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The use of Youth Justice Services by Young People with  
Neurodevelopmental Disorders in Glasgow, Scotland: A  
Qualitative Exploration of the Perspectives of Services Providers.

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Submitted in partial fulfilment of the requirements for the degree of

Doctorate in Clinical Psychology

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College of Medical, Veterinary and Life Sciences

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This is for Cai.

## Chapter 1: Systematic Review

Self-reports of motivations for sexual offending behaviours in individuals with neurodevelopmental disorders: a systematic review.

Prepared in accordance with the author requirements for *Psychology, Crime, and Law*;

[https://www.tandfonline.com/action/authorSubmission?show=instructions  
&journalCode=gpc120](https://www.tandfonline.com/action/authorSubmission?show=instructions&journalCode=gpc120)

## **Abstract**

**Background:** Neurodevelopmental disorders (NDDs) encompass a range of conditions that can impact functioning. Individuals with NDDs can be at risk of increased likelihood for offending. A variety of reasons have been proposed as to why, largely relating to the core features of the specific diagnosed NDD. **Aims:** To systematically review the literature, thematically synthesise, and appraise existing literature investigating the reasons individuals with NDDs give to explain their offending behaviours. **Methodology:** A thematic synthesis of the available qualitative literature was conducted and appraised for risk of bias. **Results:** A total of three studies were eligible for inclusion in this review and the risk of bias was ‘uncertain’ to ‘high’ across them. Included studies only included males who had committed sexual offences, who had diagnoses of Attention Deficit Hyperactivity Disorder, Autistic Spectrum Disorder and Learning Disabilities. Three analytic themes were identified: ‘Lack of understanding’, ‘Lack of control vs. control’ and ‘Life events’. **Conclusion:** Self-reported motivations for offending, in men who sexually offend, are multi-faceted. Further research is required to further understand the motivations for offending, and to improve outcomes for individuals with NDDs.

### ***Key words***

Neurodevelopmental disorders, Offending, Motivations, Autism. ADHD, Intellectual disabilities

# Introduction

## *Neurodevelopmental disorders*

Neurodevelopmental disorders (NDDs) encompass a range of conditions, including intellectual disabilities (IDs), attention deficit hyperactivity disorder (ADHD), autism spectrum disorders (ASD) and head injuries (HI) that persist across an individual's lifetime (Tyler, 2015). NDDs may be caused by a wide range of factors that compromise brain function and impair daily functioning (British Psychological Society, 2015; Morris-Rosendahl and Crocq, 2020). Impairments in functioning can include hyperactivity and impulsivity; aggressive behaviours; difficulty sustaining attention and concentration; global impairments of intelligence, memory, adaptive functioning or social communication skills (Young et al., 2018; Holland, Reid and Smirnov, 2021).

## *NDDs and offending*

Difficulties experienced by people with NDDs may increase criminogenic risk (Mohr-Jensen *et al.*, 2019). There are reports, across many countries, of disproportionately high prevalence rates of NDDs among people in custody, compared to the general population (Sinclair *et al.*, 2013). Prevalence of NDDs is higher in men (Jacquemont *et al.*, 2014), and men tend to have more contact with the criminal justice system (Ministry of Justice, 2016). Therefore, much of the available literature has focused on male participants, despite there being proposed differences in criminogenic needs between genders needed to reduce recidivism (van der Knaap *et al.*, 2012).

There is evidence of significant comorbidity between NDDs and of higher rates of offending in children (Hughes, 2015), and adults (McCarthy *et al.*, 2015), yet, only a small number of relevant studies include adult populations (McCarthy *et al.*, 2019).



Studies including adults who offend tend to be disorder specific; relating only to ADHD (Young *et al.*, 2014), ASD (King and Murphy, 2014), IDs (Jones and Chaplin, 2020) and traumatic brain injuries (TBIs) (Parsonage, 2018).

### ***ASD and offending***

ASD is an NDD characterised by persistent impairments in social communication and interaction, coupled with restricted and repetitive patterns of behaviour, interests or activities (American Psychiatric Association, 2013a). There is some evidence that individuals who offend and have ASD are more likely to engage in crimes against the person, for example sexual offences and assault, as opposed to property crimes, drug related crimes, or driving offences (Kumagami and Matsuura, 2009; Cheely *et al.*, 2012). Individuals with ASD may be more likely to commit sexual offences as they report less sexual and privacy knowledge and understanding, and exhibit more public sexualised behaviours than their neurotypical peers (Stokes, Newton and Kaur, 2007; Mehzabin and Stokes, 2011). Additionally, it is suggested that mainstream sex and relationship education is not sufficient for people with ASD (Hannah and Stagg, 2016). Furthermore, adolescents and adults are considered to have less access to peers as a source of learning (Stokes and Kaur, 2005).

### ***ADHD and offending***

ADHD is characterised by three core symptoms; inattention, hyperactivity, and impulsivity, which can persist into adulthood (Gudjonsson *et al.*, 2013). Research infers that core features of ADHD alone can increase the risk of offending (Young *et al.*, 2011). Offending is likely unplanned, opportunistic, and driven by impulsivity and

mood instability (Retz and Rösler, 2010). ADHD is the most frequent predictor of violent offending among imprisoned male offenders (Young and Thome, 2011).

### ***IDs and offending***

It is widely thought that individuals with IDs who offend, do so due to difficulties in moral reasoning abilities and reduced ability to empathise with victims (McDermott and Langdon, 2016). However, although accepted in the child and adolescent population, this has been disputed in the adult population (Lovell and Skellern, 2020). Other approaches to understanding offending motivations in ID individuals focus on biological, societal, and developmental factors (Lindsay, Taylor and Sturmey, 2004). A large proportion of people with IDs who offend, especially those who committed sexual offences, have experienced significant adverse childhood events, including trauma, abuse, or exploitation (Lindsay, 2011). It is proposed, that offending may occur as a result of these factors inhibiting an individual's difficulties to be recognised, and therefore, supported with intervention (de Villiers and Doyle, 2015).

### ***TBIs and offending***

Traumatic brain injuries (TBIs) are classified by an injury to the brain caused by an impact (Chitsabesan and Hughes, 2016). There is emerging evidence that specific areas of the brain may have an important role to play in anti-social behaviour (Mobbs *et al.*, 2007). Specifically, the frontal regions, along with amygdala and the hippocampus, are important areas involved in capabilities such as impulse control, empathy, and consequence consideration (Dillien *et al.*, 2020). These are often the areas affected in TBI, and as such, dysfunction has been associated with violence and offending (Williams *et al.*, 2010).

Prevalence rates of TBIs in young offenders range from 4.5% to 72% (Hughes *et al.*, 2012), yet, although there is a large and developing literature on the impact of TBIs on child developmental trajectories and offending behaviours, it continues to be an under-recognised NDD.

