and this can lead to the child building a bad reputation which travels with them to other classes or schools.

"Teachers can then become tense around a child, which can then make them do something which is a bigger issue. The reputation is a disaster because it affects how people deal with them,"

A lack of a neurodiversity-informed approach in schools was deemed as a factor in causing violence more widely. Two key points raised by practitioners was a lack of special educational needs (SEN) workers in school and the oppressive environment in alternative provision (AP).

"Our AP is shocking… they are what you imagine they were like 30 years ago. It's about being locked in a building with no understanding of individual need."

This environment was perceived as particularly bad for those with neurodiverse conditions who require specific sensory support.

Practitioners felt the lack of training was not confined to just teachers, but also to parents who often do not have the training to tackle certain behaviours. They described it can be difficult to step back and give a child space when they appear distressed in particular, but this space and processing time is often required for neurodiverse individuals. *"The most important thing is to stop talking and back off…. Stop asking what the matter in,"* one practitioner said. She gave the example of a child who had been making fire-engine noises for 48 hours, and only stopped once the father had given him some space.

Drugs/ substance misuse

Practitioners reported that drug and alcohol use can make individuals more prone to be victims or perpetrators, and this a problem within the neurodiverse community because some individuals are self-medicating. Several practitioners said neurodiverse young people use cannabis to self-regulate behaviour or deal with anxiety or high levels of rumination. One youth justice lead reported,

"As a society, as a local authority and as a service we are accepting drug and alcohol use as a given. We aren't addressing cannabis use as a factor that leads to offending as significantly as we should, and as it's become more socially acceptable is has impacted our approach,"

The use of cannabis is potentially being driven by a lack of access to other suitable medication. One practitioner reported that melatonin is a suitable medication for some neurodiverse young people, but it is rarely prescribed.

Practitioners said neurodiverse individuals use alcohol as well as cannabis as a coping mechanism.

"One of our members had an alcohol misuse problem, and said the reason they drink is that when they do, they're not themselves."

Diagnosis

Practitioners said that a core element in a number of factors leading to violence is a lack of early diagnosis which in-turn prevents the implementation of early intervention strategies. Likewise a lack of support after diagnosis was also described as potentially devastating. One practitioner explained,

"If they are on the waiting list [for diagnosis] for three years frustration and anger can reach boiling point. We used to say there's an awful lot you can do without a label, things we can put in place, but everyone feels that having a label will make people understand them better,"

Splits can also occur within families when one parent wants a diagnosis and another does not or does not recognise any neurodiverse traits within their child. "*The tension can lead to families splitting up. It should never reach that, they should have more support along the way*," one practitioner said.

Trauma and adverse childhood experiences (ACEs)

Practitioners reported a high extent of emotional and physical trauma amongst neurodiverse young people which could as factors in experiencing violence. One practitioner gave the example of neurodiverse women being restrained, which can trigger traumatic memories of sexual abuse. The combination of trauma and the condition can lead to violent outbursts against those trying to restrain them.

Several practitioners also highlighted the prevalence of serious head injuries amongst neurodiverse individuals, and how those injuries can influence later behaviour.

Using violence as a coping mechanism

One expert described people with autism behaving in a violent way to get put in isolation (to get access to a quiet space) or to be restrained (which felt comforting). Identifying and understanding these behaviours enabled the expert to work with the people concerned to develop better coping mechanisms, based on their own needs. This required well trained practitioners taking a trauma-informed approach, plus time to communicate and understand the needs of the people. The result was access to a quite space when feeling overwhelmed and access to a weighted blanket rather than restraint.

Summary of causes of violence

A common theme across the causes of violence is a lack of awareness of how to work with and support neurodiverse young people. Better understanding of the coping strategies neurodiverse young people employ can ensure those working with them, such as teachers, do not escalate situation, as would greater awareness of the frustration and irritation neurodiverse young people can feel. Likewise better support for young people is also crucial, and providing tools to help them evaluate social situations, make friends, and tackle mental health issues could prevent them entering situations which result in violent outcomes.

6.5 Training provision

Many of the practitioners interviewed had been involved in delivering training to other people or organisations about how to work with and support neurodiversity in their own work situations. One reflected that being able to outsource screening and assessment of neurodiversity to a specialist organisation freed capacity and allowed that service to bring their expertise to doing assessment for neurodiversity.

A lot of the training delivered on neurodiversity is around awareness: how to recognise and respond to neurodiversity when it presents in various situations from the workplace to interactions with police officers.

"We spend time training managers and employers. Things we might do – express through body language."

There was also an acknowledgement that while many people were interested to learn about neurodiversity, what could make it more relatable was personal experience of neurodiversity within a cohort of trainees.

"One of the things we've hugely benefited from when we've delivered training to organisations. Is one of the people will share an experience of an autistic family member. That's hugely beneficial because it sparks something with the other trainees. To have that experience usually makes people think about things."

Practitioners also emphasised that a one-off training course was not sufficient to understand the range and variety of experiences of neurodiverse people.

"What we always say when delivering training, is that this isn't a self-contained unit. Carry on, watch more, read more, talk more. That's essential."

This reflected a wider understanding that the level of awareness and training on neurodiversity are generally not sufficient across wider services and support.

"As a generalisation I would say no [there's not enough training] – I don't think people are trained and aware."

"Most staff have done basic neurodiversity training awareness, we know awareness and type of behaviours, but training doesn't go far enough how to behave with these young people. […] If we're doing consequences of offending – how do we know a young person with neurodiversity has understood if this happens this is the result. We're giving them information; we're providing that in a way they can't understand."

Challenges in accessing training ranged from struggling to find training courses, to finding budget and time in order to do training.

"There is training. It's a challenge that it's a field of continuing research. Knowledge is increasing year on year. Not a case that what was taught 10 years ago is adequate today. GPs need to update and renew knowledge. There are good resources out there. Time is a challenge, getting time to attend [training courses] is a challenge."

"[Training is] difficult to find. People are cutting back on what they offer. We have to find budget to pay for any element. […] It can be difficult to find someone who is qualified."

Summary of training provision

Training around how to recognise and support people with neurodiversity does exist but it is not standardised. Practitioners who work with neurodiverse young people generally have good training in supporting them. However, staff that work with a range of young people (eg teachers) may not have this, or may only have done a limited amount of awareness training. People working in public-facing roles, eg police officers, sometimes also have specific training on responding to neurodiversity but this is not widespread.

6.6 Best practice

When discussing best practice for working with neurodiverse people, practitioners offered a range of knowledge from their own experiences and shaped by their own job roles.

Ways of working

One key way of working that was identified is through providing time and space for neurodiverse young people to process their surroundings and to make decisions. This is key both for making a neurodivergent individual feel comfortable, but also in order to prevent violence. However, they also identified that in many situations there is not the time or to do this.

"If someone doesn't want to move, you don't try and move them, you sit next to them and listen to them and their body language. Schools, police stations, A&E – they don't have time [to provide process time]. Biggest thing is to say stop talking, sit and be quiet, and allow them time to process the situation and what is being said. However able or not able, they need this process time. You need to stop doing something – give them time to process. They lash out because they're trying to work out what to do."

Other ways of working identified included working across whole-school approaches in school settings (so all school staff understand their neurodiverse students), as well as better information sharing between systems or stages within a system

"It has to be an institutional approach – from cook, playground, caretaker. Otherwise it doesn't work."

"The information [about their neurodiversity or other issues] should travel with them. We used to provide a prisoner card for older prisoners – some sort of passport card [detailing specific information about them and their communication needs]."

Another practitioner identified that working in a trauma-informed way could help to promote better support for neurodiverse young people, as well as any other young people with experience of difficult situations who may need additional support or different ways of working.

"[We've] got to have child-first and trauma informed approach. 70-75% have experienced trauma. If we're not considering that alongside neurodiversity, we need to tackle that. We need a trauma informed service."

Another key way of working cited by multiple practitioners was that it is best to design and deliver support services assuming people are neurodiverse, and that way it is inclusive to everyone including neurotypical people.

"Go for the approach that everyone is neurodiverse so it's inclusive."

"You have to treat everyone who enters the CJS as neurodiverse unless there's evidence otherwise."

Wider support systems

Support needs to be not just for the neurodiverse person but also others around them, for example parents.

"You actually need someone who you can phone. Informal parent groups, someone they can talk to always immediately, that's defused a lot of situations. They need to be able to talk to someone they understand. [They] can't think that person at end of phone will judge or take child away."

"We have to get whole family approach. In CJS, in early intervention, we need whole family approach. Neurodiversity sits across families, if the parent hasn't been supported in their neurodiverse issues, how can they support neurodiversity [in their child]."

Communication skills

There was agreement between practitioners that there weas a need for specific communication skills for both neurotypical and neurodiverse people, to maximise effective communication and understanding.

"[It] alleviates some of that frustration or annoyance that have expressed, because they're not understanding the way people are."

"I think some is knowledge and some is skills development., De-escalation in heightened state, techniques to de-escalate that is kind of a skill. Knowing how to do that while keeping [everyone] safe."

"You have to have that open mindedness, to be able to have that flexibility of approach. Sometimes council services may not have that flexibility."

"The programmes need to be less around the behaviours, and more about resilience, coping, and wellbeing. We know that from the interventions."

"We invest heavily in parents understanding challenging behaviour – anything from serious violence to repeating themselves over and over again. Managing challenging behaviour – get a handle on that, give them strategies and recommendations. We do non-violent resistance – how to talk to someone, which is difficult to do in heightened state when you're being lashed out at and hit, it's difficult to do."

"[We need] a youth centre – because school led interventions don't often work. But at youth centres where the ambience is different. If for example you have one youth centre for an area, it can be fed in and supported by multiple schools. Then through the youth centre you work with young people to work with them on their resilience, and coping skills."

Youth centres and promotion of social activities around key interests may also help address issues like young people being drawn into inappropriate content online (identified as a risk factor for people potentially accessing radicalisation or terrorist information online), as it will support different interests.

Neurodiversity in the CJS

Several of the practitioners interviewed specialised in working with young offenders and people in the CJS with neurodiversity. There was a good awareness of the higher prevalence of neurodiversity in this population, and therefore some specific ways of working that were recommended in this context. One practitioner in particular identified that "you have to treat everyone who enters the CJS as neurodiverse unless evidence otherwise" due to the high prevalence particularly of people without a formal diagnosis of a neurodiverse condition. It was also recommended that as with schools, each prison should have a SENDCO due to the high prevalence of special educational needs and the impact of these on the behaviour and outcomes for prisoners.

"I think the key thing is early assessment and identification of need."

The lack of diagnosis is reported as a big issue in the CJS, where when screened, a large proportion of prisoners often can be diagnosed with neurodiverse conditions but very few of them come with a formal diagnosis, or if they have this, they have not disclosed it at any point of contact with the CJS.

"[They] don't want to open up to any more vulnerabilities when already in a stressful situation."

"They long to fit in and belong and not be different. They don't ever self-disclose, to police or courts."

Practitioners also identified how a lack of diagnosis in early life could lead to ongoing problems that escalate and that earlier interventions could have helped that person much earlier.

"They haven't been picked up in mainstream school, the teachers think they're just playing up and being naughty. Even basic things like telling the time. They don't understand the concept of time, or they don't understand what time is. If all that was addressed at a younger age, and they'd had support they would be a different place now."

Including neurodiverse people

Finally, several practitioners were keen to emphasise that the voice of neurodiverse individuals was included in the design and delivery of services.

"We need to ask young people more: 'what works for you? What should it look like?'".

"Centring the voices of people with autism in the service design. Ensuring that police officers, people in the courts, there shouldn't be any shame or concern felt if they out themselves as autistic. It's not LGBTQ+ people in premiership football! More normalising of people talking about it, and there is a benefit of people being able to relate to autistic people more if they are their friends, colleagues, family members, etc."