### ***Comorbidity and under-recognition of NDDs***

Increasing evidence suggest that many individuals with NDDs face adversity over time in a cascading and cumulative manner, resulting in poorer psychosocial outcomes (Megan Cleaton and Kirby, 2018). Yet, research consistently reports NDDs as both overlooked or mis-attributed to other difficulties. Co-occurring NDDs, although common, are often underdiagnosed among individuals with ASD and ADHD, especially when children are looked after by the state, adopted, or in prison (Nussbaum, 2012; Gillberg and Fernell, 2014; Woolgar and Baldock, 2015; Buitelaar and Ferdinand, 2016). This may be in part due to the chaotic lives these individuals can live reducing engagement with services, and it may also be impacted by the limited resources and access to routine diagnostic screening. NDDs often have overlapping symptoms (Hughes, 2015), which could make it difficult to determine the nature of someone's difficulties. If the motivations for offending differ depending on someone's specific NDD diagnosis, then there would be implications for clinical practice and future research to investigate how best to appropriately assess and intervene with these young people.

Additionally, trauma and maltreatment can impact an individual's functioning in similar ways. Research indicates that up to 90% of all individuals who offend have experienced a traumatic event in childhood and up to 30% of meet the criteria for post-

traumatic stress disorder (Fox *et al.*, 2015). Neglected or abused young people can often experience a decrease in concentration and an increase in hyperactivity (Capusan *et al.*, 2016); mimicking the core features of ADHD.

### ***Previous research on motivations to offend***

Previous research investigating motivations to offend has focused on individuals without NDDs, leading to assumptions made of “what works” for neurotypical individuals, will also work for neurodiverse individuals (Courtney, Mason and Rose, 2006). One of the most common models of conceptualising the reasons why individuals offend, and then translating these into targeted interventions, is the Good Lives Model (GLM) (Ward and Stewart, 2003). It is a model used internationally, across many offending typologies, and across various psychopathologies (Mallion, Wood and Mallion, 2020), even though it was originally developed for neurotypical individuals who commit sexual offences (Aust, 2010). This model assumes that individuals who offend are goal directed towards seeking *primary goods*. These include, but are not limited to; happiness, relationships/friendships, and experiencing mastery in work and leisure activities (Willis, Prescott and Yates, 2013). It is proposed that factors blocking the appropriate and pro-social achievement of these primary goods, for example through a lack of internal skills or external resources, are the reasons people offend (Ward and Stewart, 2003).

Although gaining ever-increasing popularity, the GLM has been frequently criticised for its lack of grounding in empirical research derived from the personal experiences of offenders, with many arguing that it is based only on intuition of professionals (Mallion, Wood and Mallion, 2020). A recent systematic review examined whether the

assumptions of offending motivations detailed in the GLM are supported by empirical evidence investigating self-reported motivations for offending by neurotypical individuals who offend (Mallion, Wood and Mallion, 2020). This review found 12 studies that investigated individuals self-reported motivations for offending. Most included studies were in support of the GLM, finding that individuals were motivated to maladaptively seek their primary goods through offending behaviour due to not having the internal or external resources to do this in a pro-social manner.

Conversely, Barendregt (2015) demonstrated limited support for the GLM assumptions that individuals offend because they have unmet needs. They found that the only motivation related to offending was to meet financial needs. Interestingly, this was the only study included in the review which referenced individuals diagnosed with ASD and ADHD. Overall, even in the neurotypical population, research investigating the self-reported reasons for offending is limited. Nonetheless, this research tends to conclude that offending happens when individuals want to achieve a primary good, but do not have the skills to do so appropriately. However, findings may not be generalisable to individual with NDDs.

### ***Rationale for review***

Understanding motivations for offending behaviours from the perspective of individuals with NDDs has been inadequately addressed in the research (Dowse, Baldry and Snoyman, 2009). Despite acknowledgement that effective interventions to reduce recidivism need to target the specific needs, behaviours, and motivations of individuals (Melvin, Langdon and Murphy, 2017), to date, no systematic reviews have been completed investigating individuals' with NDDs self-reported motivations for

offending. As qualitative data provides in-depth, rich information, it is a valuable method to use when exploring under-researched areas. It is valuable to synthesise and rate the quality of qualitative data, to understand the motivations for offending in greater detail, and to identify further avenues for exploration.

### ***Aims***

In line with the above rationale, the aim was to systematically review the qualitative literature on the reasons people with NDDs give to explain their offending behaviours. The review aimed to thematically synthesise the results, and report the findings according to PRISMA guidelines (Page *et al.*, 2021).

### ***Review questions***

This review aimed to address two review questions:

- 1) What reasons do people with neurodevelopmental disorders self-report to explain their offending behaviours?
- 2) Do these reasons differ dependent on the type of offence, or the type of neurodevelopmental disorder?

## **Method and materials**

### ***Protocol and registration***

A protocol for this systematic review was registered with PROSPERO, the international prospective register of systematic reviews (registration number: CRD42021267434).

### ***Information sources***

A systematic search was performed on 5<sup>th</sup> December 2021 in accordance with the Preferred Reporting Items for Systematic Reviews and Meta- Analyses (PRISMA) checklist, flow diagram, and guidelines (Page *et al.*, 2021). Searches were carried out across 4 electronic databases: MEDLINE, PsycINFO, Embase, and CINAHL. Date limiters were applied to the searches, and only results published since 1994 were included. This was due to the various clinical diagnostic criteria for neurodevelopmental disorders having been reviewed in the Diagnostic Statistical Manual (DSM) Versions 4 and 5 (American Psychiatric Association, 1994, 2013a, 2013b) and International Classification of Disorders (ICD) Versions 10 and 11 (World Health Organization (WHO), 1993; WHO, 2019), (Doernberg and Hollander, 2016). Therefore, it was unlikely that many studies published prior to the publication of these newly revised versions of both manuals would have assessed these disorders using most current terminology.

Boolean operators (OR and AND) were used to combine search strings and index terms were discussed and agreed upon with a University Librarian. The search terms used across all 4 electronic databases were related to NDDs, criminal justice involvement, and motivations for offending. For a full search strategy, see Appendix 1 [pg. 90].

### ***Study selection***

Search results were imported into EndNote referencing software where duplicates were removed. The first reviewer (KAD) worked independently to screen the titles and abstracts for all relevant papers. An independent reviewer (RB) reviewed a sample of

100 titles and abstracts selected randomly. Any relevant papers identified for inclusion by RB were discussed with the first reviewer. Any discrepancies were planned to be resolved through discussion with the third reviewer (ER). However, this was not required as KAD and RB had perfect agreement ( $\kappa = 1.00$ ). After the abstracts were selected, full-text articles were screened for inclusion by the first reviewer. The references of included papers were examined further for relevant studies. All articles were screened based on the following criteria:

*Inclusion criteria:*

- Studies of populations with a diagnosed neurodevelopmental disorder (e.g. Autism Spectrum Disorder, Foetal Alcohol Spectrum Disorder, Attention Deficit Hyperactivity Disorder, Head injury, Communication disorder)
- Qualitative and mixed method studies, if data relating to participants' self-reported motivations for offending could be extracted
- Studies reporting criminal justice system involvement, e.g. information pertaining to police cautions or charges, arrests, offences, or incarceration
- Original research papers that have undergone academic peer review and have been published in English
- Studies on humans of all ages, ethnicities and genders

*Exclusion criteria:*

- Studies on animals
- Studies not published in English
- Grey literature (e.g., conference abstracts, student dissertations)



- Research which only uses quantitative research methods

### ***Data synthesis***

Data extraction was performed using a standardised form with the following categories: author(s), date of publication, sample size, participant recruitment source, age of participants, study design, neurodevelopmental disorder of interest, comparative groups (if appropriate), type of criminal offences, and the main findings/ themes generated from self-reported motivations for offending.

Thomas and Harden's (2008) stepwise model to approaching thematic synthesis was used to identify and make sense of the key findings from the included studies. This is an approach commonly utilised to synthesise literature in qualitative research (Popay *et al.*, 2007). Using the overarching themes as a framework, subthemes and more detailed descriptions were extracted from each study.

The synthesis of the findings took the form of three stages: the free line-by-line coding of the findings of primary studies; the organisation of these 'free codes' into related areas to construct 'descriptive' codes based very closely on the original findings of included studies; and then using the descriptive codes to generate analytic themes to answer the research question. Coding was completed for all of the text labelled as "results" or "findings" in the included studies, focused on the aim of the present review, at the same time being open-minded to allow for the possibility of different or better fit of codes emerging (Thomas and Harden, 2008).

### ***Risk of bias in individual studies***

Risk of bias was assessed using the Critical Appraisal Skills Programme (CASP) checklist for qualitative studies (CASP, 2019). This checklist is comprised of ten questions, each assessing areas of potential bias (e.g. clarity of research objectives, appropriateness of recruitment strategy, rigour of data analysis methods and approaches). Each question is answered with “yes,” “no,” or “can’t tell”.

Freedom from risk of bias was assessed for the 10 items on the checklist, using the following ratings: ‘Yes’ (low risk), ‘Unknown’ risk, or ‘No’ (high risk). Risk of bias was then graded for each study overall using the following ratings (Mathie *et al.*, 2017):

- Rating A= low risk of bias for all 10 items;
- Rating B<sub>x</sub>= uncertain risk of bias for x items, low risk of bias in all other items;
- Rating C<sub>y,x</sub>= high risk of bias in y items, uncertain risk of bias in x items, low risk of bias in all other items.

All studies were assessed for quality and risk of bias by the first (KAD) and second (RB) reviewer. The scores were cross matched, revealing an interrater reliability of 80% agreement (McHugh, 2012). Any disagreements between the two reviewers were discussed until an agreement was reached. Studies were not excluded based on quality.

## **Results**

### Study selection

20,551 papers published between 1994 and December 2021 were screened by title and abstract. 20,499 were excluded, leaving 52 papers which were screened by full text. A total of three papers were deemed suitable for inclusion in the final review [Figure 1].

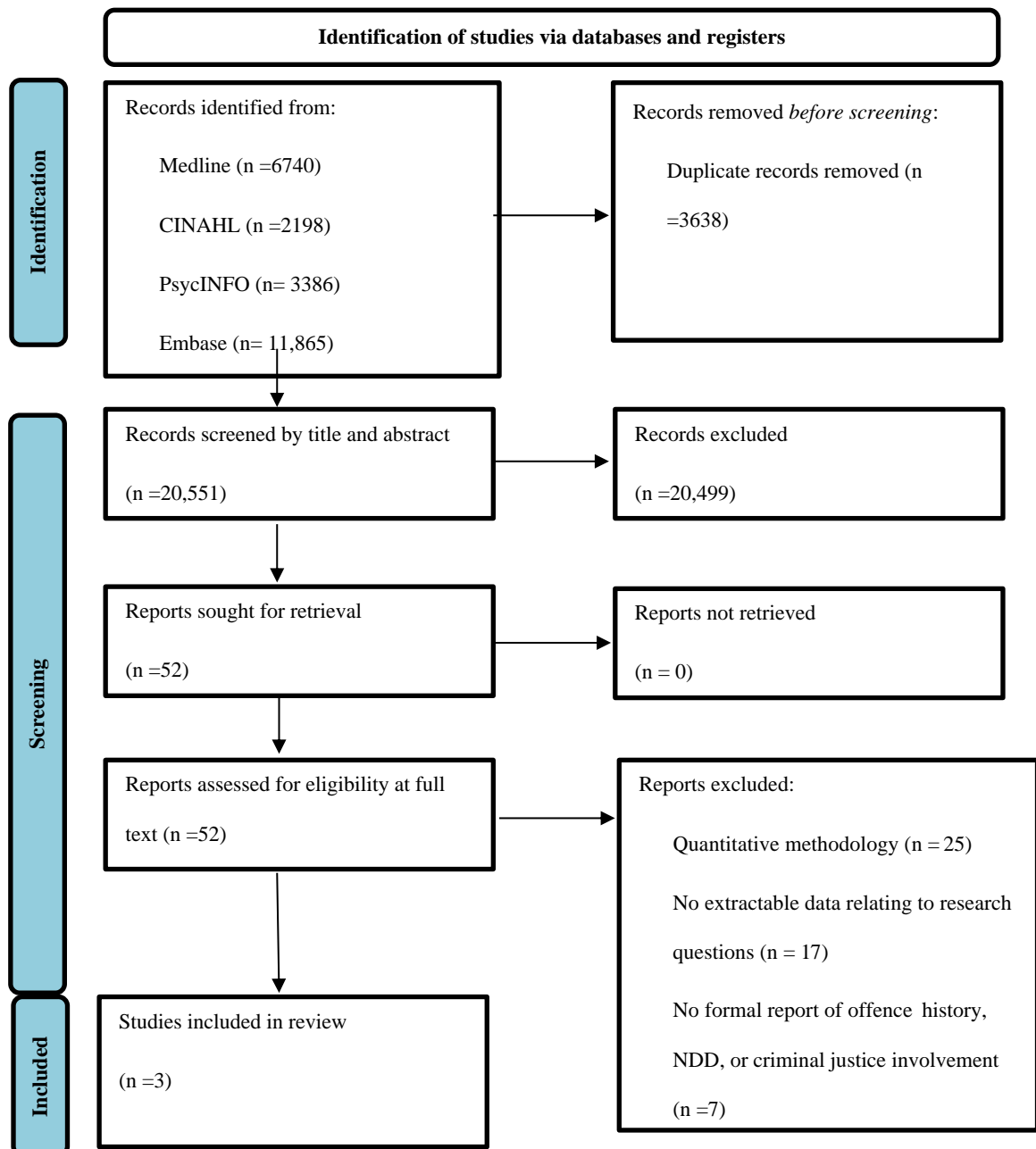


Figure 1 Flowchart of search strategy (PRISMA, 2020)