"From the work we did with the police, there's the NPAA [National Police Autism Association], and there's about 3500 serving police officers who have an autism diagnosis. It's been good to work with responding services and looking at the numbers of autistic individuals in those services, for them to feed in on provisional and how to provide services for autistic individuals."

Practitioners generally agreed that by including neurodiverse people in the design and delivery of systems then they would be better able to support the people who need them. However, this was not the only advantage: they also felt that reducing stigma and increasing awareness would help to promote a wider understanding of neurodiversity, and also by making a personal connection then neurotypical people would be able to relate more to the experiences of neurodivergent people if they had a personal connection to them. This approach was felt to break down barriers between "us" and "them" that could cause issues in communication with neurodiverse people.

Summary of best practice

While a range of key points and ways of working were discussed by practitioners depending in their own experiences, there were several commonalities. Awareness of neurodiversity and how to deal with it needed to be embedded across schools, services, and any other key touchpoints for young people.

- The support should include the whole family, should be trauma informed, and should always be designed to include neurodiversity even when it is a "mainstream" activity
- Support specifically for neurodiverse people should offer settings outside of schools, and deliver skills training on emotional regulation and resilience

- There then needs to be specific and specialised support for young offenders and all touchpoints with the CJS as neurodiversity is prominent in these settings and can have a big impact on how a person navigates and understands the system
- Throughout all of this, the neurodiverse voice needs to be included
- Services and support should be designed for and with neurodiverse individuals to understand their needs.

6.7 Supporting and accessing interventions

Supporting and accessing interventions to support neurodiverse young people can present particular challenges, from lack of funding and provision of services to challenges accessing them due to their neurodiversity, practical considerations like limited transport, and also a variable experience depending on how much they have someone advocating for them

Lack of money

Practitioners identified that the lack of funding was a key barrier to delivering both services and training.

"Short-term funding streams don't lead to longer term programmes."

"It's very difficult to break that cycle. If there were more resources for schools to support young people and help them to get motivated to get out of the situation, they're in."

"Austerity: Local authorities have had to cut to the bone."

"VRU funding is short term, we had 2 year funding stream from VRU for communicate programme, we had SALT assessments but not resources to address SALT findings."

They also noted that where they were able to provide training courses, the target audience were often unable to contribute time or funding to access these.

"We asked schools to come in watch training using two way mirrors, but they wouldn't release someone [from their job] to watch, there's not enough money."

Location barriers

For young people accessing services and support, location can be a particular challenge.

"Neurodiverse friendship groups are aimed at more able young people because there's no transport [so they need to be able to travel independently]. It's very 'postcode lottery-ish'. It's really difficult for teens. All the boys want a girlfriend, but women get put off because guys want to hit on them."

"I think some of it comes down to what education setting you're in. There are some fantastic academies that put funding into neurodiversity support, and then some that don't. I think that can be inconsistent and therefore not fair."

"I think we have to take learning from COVID: we can offer more if we can offer it virtually. Young people can engage better from a tech perspective than others, but then it doesn't work for some, so we have to keep some face-to-face delivery open."

Mental health

Many of the practitioners identified an overlap between mental health and neurodiversity and that this combination could present a particular challenge to a neurodivergent individual.

"A lot of parents say 'I can't get him out the house'. Their anxiety means they won't go. So the most important thing is to have family support or social worker who can liaise between groups and families so they can form a bridge and create a connection and go to session once or twice. Show them it's okay."

The link with mental health not only means that a neurodivergent person may have more difficulty accessing services due to anxiety, but also that their neurodiversity can affect them accessing mental health support too.

"It can be challenging for autistic individual to get access to mental health services because they may not present with depression in a neurotypical way, and they may struggle to be understood within that system."

Parental influence

The impact of parents can also affect the extent to which a young person can access support and services. Even past young childhood, someone with neurodiversity may still be more reliant on parental support than their peers. Some parents are particularly good at navigating the system and will push for support from schools and other services for their child. However, not all parents have

the skills, knowledge, or time to do this and so the support a young person can get may be very dependent on the strength of parental advocacy.

"I think that would very much depend on the parents' ability. Some kids who've had autistic features, maybe not diagnosed, some of the parents are very keen to support them, and that depends on the type of parents they are."

Summary of supporting and accessing interventions

Provision of support often lacks funding and can be a 'postcode lottery' of availability. Barriers to accessing support include physical limitations such as transport, but also can be due to anxiety, or the presence or absence of someone to support and advocate for the young person. For many young people, the presence or absence of a parent or carer who is able to advocate for them will determine whether they are able to get sufficient support or not.

6.8 Summary

- Practitioners highlighted several ways young neurodiverse individuals experience violence as victims. This includes the restraint tactics used to deal with challenging behaviour, but also through malicious activity such as bullying and exploitation. Importantly practitioners also reported on high levels of self-harm and idealisations of suicide.
- Several practitioners agreed that violence against parents is the most common way neurodiverse young people perpetrate violence, and that this is driven by build-ups in emotions which young people only feel comfortable exposing in front of their family. Other forms of violence result from a lack of understanding various social structures. Possession of weapons is driven by a lack of understanding consequences, while sexual offending could be driven by not understanding consent in some cases.
- The main causes of violence are two-fold. The first is a lack of support in tackling issues such as mental health, loneliness, and desire for friendship. The second is a lack of awareness about how to deal with neurodiverse conditions and behaviours, which can in-turn escalate situations.
- Training provision is generally thought to be limited, with most practitioners stating that there should be more awareness of neurodiversity in the wider community. Time and funding are key barriers to people accessing training provision.

- Best practice may be slightly different in different settings, but commonalities included working in a neurodiversity friendly way in all activities, working in a trauma-informed way, and offering whole family support. Awareness of neurodiversity is essential for neurotypical people. Activities with neurodiverse people should focus on emotional regulation and coping skills.
- Supporting and accessing interventions can be affected by provision or existence of support, which is often lacking funding and can be a 'postcode lottery' depending on what is available. Barriers can include physical limitations such as transport, but also can be due to anxiety, or the presence or absence of someone to support and advocate for the young person.