### ***Study characteristics***

Table 1 presents the main study characteristics. The studies were conducted in the United Kingdom (n=2) and Sweden (n=1). Between the reviewed studies, there was a combined sample size of 29, and 100% of these participants were males who had committed sexual offences. One study included a sample of participants with ADHD (Tidefors and Strand, 2012), one a sample with ASD (Payne *et al.*, 2020), and one a sample with intellectual disabilities (Courtney, Rose and Mason, 2006). One study included both adults and children (Tidefors and Strand, 2012), whereas the other two studies only included adults (Courtney, Rose and Mason, 2006; Payne *et al.*, 2020). The age of participants ranged across the three studies from 14 to 62 years old, with a mean age of 27.7 years old. Two of the studies did not report the ethnicity of participants (Tidefors and Strand, 2012; Payne *et al.*, 2020). In the study that did report ethnicity, participants were all Caucasian (Courtney, Rose and Mason, 2006). All participants had been charged with sexual offences, and were recruited from prisons, probation services, community, and residential institutions. All three papers utilised a one to one, qualitative semi-structured interview methodology. Two of the papers used thematic analysis (Tidefors and Strand, 2012; Payne *et al.*, 2020), and one used grounded theory (Courtney, Rose and Mason, 2006). Publication dates ranged from 2006 -2020.

### ***Critical appraisal/ risk of bias***

Studies were not excluded based on quality. None of the papers had a low risk of bias; two had uncertain risk of bias (Courtney, Rose and Mason, 2006; Payne *et al.*, 2020), and one presented a high risk of bias (Tidefors and Strand, 2012) [Table 2]. Generally, the findings were clear and well stated, the study design and methods of recruitment

were appropriate, and the analysis was acceptably rigorous. Based on the CASP checklist (CASP, 2019), the area where quality was most lacking was in relation to Question 6, which asked whether the relationship between the researcher and the participants had been adequately considered. The answer to this question was unclear in two of the studies (Courtney, Rose and Mason, 2006; Payne *et al.*, 2020), and not reported on in one study (Tidefors and Strand, 2012). The question on appropriate consideration of ethical issues was only adequately addressed in one of the studies (Payne *et al.*, 2020).

Table 1 Study characteristics

Reference	Study design	Country	Number of participants	Recruitment sources	Mean age (range) in years	Gender	Ethnicity	NDD diagnosis	Criminal typology
<b>Courtney, Rose &amp; Mason, (2006)</b>	Semi-structure interview with grounded theory analysis	UK	9	Community and residential sources	37.3 (20-62)	100% Male	100% Caucasian	100% of participants with ID diagnosis	Sexual offences
<b>Tidefors, &amp; Strand (2012)</b>	Semi-structure interview with thematic analysis	Sweden	11	Institutions or psychiatric clinics	16.2 (14-19)	100% Male	Not reported	100% of participants with ADHD diagnosis	Sexual offences
<b>Payne et al. (2020)</b>	Semi-structure interview with thematic analysis	UK	9	Prisons and probation services	29.56 (22-50)	100% Male	Not reported	100% of participants with ASD diagnosis	Sexual offences

**Abbreviations:**

ADHD= attention deficit hyperactivity disorder

ASD = autism spectrum disorder

ID = Intellectual disability

NDD = Neurodevelopmental disorder

Table 2 Quality appraisal

Critical Appraisal Skills Programme Checklist item*	Courtney, Rose & Mason, (2006)	Tidefors, & Strand (2012)	Payne et al. (2020)
1. Was there a clear statement of the aims of the research?	Yes	Can't tell	Yes
2. Is a qualitative methodology appropriate?	Yes	Yes	Yes
3. Was the research design appropriate to address the aims of the research?	Yes	Can't tell	Yes
4. Was the recruitment strategy appropriate to the aims of the research?	Yes	Yes	Yes
5. Was the data collected in a way that addressed the research issues?	Yes	Can't tell	Yes
6. Has the relationship between the researcher and the participants been adequately considered?	Can't tell	No	Can't tell
7. Have ethical issues been taken into consideration?	Can't tell	Can't tell	Yes
8. Was the data analysis sufficiently rigorous?	Yes	Can't tell	Yes
9. Is there a clear statement of findings?	Yes	Yes	Yes
10. Is the research valuable?	Yes	Can't tell	Yes
<b>Overall rating</b>	B2	C1.6	B1

\*Possible scorings for individual items: yes (low risk), cannot tell (unknown risk), no (high risk).

Rating A = low risk of bias for all 10 items.

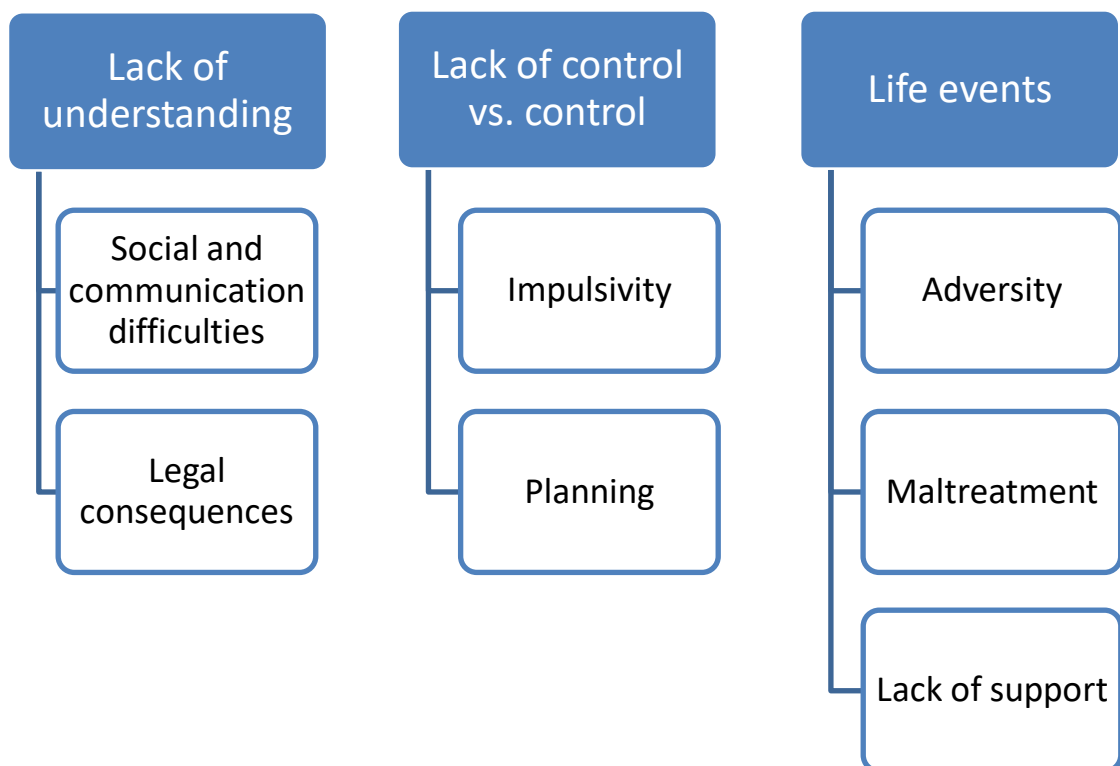
Rating Bx = uncertain risk of bias for x items, low risk of bias in all other items.

Rating Cy,x = high risk of bias in y items, uncertain risk of bias in x items, low risk of bias in all other items.

## ***Thematic synthesis***

*Research question 1: What reasons do people with neurodevelopmental disorders self-report to explain their offending behaviours?*

Thematic synthesis of the original key themes identified from the included studies [Appendix 2, pg. 91], resulted in the identification of three analytical themes and seven subthemes. These provided insights into the motivations individuals gave to explain their offending behaviours. The three analytic themes identified were: ‘Lack of understanding’, ‘Lack of control vs. control’ and ‘Life events’ [Figure 2]. Fidelity to the original context was retained. Extracts and quotes from the original studies have been provided to illustrate the themes.



*Figure 2 Analytic themes*



### ***Theme 1: Lack of understanding***

All three studies reflected a theme of lack of understanding as a factor in participants' offending. This was in relation to social and communication difficulties, as well as regarding the wider context of their actions having legal consequences.

*Social and communication difficulties:* Social and communication difficulties were in relation to individuals not understanding social nuances of approaching and interacting appropriately with others.

*'I did [online offence] to kind of...maybe try and be closer to other people and I just went about it the wrong way.'* (Payne *et al.*, 2020, pg. 12).

*'I wasn't going to do things with her, I just wanted to get a relationship with her and take her out for drinks and have her in me house.'* (Courtney, Rose and Mason, 2006, pg. 185)

*'The boys seemed to lack social survival skills in school, and being in school became a struggle.'* (Tidefors and Strand, 2012, pg. 427)

All studies also highlighted that difficulties with taking the perspective of others was a contributing factor to individuals committing the offence. Two studies found that this led to their participants placing unreasonable responsibility on the victims.

*'She didn't tell me to get off ... she just carried on ... and tried to do me for a crime'* (Payne *et al.*, 2020, pg. 15)

*'Yeah and I thought with her being er . . . aroused herself, I thought she ain't never going to tell them, she is going to keep it to herself'* (Courtney, Rose and Mason, 2006, pg. 181)

Two of the studies also highlighted that there appeared to be a misunderstanding of social interactions and a lack of understanding surrounding issues of consent.

*'A joke was taken out of hand.'* (Payne *et al.*, 2020, pg. 19)

*'When I touched her, she gave me a little smile and I thought I'll carry on if she's smiling at me cos it might lead somewhere.'* (Courtney, Rose and Mason, 2006, pg. 182)

*Legal consequences:* Two of the studies highlighted that a lack of understanding of the seriousness of the actions and their legal consequences, appeared to facilitate committing the offences.

*'I didn't know...and this is going to sound odd...I didn't know how wrong it was. I didn't know what the consequences were going to be.'* (Payne *et al.*, 2020, pg 13)

*'It is notable that those who committed more opportunistic offences did little to hide the offence, perhaps indicating a genuine unawareness of wrongdoing.'* (Courtney, Mason and Rose, 2006, pg 182)

One study reflected that although some of their participants had learnt that their actions were illegal, they mistakenly generalised this to all sexual encounters.

*'Participant: It's wrong sometimes, isn't it? If I touched anybody, I'd be in big trouble, wouldn't I? It'd be against the law, against the law, wouldn't it?*

*Researcher: So you mustn't touch anybody ever? Participant: No.'* (Courtney, Rose and Mason, 2006, pg. 185)

### ***Theme 2: Lack of control vs. control***

*Impulsivity:* Acting with impulsivity, and a sense of 'getting caught up' in the moment, was a theme that was evident across all included studies. This theme referred to spontaneous acts of impulsivity. Impulsivity also referred to acts in response to having a lack of control over their emotions.

*'I kind of think about me in the erm ... in sort of like here and now but I don't really think about the bigger picture if that makes sense.'* (Payne et al., 2020, pg. 16)

*'I had fights at home, so I was really pissed off, felt as if mum and dad didn't listen. I went out and it just happened...I was too impulsive, I couldn't stop myself from doing it.'* (Tidefors and Strand, 2012, pg. 429)

*Planning:* One study reported a continuum from "grabbing" through to "extensive grooming". It was found that acting either impulsively or with planning varied based on the victim.

*'Participant 5 acted differently with different sisters against whom he was offending at the same time...Participant 2 planned and groomed his victim in detail on one occasion but against a different victim at a different time, was more impulsive and opportunistic.'* (Courtney, Rose and Mason, 2006, pg. 187)

This planning usually arose from an individual being motivated to have sex, and a need to reduce external inhibitors to facilitate that.

*'I like waited until the night staff go into the office for the handover.'* (Courtney, Rose and Mason, 2006, pg.180)

### ***Theme 3: Life events***

*Adversity:* Two of the included studies reported that facing adversity contributed to their offending behaviours. This was in the form of early life adversity,

*'Both convictions were where I had left home for the first time, and my head was all over the place...I went to try and find my birth family because I got adopted at a young age.'* (Payne *et al.*, 2020, pg. 19)

*'All participants had been let down by a parent at a young age... My dad had a rough time, stealing, breaking into houses. My dad was sixteen when his father killed himself and my grandmother killed herself too.'* (Tidefors and Strand, 2012, pg. 427)

as well as immediately prior to the offence occurring.

*'These periods were resultant from a number of factors (e.g. dismissal from employment, lack of money and lack of safety): I had no money. I tried robbing the victim'* (Payne *et al.*, 2020, pg. 20)

*Maltreatment:* Two of the studies also reported high rates of maltreatment experienced by the participants in the form of emotional, sexual, and physical abuse, and neglect, from trusted individuals. Participants were able to reflect on how this led to normalising of abusive relationships and sexual interactions.

*'Dad wanted us to do things with each other. All kinds of things... touch each other. I believed it was something all children did...it was normal.'* (Tidefors and Strand, 2012, pg. 246)

*'I mean I can't really say all of this is because of what happened to me growing up...err...because you know that's not taking responsibility and I do take full responsibility but the line that I took from what \*\*\*\*\* [offender's abuser] did to me influenced my thoughts and feelings and everything else about relationships.'* (Payne et al., 2020, pg. 20)

*Lack of support:* Two of the studies found that their participants had felt that a lack of support from professionals had contributed to their offending behaviours. For some participants, this appeared to be in the form of not understanding the purpose of the professionals involved.

*'I had to go through a psychiatric assessment because of my messiness, they wanted to see what was wrong with me.'* (Tidefors and Strand, 2012, pg. 428)

For others, there was a sense that they did not get the help that they needed at the time.