7. Interventions and good practice in preventing neurodiverse young people entering the criminal justice system

7.1 Introduction

This section of the report aims to address the research questions listed below, based predominantly on published literature.

Research questions

- What evidence-based interventions are available to prevent young people with neurodiversity entering the criminal justice system?
- What lessons can be learned from interventions which aim to prevent young people entering the criminal justice system which can be applied to the development of interventions which to prevent neurodiverse young people entering the criminal justice system?
    - What support is needed for the organisations delivering these interventions?
    - What interventions are currently in place in West Yorkshire and beyond?
    - How effective are these?
    - Does accessibility of interventions vary in any way?
- What is best practice for preventing young people with neurodiversity entering the criminal system?

7.2 Challenging behaviour

The term 'challenging behaviour' is used to describe acts of aggression or self-injury, stigmatised behaviour, or other culturally abnormal behaviour that places the physical safety of the person or others in serious jeopardy, or seriously limits the use of or access to community facilities. For parents or carers of children aged under 12 with a learning disability and emerging challenging behaviour, NICE recommends the following[82]:

[82] NICE, Challenging behaviour and learning disabilities: prevention and interventions for people with learning disabilities whose behaviour challenges, 2015, Link

- Accessible parent-training programmes delivered in groups up to 15 parents or carers delivered across eight to twelve sessions, lasting 90 minutes, which focus on developing communication and social functioning.
- Pre-school classroom-based interventions for children aged 3-5 focusing on curriculum design and development, social and communication skill training, behavioural strategy training for parents or carers, and training for pre-school teachers on mediating intervention.

NICE recommends the following interventions for older groups of young people:

- Personalised interventions with clear targeted behaviours and outcomes which assess environmental factors and address staff and family members' responses to challenging behaviour.
- Individual psychological interventions based on cognitive-behavioural principles delivered individually or in groups over 15 to 20 hours.
- Developing and maintaining a structured plan of daytime activity that reflects the person's interests and capacity.

However, there is currently no insight into the application and effectiveness of these guidelines.

7.3 Parental training programmes

Parental training programmes are typically delivered to parents of early-years children following a diagnosis of neurodiversity, however some are also aimed at supporting parents of neurodiverse children who are older. Courses are delivered by private companies or charities, and in some cases by local NHS bodies. This section includes some programmes that are no neurodiversity-specific, but which have been effective at delivering outcomes related to the reduction of challenging behaviour.

Autism UK

Autism UK, a national charity, provides support and education programmes for parents of children with autism. The charity offers three different programmes depending on a child's age. The EarlyBird programme is for parents of those aged under five, the EarlyBird Plus for parents of those aged 4-9, and the Teen Life programme for parents of children aged 10-16. Programmes focus on how children experience autism in different life stages and building confidence in parents to facilitate their child's communication skills, overcome challenges, and dealing with topics such as puberty, education, and independence.

Triple P

The Triple P (Positive Parenting Programme) model is a multilevel intervention made up of five levels (Level 1 to Level 5) with gradually increasing levels of intensity. The Level 4 programme is for parents of children with severe behavioural difficulties and aims to improve parenting, and subsequently child behaviour, across an eight-week programme focused on practicing parenting strategies and observing videos and other parents. The course is delivered in one-to-one sessions for parents, delivered by a practitioner employed by Triple P, a private company.

An independent evaluation of the Triple P Level 4 course delivered to parents of nursery-age children by nursery staff in the UK found that its sessions were well received by both parents and nursey staff and that both groups reported improvements in child behaviour, although nursey staff reported slightly smaller improvements than parents[83]. 83% of parents reported positive changes in their child's behaviour, as did 40% of nursery staff. The nursery staff's openness and honesty was seen as a crucial condition of delivery. One concern is that recruitment of parents and their attendance at sessions was lower than planned, with an average attendance of 4.8 of eight workshops. The Early Intervention foundation reports the programme prevents crime, violence, and antisocial behaviour.

CANParent

The CANParent programme, while not neurodiversity specific, is a parenting programme aimed at improving parents' confidence which then impacts on their children's behaviours. The CANparent trial was a two-stage trial which sought to evaluate a universal offer of high quality, stigma-free parenting classes for those with children aged 0-6. The trial took place in Middlesbrough, Derbyshire and London and aimed to support and enhance parenting skills, stimulate a commercial market, and prevent the need for further intervention.

The classes delivered during the CANparent trial significantly improved parents' satisfaction with being a parent, their confidence in being a parent, their mental wellbeing, and their life satisfaction[84]. Parents involved reported changes in their own behaviour, leading to positive impacts on their children.

CANparent delivery providers were given vouchers with a nominal value of £100 for each parent who enrolled during Stage 1, however providers were critical of the value, and the vouchers alone were not sufficient in awareness-raising. When the use of vouchers was removed in Stage 2, the

[83] Education Endowment Fund, Level 4 Group Triple P: Positive Parenting Programme, 2021, Link
[84] University of Warwick, CANparent Trial Evaluation: Phase 2: Final Report, 2016, Link

supply side shrank from 12 providers to 6, and parent enrolments fell from nearly 3,000 to 164. As such the evaluation concluded the vouchers were important to the development of a 'new market', and a carefully planned change-over to a non-voucher system is critical to success.

The Incredible Years

The Incredible Years series of programmes is a set of parenting programmes targeting key development stages: 0-2 ½, 3-5, and 6-12 years old. These programmes are delivered in group settings using media to encourage group discussion, problem-solving, and sharing of ideas and support networks amongst parent or teachers. The long-term aim of the programme is to prevent conduct problems, delinquency, violence, and drug abuse.

Parents are offered several programmes. The Basic programme develops parenting skills to promote social competence, emotional regulation, and academic skills to reduce behavioural issues. The Advance programme focuses on interpersonal skills such as communication, anger, and depression management, and how to teach problem solving. Other programmes include those focused on school readiness and supporting education.

The Incredible Years programmes have been evaluated numerous times since the 1980's and are found to improve parent-child interactions and decrease child noncompliance, deviance, and externalising behaviours, as well as ADHD symptoms[85]. These results have been maintained for three years after intervention, while a 10 year follow up found 77% of children with early onset conduct problems who were treated by the programme had no major delinquent acts and 82% had no criminal justice system involvement.

The Incredible Years programme was delivered in Manchester by the local NHS Children and Parents Service under the name Parent Survival Course (PSC). The course was not aimed solely at parents of neurodiverse children, however it proved effective at delivering results. Of parents who started the course, 65% reported problem behaviour in their child. This dropped significantly to below the clinical range by the end of the course and was maintained after the course ended[86].

[85] Webster-Stratton, C, The Incredible Years, 2011, Link
[86] Children and Parents Service Manchester, CAPS Annual Report, 2010, Link

7.4 Positive behavioural support

Positive behaviour support is a person-centred approach which aims to develop an understanding of challenging behaviour based on an assessment of an individual's environment and then provide a support system which enhances quality of life outcomes. It is deemed an ethical method for tackling challenging behaviour as it is person-centred, involves all stakeholders, is carried out for the benefit of the individual, does not use punishment, and is transparent and honest[87].

Bristol Positive Behavioural Support Service (PBSS)

PBSS is a service commissioned and funded by the local authority and commissioning group in Bristol which supports children and young people with learning disabilities who present challenging behaviour. Young people who are at risk of home or school breakdown are referred to a Complex Needs Meeting made up of education, social care, school, and NHS representatives, who can refer these children onto BPSS.

Once referred to PBSS children and their family are met with and observed to identify their needs and functions, and a bespoke intervention programme is then designed to build and extend skills and reduce challenging behaviour. BPSS aim to deliver support in the classroom alongside peers, and also provide training to staff and family members.

Over five years PBSS have supported 12 children to learn new skills, ten of which have remained permanently in their local school[88]. Staff noted that the process takes time, and while little progress amongst the children was made within six months, significant progress was made within 18 months. Support staff also noted that positive behavioural support is most successful when applied consistently across the home and school environment, and that staff need to be skilled in PBS approaches to ensure success.

Ealing Intensive Therapeutic Short Break Service (ITSBS)

The ITSBS is a programme using a Positive Behaviour Support approach and provides individualised interventions to children at immediate risk of being placed in residential care. The services provided include:

- Short breaks
- Intensive clinical psychology interventions

[87] NHS England, The seven key questions about Positive Behaviour Support, 2016, Link
[88] The Challenging Behaviour Foundation, Paving the Way, 2021, Link

- Ongoing family support and psychological therapy for the young person and their family
- A behavioural management plan
- Professional training for those in the young person's network

Almost all the children ITSBS has worked with have remained in the community despite being facing imminent residential placement, and their behaviour has improved significantly[88]. Parents' ability to cope with their children also improved, thus improving the quality of life for the young person and their family.

The Cumbria Early Intervention Project (CEIP)

The Cumbria Early Intervention Project (CEIP) pilot ran over 2018-2019 and aimed to support children with autistic spectrum disorder or learning disabilities who displayed challenging behaviour. The multi-agency approach comprised of four main strands, which were:

- Early Positive Approaches to Support: A series of workshops were delivered by various practitioners to those with children aged 0-5, with each course comprised of eight two and a half hour sessions
- Positive Behaviour Support: A series of workshops delivered to carers and professionals focused on school-aged children, delivered jointly by carers and professionals. These sought to develop the understanding and practice around PBS
- Resilience workshops. These half-day workshops focused on family carer's mental and physical well-being through the use of mindfulness and reflective practice
- Co-produced strategy development. Family carers reviewed Cumbria-wide survey data and other literature to co-design and develop recommendations to improve early intervention and support services for children with ASD or learning disabilities whose behaviours challenge.

The evaluation of the CEIP found parents appreciated the programme as not 'yet another parenting programme', but something in which their opinion felt valued[89]. However, it was also found that family carers must be reimbursed for their time and paid for their input as they could not afford to provide lots of time for free. Being paid for their time also enhanced their sense of being taken seriously.

The workshops were well received by parents, and the programmes were highlighted as complimenting each other and meeting previously unmet needs. Family carers were engaged with the programme and said it differed from those poorly put together, mainly as they felt recognised as

[89] Graham, B, The Cumbria Early Intervention Project: Independent Evaluation, 2020, Link

important or valuable. The evaluation concluded that the model, if co-produced and rolled out widely, met SEND shortcomings found by Ofsted and CQC.

7.5 Community interventions

Active Support

Active Support is a theory of support which aims to actively engage people with learning disabilities with their lives, focusing on person-centred action. It seeks to promote an individual's independence. While not specifically aimed at reducing challenging behaviour, Active Support can work to do so by promoting engagement with meaningful things and develop interesting lives and good social relationships[90]. The aim is to 'work with' an individual, rather than 'care for' them.

A meta-analysis of Active Support found it reduces challenging behaviour when complimenting behavioural support strategies[91]. However, implementation of successful Active Support is difficult, with one UK study finding only 53% of those receiving Active Support were experiencing it at 'good quality'[91]. Analysis of effective Active Support was found to require:

- Training to ensure staff know how to tailor Active Support to each service user
- Good quality Active Support for those with lower levels of adaptive behaviour
- Full coverage of Active Support training for those involved in the individual's care
- Strong front-line practice leadership
- Consideration of resident groupings and size of services, ensuring groups are manageable

7.6 Preventing reoffending

Within the criminal justice system, neurodiverse children and young people are deemed to receive better support than those in adult services, but there is little transfer of learning or information between the two. This is especially the case for information regarding the young people themselves[92]. The provision of rehabilitative support adapted for neurodivergent offenders is extremely limited, and those in the community only address sexual offending. These programmes are also not available in every prison or National Probation Service (NPS) area and suffer from large waiting lists[92]. More holistic, long-term support to prevent reoffending is also relatively lacking with

[90] Bild, What is Active Support? 2020, Link
[91] Bigby, C *et al*, Factors that predict good Active Support in services for people with intellectual disabilities: A multilevel model, 2019, Link
[92] Criminal Justice Joint Inspection, Neurodiversity in the criminal justice system, 2021, Link

the best examples provided by partnerships between criminal justice practitioners and other statutory or voluntary agencies[92].