*'Participants often felt that having an ASD diagnosis was irrelevant as they did not receive the support that they felt that they needed to enable them to function effectively within the rules/norms of society: it [ASD] was kind of something that was just on a bit of paper rather than something that I actually got help with.'* (Payne et al., 2020, pg. 20)

Interestingly, one study identified some positive consequences reported by the individuals who felt that committing the offence gave them access to structure and

support that they had wanted prior to offending, and some even experienced an increase in self-esteem from being a member of a sex offender programme (Courtney, Rose and Mason, 2006).

*Research question 2: Do these reasons differ dependent on the type of offence, or the type of neurodevelopmental disorder?:* All the studies retrieved for inclusion in this systematic review focussed on individuals who had committed sexual offences. This meant that the motivations for offending were not possible to be compared by offence type. The studies did include participants diagnosed with three different NDDs; Autism, ADHD, and IDs. Within the studies, it is important to note that although 100% of participants from each study had the aforementioned NDD diagnoses, there was mention of diagnostic overlap. Payne et al., (2020), found that the mean full-scale IQ scores of their population with ASD was 87.56, with a range of 64-102. A score of 70 or below is often considered to be an indicator of significant cognitive impairment, and can contribute to an individual receiving a diagnosis of an ID (Bishop, Farmer and Thurm, 2015). Although the mean score was 87.56, from the range, it could be likely that some participants would have IDs. No further information relating to NDD comorbidity was mentioned in the study. Additionally, Tidefors and Strand (2012), made reference to 5 of their 11 participants, all diagnosed with ADHD, having “impaired learning abilities”. Given this overlap and potential comorbidity, it is difficult to differentiate with any amount of confidence between motivations based on the reported NDD. The following sections attempt to differentiate the research by NDD diagnosis.

## **ASD**

One study included participants with a diagnosis of ASD (Payne et al., 2020). They found that two of their five identified themes appeared to be specifically linked to the characteristics associated with a diagnosis of ASD, for example, having rituals and restricted, repetitive interests.

*'I didn't want her to get to know me because ... I knew I was different from other people...I wasn't on the same planet as everybody else. I was in the world of ritual.'* (Payne et al., 2020, pg. 12)

Other ASD-related reasons given for offending by individuals, were difficulties with theory of mind and being able to predict others' behaviours and having increased difficulties initiating and maintaining appropriate relationships. Individuals also identified a lack of ASD specific support available to them prior to their offending, indicating that having a better understanding of their diagnosis-related difficulties might have helped reduce the likelihood of them offending. The other three themes identified in this study related to more general factors, which could be viewed as transdiagnostic.

### ***ADHD***

Similarly to the study including participants with ASD, Tidefors and Strand (2012), found that their participants identified their ADHD related difficulties as a factor in their offending.

*'My disease has destroyed me...it gives me obsessions and then this shit happened. I was like...I couldn't control myself when it happened.'* (Tidefors and Strand, 2012, pg. 429).

Although participants had referenced their history of abuse and adversity in describing their likelihood to offend, none of the participants explicitly associated this with reasons for their sexual offenses. Instead, they tended to focus on the impulsivity of their actions and their perceived lack of control over emotions and aggression.

## ***ID***

Only one study explicitly included participants with IDs (Courtney, Rose and Mason, 2006). However, as mentioned previously, there did appear to be some diagnostic profile overlap with the other included studies of which the extent is unknown. This study investigated motivations at all stages of the offence process, and the themes that were derived had much overlap with the themes from the other included studies, such as misunderstanding the consequences of their actions, difficulties with social interaction, and impulsivity. None of the participants in this study directly identified their ID as a factor contributing to their offence(s). This was the only included study that referenced a process of planning and grooming victims.

## **Discussion**

### ***Main findings***

*Characteristics of included studies:* All participants included in the studies were male. Although this is unsurprising given that most of the literature in this area has historically used predominantly male samples, it limits the generalisability of the results. The NDDs included in the studies were ASD, ADHD and IDs. Two of the studies reported that a proportion of their sample had additional cognitive impairments.



Considering the overlapping of symptoms, differentiating results by the NDD studied may be marred with ambiguity.

*Thematic synthesis findings:* Using a thematic synthesis, data from three articles were organised into three analytical themes: ‘Lack of understanding’, ‘Lack of control vs. control’ and ‘Life events’. The included studies all referred to the participants reporting of multiple reasons for offending, highlighting the importance of assessments and subsequent interventions to consider a range of both internal and external factors. There were several findings that require further discussion.

Firstly, the theme ‘Lack of understanding’ arose from all studies. Although social communication difficulties are a key feature of ASD, this theme was referenced by individuals with ID and ADHD. Considering the high prevalence of trauma and maltreatment experienced by individuals in contact with the criminal justice system (Fox et al., 2015), the difficulties managing social relationships could be understood in the context of this trauma. Experiences of abuse from parents/carers, can reduce the ability for individuals to learn appropriate relationship skills (Abbassi and Aslinia, 2010). This, along with inadequate sex and relationship education from schools (Hannah and Stagg (2016), reduced access to peer learning (Stokes and Kaur, 2005), and a predisposition to difficulties with social communication, could make acquiring appropriate relationship skills incredibly difficult for someone with an NDD. All of the above would make it unsurprising for an individual to commit, what was referred to as accidental offences (Hannah and Stagg, 2016).

Secondly, a lack of understanding of the seriousness, or legal implications of one's actions was present across all included studies. The findings from Payne *et al.*, (2020), and Courtney, Mason and Rose (2006) indicated that when legal issues were explained to participants, they were able to understand, learn, and retain legal information. However, Courtney, Mason and Rose (2006), highlighted that even after being given education on what constitutes sexual offending and consent, there was a tendency to generalise this knowledge to all sexual situations. Additionally, consent is a complex and often confusing concept, even for neurotypical populations, especially relating to aspects such as implied consent (Beres, 2007). For individuals with NDDs and associated impaired cognitive abilities and/or difficulties interpreting others' actions, intentions, or perspectives, this could understandably be even more challenging to understand.

The analytic themes of 'Lack of understanding' and 'Life events' related to all three included NDD diagnoses. However, the final theme 'Lack of control vs. control', highlighted some differences across NDD diagnoses. The only study to report themes relating to planning an offence and grooming victims, was Courtney, Mason and Rose (2006) who included participants with IDs. Research suggests that individuals with IDs demonstrate delayed gratification through grooming victims, and the levels of impulsivity present in their offences are similar to non-intellectually disabled people who offend (Craig and Hutchinson, 2005). Research into grooming practices for other NDDs appears to be extremely limited, with other research only highlighting the vulnerability of individuals with ASD and ADHD being groomed by others (Bond and Rawlings, 2018). While this may be a genuine finding of difference between ID and other NDD diagnoses, it may have only emerged in this review due to the questions

asked by the researchers. For example, Courtney, Mason and Rose (2006), may have explicitly asked participants about grooming, whereas other studies may not have included this in their interviews.