Community order treatment requirements

There are three possible treatment requirements which may be part of a community order, however none of these are related to neurodiversity. One of these three, the Mental Health Treatment Requirement (MHTR), is intended for those who have a mental health problem which does not require secure in-patient treatment. Despite mental health problems being high in prevalence amongst the prison population, MHTR comprises less than 1% of all requirements of orders[93]. The criteria for this acceptance is based on mental health assessments, offence type, and age, and is available to those with neurodiversity.

There is limited information on the use MHTR for neurodiversity, however, have sites in the UK (Plymouth, Milton Keynes, Northamptonshire, Birmingham, and Sefton) have been trialling an expanded use. Guidance on their application for those with autism stress the importance providing consistence support and using the same staff member as a point of contact where possible[94].

Durham Community Peer Mentors

Durham PCC has deployed independent community peer mentors (volunteers) for the past six years who provide support to victims, survivors, perpetrators, prison leavers, or those forgotten by society. The service has seen on average an 81% reduction in contact with services, and reduced offending and hospital admissions[95]. There are currently 92 volunteers with personal experience of neurodivergence who work alongside and are supported by paid staff. Programme mentors support those in need by taking them to appointments, assisting with accommodation, financial or behavioural issues, and linking in with other local schemes. A third of participants assisted by the scheme said they no longer felt the need to call the police[96].

[93] National Offender Management Service, Mental Health Treatment Requirements, 2016, Link
[94] Institute for Public Safety Crime and Justice, Primary Care MHTR Practitioner Manual, 2020, Link
[95] Durham Police and Crime Commissioner's Office, Community Peer Mentors, Link
[96] Criminal Justice Joint Inspection, Neurodiversity in the criminal justice system, 2021, Link

7.7 Summary

- While a range of support is available to neurodiverse young people and their families, very little focuses on tackling experiences of violence
- Much of support in this area is focused on reducing episodes of challenging behaviour, whether that be via restraint, parenting classes, or positive behavioural support programmes for neurodiverse young people
- While there are also programmes and organisations which aim to prevent reoffending, these are again more general and lacking focus on violent experiences

8. Training provision on neurodiversity for those working in violence prevention

8.1 Introduction

Research questions

- What is the training provision for professionals working with young people in recognising and responding to young people with neurodiversity?
- What are the opportunities for adapting existing training for professionals working with young people to include recognising and responding to young people with neurodiversity?

Training for professionals working with young people in recognising and responding to young people with neurodiversity can vary, often depending on the extent to which they are expected to work with this group. For example, teachers who are a Special Educational Needs Coordinator (SENCO) for their school would be expected to have more extensive training than a classroom teacher who may or may not have any neurodiverse children in their class (though the DfE does not specify what the CPD requirements are for teachers on this). Those who work specifically with young people with neurodiverse conditions can be expected to have more training in neurodiversity than youth practitioners who work with general audiences (eg in youth clubs, etc).

8.2 Neurodiversity in schools and formal education

One key initiative in formal educational settings is the Teaching for Neurodiversity initiative[97]. This programme, rolled out in 2016/17, aimed to improve the awareness of types of neurodiverse conditions, how to recognise these, and also how they can have an impact on how young people learn and behave in classroom settings. A key finding from a review of this scheme was that it seemed to encourage teachers to focus upon individual learner strengths and needs, rather than specific diagnoses of types of conditions, and that this was empowering for both teachers and learners.

[97] Griffiths, D (2020) Teaching for neurodiversity: Training teachers to see beyond labels. Impact Journal of Charted College of Teaching. Link.

Safeguarding training and responsibilities are a requirement for youth practitioners, including teachers. While children who have been diagnosed with learning disabilities or special educational needs (which will include some but not all neurodiverse young people) may require additional support and their own considerations for safeguarding[98]. This supports the need for all youth practitioners to have a broad understanding of recognising neurodiversity in young people, in order to carry out their safeguarding duties as effectively as possible.

Resources and advice for supporting neurodiversity in schools are extensive, often developed by support organisations for specific conditions (eg National Autistic Society[99], the British Dyslexia Association[100]) or broader educational best practice advice (eg Structural Learning[101]). Some examples of strategies suggested for supporting neurodiversity in schools are shown in Table 3.

Table 3 Strategies for making classroom learning more accessible to neurodivergent children

Psychologically safe classrooms	A classroom environment that promotes and supports asking questions to check understanding. Promoting wellbeing and self-esteem. Using variable communication styles to suit individual learners.
Helpful classroom environment	A clutter free environment, signage, and written materials in clear language with supporting visuals, and quiet spaces available for anyone who needs them.
Diversifying teaching style	Recognising the different learning styles of all children in the classroom and using a range of teaching styles to suit and adapt to their needs.
Recognising learners' strengths	Neurodivergent children may have particular strengths and should be praised for these (for example, some people with Autism Spectrum Conditions may show particularly good attention to detail). There are different ways of approaching learning and problem solving, all of which are equally valid.
Supporting learners' weaknesses	Where children have weaknesses, whether due to neurodiversity or not, these should be recognised, and support provided to improve.
Reducing stigma	Where additional materials or tools are provided to support young people with special educational needs, making these generally available

[98] HM Government. (2018). Working together to safeguard children. Link.
[99] https://www.autism.org.uk/advice-and-guidance/professional-practice/neurodiversity-education
[100] https://www.bdadyslexia.org.uk/advice/educators
[101] https://www.structural-learning.com/post/neurodiversity-in-the-classroom-a-teachers-guide

	for anyone can reduce stigma (eg helpful software installed as standard, rather than just for learners with a specific diagnosis)

8.3 Other settings

Other settings where an understanding of the specific strengths or needs of neurodiverse young people outside education may be specifically for young people, like youth groups, sports, hobbies, while others will be a broader range of people, such as police and frontline services. While they are still involved in the safeguarding of young people, they may have less specific training or awareness of the needs of neurodiverse young people, and a lack of recognition of this could lead to inappropriate responses to behaviours that may challenge.