### ***Comparison with existing literature***

Findings from this review are in line with previous research in the area and support can be given in part to the GLM (Ward and Stewart, 2003). This review demonstrated that the individuals in included studies were motivated to achieve 'primary goods' of being in a relationship or having sexual relations, however, the individuals lacked the interpersonal skills to achieve this in a socially acceptable manner. We were unable to state with certainty whether the GLM is fully applicable for this population. This could be in part due to the included studies focusing on sexual offences. These offences are more closely related to the primary good of relationships, and perhaps if other offending typologies were included, other primary goods may have been identified.

### ***Implications for policy and practice***

Several implications for police and practice were highlighted by this review. Firstly, considering the lack of understanding about appropriate social relationships in people with NDDs, schools may have a role in increasing the education provided. Considering the reduced cognitive abilities and predisposition to rigid styles associated with some NDDs, it would be important for sexual and relationship education for individuals with NDDs to be as concrete as possible and explicit in what constitutes a sexual offence. Providing more information around consent should also be addressed in sex and relationship education.

Secondly, the included studies all reported a lack of support received by individuals with NDDs. Assessments should provide a comprehensive assessment of individual difficulties, and NDD specific support would be of benefit. It was also evident from the findings that many of the individuals had experienced abuse or neglect in their childhoods by parents. This seemed to normalise abusive relationships for some of the participants. Therefore, if maltreatment is disclosed, trauma-informed interventions should focus on education around appropriate relationships, to further reduce the risk of offending and subsequent disadvantages faced by individuals with NDDs.

### ***Recommendations for further research***

More research utilising a self-report methodology in this area is required, for males and females with a wider variety of NDDs and offending typologies. Further research should also investigate whether a transdiagnostic model to conceptualise NDDs and offending motivations is sufficient, or whether the reasons for various NDDs are sufficiently different, supporting a more individualised approach to interventions. The GLM is often used across transdiagnostically, across various services and with various offending typologies. The outcome of future research investigating the impact of NDDs on offending, could therefore have wider implications for stakeholders, pertaining to service delivery models and intervention buy-ins. Future research should consider the similarities and differences between NDD features and trauma presentations in young people who offend. This would provide clarity to the conclusions drawn from research into specific NDDs and could provide a basis for disentangling the impacts of each on motivations for offending.

Additionally, it is important to recognise that the studies included in this review only focused on sexual offences. All studies only had male participants, and all three were

from high-income countries. This seems to be typical of the research investigating the motivations for offending, and so, future research should focus on diversifying the evidence base.

Furthermore, there were no studies eligible for inclusion within this review which identified TBIs as their NDD of focus. TBIs can be associated with an individual having poor insight into their difficulties, and as such, self-reporting their motivations for offending may be challenging. However, considering the aforementioned potentially high prevalence rates, and the association with offending behaviours, this is an area which could require further investigation.

### ***Strengths and limitations***

This was the first review to attempt to synthesise research investigating the motivations of people who offend and have a diagnosed NDD. This synthesis allowed for increased understanding of the motivations for offending from the perspective of individuals with NDDs. This review has advanced the evidence base, providing recommendations for services providing support to this population and directions for future research.

The strengths of this review include its transparent approach to the description of the methods, and synthesis of the results. The search terms in this review were devised in collaboration with a librarian, and the pre-determined protocol was prospectively registered on Prospero. In addition to this, the reporting is in line with the PRISMA (2020), guidelines. This enhanced the transparency and made it reproducible; ultimately reducing the risk of bias. Additionally, an extensive search strategy was used across four comprehensive databases. The databases were searched over a long

timeframe, and a very large number of results were retrieved. Grey literature sources were not searched. Given that grey literature often has not undergone rigorous peer review, studies can have methodological shortcomings and these could have implications for the validity of results (Paez, 2017). While it is not unusual for grey literature sources to be excluded, this could have introduced publication bias into the sampling of the present review and contributed to the minimal results retrieved. Future reviews in this area could consider searching grey literature sources to further increase comprehensiveness. However, none of the retrieved results were excluded based on them being from non-peer reviewed sources. Searching the reference lists of included studies retrieved no additional results, and this coupled with the sheer number of titles and abstracts screened, compared to the small number reviewed by full text, demonstrated that literature in offending motivations from the perspective of individuals with NDDs is significantly lacking.

Only 100 titles and abstracts were screened by two reviewers (KAD and independent reviewer RB) due to significant time pressures. However, there was a perfect agreement between the two reviewers ( $\kappa = 1.00$ ). Data extraction was performed only by the first reviewer (KAD) but was undertaken systematically using a structured database.

Furthermore, regarding the quality of the available research, it is recognised that the CASP appraisal can be subjective and open to interpretation. However, attempts were made to minimise this through two reviewers independently reviewing all included articles. Additionally, the review only found results investigating the impact of ASD, ADHD, and LD on the motivations of males to commit sexual offences. This therefore does not make it representative of the large range of NDDs, or the broader patterns of offending behaviours. Bearing in mind the risk of bias within studies, as well as the

small number of included studies which investigate a narrow range of NDDs and offences, these results should be interpreted with caution.

## **Conclusions**

The aim of this review was to collate, quality appraise, and synthesise the available qualitative research on reasons for offending from the perspective of people with NDDs. A combination of personal and societal factors may increase the likelihood of someone offending, and these have implications for practice. Existing research is significantly lacking and of uncertain quality. Further research in this area is required to fully understand motivations for individuals with NDDs, and ultimately improve outcomes.

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## **Chapter 2: Major Research Project**

The use of Youth Justice Services by Young People with  
Neurodevelopmental Disorders in Glasgow, Scotland: A Qualitative  
Exploration of the Perspectives of Services Providers

Prepared in accordance with the author requirements for *Psychology,*  
*Crime, and Law;*

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## **Plain language summary**

**Title:** The use of Youth Justice Services by Young People with Neurodevelopmental Disorders in Glasgow, Scotland: A Qualitative Exploration of the Perspectives of Services Providers.

**Background:** Neurodevelopmental disorders (NDDs), are a group of conditions that can make life more difficult for people, in many ways. People with NDDs might be at higher risk of offending, and they might need support from services, in different ways to people without NDDs.

**Aims:** This study wanted to understand what people who work in services thought the risk factors might be that made people with NDDs more likely to offend. The study also wanted to understand what people working in services thought people with NDDs needed help with, and in what ways this help can be best given.

**Methods:** 10 staff working in social work services across Glasgow were interviewed online. Interviews were recorded and then transcribed word for word. Time was spent looking over the text for similarities, these were called themes.

**Results:** Three main themes were found. The risk factors for someone offending included: acting without thinking, having difficulties understanding communication and having complex life experiences. Staff also said that people with NDDs can feel excluded from their families, and from society in general, so they look for acceptance from friends who may also offend. Staff felt that services needed to make it easier for people with NDDs to use services, and that there should be a shift from punishment, to understanding how difficult people's lives can be.