A pilot survey into the awareness of police officers of autism found that 53% of those surveyed (albeit a low number of responses as it was a pilot, just 51 officers) reported having had training on autism spectrum conditions[102]. This is thought to be an improvement on previous research done into autism awareness in the UK police service[103], though a definite comparison is difficult to make due to low survey numbers and different methodologies.

While there is limited information on the nature of the autism training available to the police officers included in this study, further information on what autism training is provided for the Metropolitan Police was made available through a freedom of information request in 2011, logged online[104]. At that time, all police officers and police community support officers received a two hour online training session covering "mental ill health and learning disability awareness", as part of their required initial training. This course covered the main diagnoses within this area, including autism, the behaviours that might be displayed, and how these people should be approached and communicated with by the police as suspects or witnesses.

It is not clear whether this level of training has changed since 2011, nor if it is standard or common across police forces in England.

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[102] Christiansen, A *et al* (2021). Pilot Survey: Police understanding of autism spectrum disorder. Journal of autism and developmental disorders. Link.
[103] Chown, N. (2010). 'Do you have any difficulties that I may not be aware of?' A study of autism awareness and understanding in the UK police service. International Journal of Police Science and Management. Link.
[104] Freedom of Information request reference no. 2011060001927. Received by Metropolitan Police Service on 13/06/2011. Link.

Autism training in particular seems to be more prevalent in police officers than training on other types of neurodiversity[105]. This research into training of staff in the CJS on neurodiversity found that most staff reported receiving little or no training on neurodiversity, and that where prior knowledge or training existed that this was often from personal experiences or prior work before joining the CJS.

Staff in the probation service reported mixed and 'patchy' levels of training on neurodiversity, and frontline prison staff were generally not equipped to work with neurodivergent individuals. This report into the evidence for neurodiversity in the CJS called for a national strategy and joined up working with the Home Office, Department for Health and Social Care and Department for Education to provide a cohesive response[105]. Training in neurodiversity for those working in the CJS is particularly important, given the high prevalence of neurodiversity in the prison population (see section 7.6)

8.4 Summary

- Training for professionals working with young people in recognising and responding to neurodiversity varies depending on the extent to which they expect to work with this group
- Safeguarding requirements and support plans for individual pupils (eg Education, Health, and Care plans) provide opportunities for training for staff and support for young people
- Recommended strategies for making schools and other settings neurodiversity-informed exist, and support is available, often from organisations that focus on specific conditions
- There are few requirements for any of this guidance to be followed, however
- In non-education settings there is some training used, largely around awareness of neurodiversity
- However, training in non-education settings is not universal nor is it standardised so recognition of and support for neurodiversity can be very piecemeal.

[105] Criminal Justice Joint Inspection. (2021). Neurodiversity in the criminal justice system. A review of evidence. Link.

9. Conclusions and Implications

As may be expected the links between neurodiversity and violence are complex encompassing both direct and indirect factors relating to the individuals social, environmental, neurological, and psychological circumstances. This complexity is exacerbated by the breadth of neurodiversity and the lack of national and local level data from which to draw conclusions of the link. Despite this however this research indicates that there are some conditions which appear to be more commonly linked with experiences of violence, possibly as a result of these young people not displaying 'typical' behaviours in social situations and as such being victims of violence or using violence out of frustration at misunderstanding or to create safer (eg less stimulating) environments. It is notable that some responses such as suspension and exclusion will further entrench social isolation whilst others such as restraint or detention may reinforce safety seeking behaviour. Similarly routes away from violence or out of criminal justice systems are also hampered through under diagnosis and lack of awareness of neurodiversity across services.

There are also clear links between this research and other areas of work commissioned by the WYCA VRU including raising aspirations for neurodiverse young people, mental health (and particularly emotion regulation) and the adversity trauma and resilience programme. Given this consideration should be given as to whether neurodiversity remains a standalone workstream or whether there is a strategic and deliberate inclusion of neurodiversity in all other workstreams both within the VRU and the wider combined authority portfolio.

9.1 Recommendations

Based on the evidence review we would make the following recommendations:

- There is a need to more clearly define neurodiversity to ensure clarity of scope and prioritisation of resource. We recommend an initial focus specifically on ASC/ASD and ADHD for intervention.

- High levels of exclusion across West Yorkshire but particularly in Wakefield of young people with special educational needs are likely to be exacerbating both short-term (eg alienation) and longer-term (eg lower educational attainment) risk factors for involvement in violence as well as access to screening, diagnosis, and support. The exclusion of children and teenagers, with learning disabilities from sex and relationships education (SRE) contributes to vulnerability, especially in relation to understanding of consent and healthy relationships.

Inclusion as opposed to exclusion is a priority area of work for WYCA. Further research into the links between exclusions, neurodiverse conditions and SEN in schools is required and consideration should be given to how this can inform inclusive policies and procedures for schools as well as enhanced monitoring of bullying related to neurodiversity.

- Family interventions and parental support are well evidence in addressing challenging behaviour. There are also opportunities for training/support for young people to build resilience and communication skills to express emotion and explain their diversity. This would need to be underpinned by a strengths based approach focusing on valuing diversity, using appropriate language, and building resilience in neurodiverse young people.

- Standardisation of, and consistency in, reporting is required, particularly in relation to the reporting of disability hate crime (DHC), routine collection by the police of health conditions, including neurodiversity will help to better understand the prevalence and associated needs of young people in the CJS. Access by WYCA to local authority disability registers will also provide a more accurate picture.

- There is a clear need for training and awareness raising across systems and services, including learning disability hate crime for staff within the justice, victim support and education systems and this should be provided across West Yorkshire. Training could be rolled out with the introduction of autism friendly environments across the area[106]. Given the prevalence of neurodiversity in the prison population consideration should be given to prioritising services along the CJS pathway.

- Further research into the links between exclusions, neurodiverse conditions and SEN in schools is required. This will potentially lead to revision of policies and training for school staff.

[106] Environmental checklist for people (southwestyorkshire.nhs.uk)

Appendix 1 – Research tools

Topic guides

Experts and stakeholders

1. How do neurodiverse young people experience violence?

2. What other factors might increase or reduce the risk of the young people who engage with your services experiencing violence?

3. How can neurodiverse young people be prevented from experiencing violence and coming into contact with the criminal justice system?

4. How can services which support young people become more neurodiversity-informed?
   - What training on neurodiversity is available for those working with young people?
   - What are the barriers to neurodiverse young people accessing universal service provision?
   - How can these be overcome?

5. What would a neurodiversity-informed system which prevents young people from experiencing violence look like?

Professionals who provide services to neurodiverse young people in West Yorkshire

1. What is the nature of the support you provide to neurodiverse young people and what are the demographics of the young people with whom you work?
   - Age, gender, neurodiverse, specific conditions
   - How young people are engaged, recruited, or referred

2. Is there any stigma surrounding diagnosis of neurodiverse conditions amongst different demographic groups?

3. What are the main challenges experiences by the young people who engage with your service?

4. How do the neurodiverse young people who engage with your services experience violence?
    - As perpetrators, victims, witnesses
    - In school, online, at home,
    - What impact does this have on the young people?

5. In terms of accessing support services related to crime or violence, how do neurodiverse individuals experience compare to neurotypical individuals?

6. What other factors might increase or reduce the risk of the young people who engage with your services experiencing violence?
    - Gender, ethnicity, age
    - Social determinants
    - Substance use
    - Mental health

7. How could neurodiverse young people be supported to prevent them from experiencing violence/coming into contact with the criminal justice system?
    - In education, employment, police, courts
    - Any existing interventions that they are aware of?

8. How can violence prevention initiatives be made more accessible to neurodiverse young people?

9. What training have you accessed in supporting neurodiverse young people?
    - What further training needs do you have?
    - What adaptations could be made to training to include the needs of neurodiverse young people?

10. What would a neurodiversity-informed system which prevents young people from experiencing violence look like?

Professionals who provide services to young people in West Yorkshire

1. What is the nature of the support you provide to young people and what are the demographics of the young people with whom you work?
    - Age, gender, neurodiverse, specific conditions
    - How young people are engaged, recruited, or referred
    - To what extent are neurodiverse young people involved in/supported by services?
2. How do the young people who engage with your services experience violence?
    - As perpetrators, victims, witnesses
    - In school, online, at home
    - What impact does this have on the young people?
3. What training have you accessed in supporting neurodiverse young people?
    - What further training needs do you have?
    - What adaptations could be made to pre-existing training to include the needs of neurodiverse young people?
4. How could your service be neurodiversity-informed and what support would you need to develop a neuro-diversity informed approach?
    - What are the barriers to neurodiverse young people accessing your service?
    - What support would you need to help neurodiverse young people access your service?

Appendix 2 – Glossary

Below is a list of terms and abbreviations used throughout this review.

ASC/ASD – Autism spectrum conditions, also known as autism spectrum disorders, refer to people who have a diagnosis of autism. Conditions is our preferred term, but where quoting specific sources we use their language of Disorders.

Challenging behaviour – The term 'challenging behaviour' is used to describe acts of aggression or self-injury, stigmatised behaviour, or other culturally abnormal behaviour that places the physical safety of the person or others in serious jeopardy, or seriously limits the use of or access to community facilities

CCE – Child criminal exploitation, the grooming and exploitation of children into criminal activity

CJS – Criminal Justice System

CPD – Continuing Professional Development

DfE – Department for Education, the government department responsible for schools and education

DHC – Disability Hate Crime

EHC– Education, Health, and Care Plan

Learning difficulties – A Learning Difficulty is a type of Special Education Needs, which affects areas of learning, such as reading, writing, spelling, and mathematics.

Learning disabilities – a "significant reduced ability to understand new or complex information, to learn new skills (impaired intelligence), with a reduced ability to cope independently (impaired social functioning), which started before adulthood"[107]

MHTR - Mental Health Treatment Requirement, provides a mechanism to ensure that certain offenders with mental health problems who are given a Community Order are able to access appropriate treatment

Neurodevelopmental disorders or conditions – disabilities in the functioning of the brain that affect a child's behaviour, memory, or ability to learn e.g. mental retardation, dyslexia, attention deficit hyperactivity disorder (ADHD), learning deficits and autism

Neurotypical – not displaying or characterized by autistic or other neurologically atypical patterns of thought or behaviour.

NPS – National Probation Service

[107] Department of Health (2001). Valuing People: A new strategy for learning disability for the 21st century. Link.

PRU – Pupil Referral Unit (an alternate provision of education for young people who are unable to stay in mainstream schools. They can provide additional care and support for young people and teach a reduced curriculum.

PSHE – Personal, Social, Health and Economic education

SEN/SEND – Special Educational Needs, or Special Educational Needs and Disabilities

SENDCO – Special Educational Needs Coordinator (a specialist role in schools)

SEMH – social, emotional, and mental health, a specific category of special educational needs where young people has severe difficulties in managing their emotions and behaviour. They often show inappropriate responses and feelings to situations. This may or may not be linked to a neurodiverse condition.

SRE – Sex and Relationships Education

VEQ – Vulnerability Experiences Quotient

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