**Conclusion:** There are lots of risk factors that might make someone more likely to offend if they have an NDD. The aspects people with NDDs find hard in life can make getting the help they need more difficult. Research, policy, and the way we work with people, should consider these difficulties, to improve the lives of people with NDDs.

## **Abstract**

**Background:** Neurodevelopmental disorders (NDDs) encompass a range of conditions that can impact on an individual's functioning. They may be at increased risk for offending. Individuals with NDDs in contact with youth justice services have highly complex lives and may require additional support for their needs to be met by services.

**Aims:** This study aimed to explore pathways into offending, and possible service needs of young people with NDDs, from the perspective of service providers. **Methods:**

Semi-structured interviews were conducted with 10 staff members from youth justice social work services across Glasgow. A thematic analysis was conducted using the transcripts of interviews to initially code, and then generate overarching themes.

**Results:** Three main themes were identified from the data: 'Risk Factors', 'Exclusion vs. Belonging' and 'Different Ways of Working'. Seven subthemes were identified.

**Conclusion:** The pathways into offending for young people with NDDs are multi-faceted and complex. Their difficulties, along with barriers from services, can prevent access to, and engagement with, appropriate services. Research, policy and practice should take these barriers and difficulties into account, if the outcomes for this population are to be improved.

### **Key words:**

Neurodevelopmental disorder, offending, young people,

## Introduction

### *Neurodevelopmental disorders*

Neurodevelopmental disorder (NDD) is an umbrella term for conditions that result in impairments in brain and neuromuscular functions (Morris *et al.*, 2013). Aetiologic factors of NDDs include genetic, prenatal exposure to teratogenic drugs or substances, prenatal or birth trauma and childhood injury or illness (Hughes *et al.*, 2012). NDDs include intellectual disabilities (IDs), cerebral palsy, specific learning difficulties (e.g., dyslexia), other communication disorders, attention deficit hyperactivity disorder (ADHD), autism spectrum disorders (ASD), foetal alcohol spectrum disorder (FASD) and head injury (HI) (Tyler, 2015; Baidawi and Piquero, 2021).

Difficulties related to NDDs can include the following: reduced executive functioning (e.g. effective decision making, attention, and impulse control) and impairments of intelligence, memory, adaptive functioning or social skills that ultimately impact upon aspects of social, occupational, academic and personal functioning (Young *et al.*, 2018; Holland, Reid and Smirnov, 2021). Moreover, young people with NDDs may be less able to make informed choices or understand the consequences of their actions and are particularly vulnerable to being coerced or manipulated by their peers (Sutton *et al.*, 2013). Although young people with NDDs can experience a range of difficulties, they may not display obvious signs of brain damage or impaired cognitive functioning (Dewan *et al.*, 2018). Additionally, the difficulties experienced by young people with NDDs may increase criminogenic risk (Mohr-Jensen *et al.*, 2019; Hughes *et al.*, 2012).

### *NDDs and offending*

NDDs may be missed by mainstream services, particularly where there is a lack of engagement or difficulties accessing services. The prevalence of NDDs is found to be disproportionately high in offenders (Hughes, 2012), but appropriate assessments, and subsequent interventions tailored to the needs of offenders with NDDs often occur too late, after earlier attempts to break the cycle of recidivism have failed (McLachlan *et al.*, 2014). NDDs are associated with a two- to three-fold increase in risk of arrest, conviction and recidivism (Young *et al.*, 2018; Mohr-Jensen *et al.*, 2019). Improved knowledge and awareness of NDDs within Youth Justice Services, as well as improving understanding of the influences of neurocognitive and neuropsychological impairments on the trajectories of offending is important for improving outcomes for these young people (Hughes, 2015).

Advocates and researchers have raised human rights concerns and have also highlighted an important question surrounding the appropriateness of detention for young people with NDDs (McSherry *et al.*, 2017; Tedeschi and Junewicz, 2018), with the United Nations Committee on the Rights of the Child (UNCRC) recently issuing a general comment stating that young people with NDDs should not be entering the Youth Justice Services at all (UNCRC, 2019). It is now well established that high numbers of children who come to the attention of Youth Justice Services have complex support needs, low levels of educational attainment, and far more unmet health needs than their peers (Talbot, 2010). These factors can increase the risk of further adverse consequences (Heanue *et al.*, 2022). Neglecting the complex needs of these young people creates an atmosphere in which control, punitive management and punishment of youth with NDDs may be accepted (McCausland and Baldry, 2017).

### ***Complexity of the lives of young people who offend***

When considering the requirement for increased knowledge and understanding of NDDs, there must be an appreciation of the complexity of lives led by young people who offend. Criminologists and psychologists consistently demonstrate that individuals who commit serious violent crimes tend to have experienced increased rates of trauma, abuse, and other harmful experiences in childhood, even when controlling for other environmental and biological factors (Fox *et al.*, 2015). Trauma symptoms and NDD-related impairments, such as overarousal, inattention, and emotional and behavioural regulation difficulties, overlap to a considerable degree (Kerns, Newschaffer and Berkowitz, 2015). Additionally, Traumatic Brain Injuries (TBIs) introduce another layer of complexity to the presentation of individuals who offend (Williams *et al.* 2010). Damage to specific areas of the brain, such as the frontal lobes, can result in increased impulsivity, loss of empathy and a lack of consequential thinking; all of which are associated with antisocial behaviour and offending (Dillien *et al.*, 2020; Mobbs *et al.*, 2007; Williams *et al.*, 2010). Although the prevalence rates of TBIs in young offenders can be as high as 72% in prison populations, it is an NDD which is under-recognised and poorly managed (Hughes *et al.*, 2012). Considering all of the above, appropriate assessment, diagnosis and intervention planning would need to be carried out by clinicians with an adequate expertise to differentiate whether behaviours are primarily a result of trauma, NDD, or both (Hoover, 2020).

### ***Experiences of professionals working with young offenders with NDDs***

A recent mixed methods study investigated the service needs of young people with NDDs within the Youth Justice Service from the perspectives of the service providers



in Australia (Heanue *et al.*, 2022). Professionals identified several key areas, consistent with existing literature, which needed adaptation to support young people with NDDs, produce effective outcomes, and ultimately reduce reoffending (Passmore *et al.*, 2020). These included: use of language, availability of resources, increased liaison with other agencies, and knowledge and understanding of NDDs (Heanue *et al.*, 2022).

### ***Working together to support young people who offend***

The development of partnerships among health and justice professionals is imperative to appropriate neurodevelopmental assessments, joint understanding between agencies involved, and tailored interventions to produce effective outcomes (Reid *et al.*, 2020). Multidisciplinary approaches across health, social care and education may facilitate more rigorous screening and assessment, potentially improving the identification of young people with NDDs in the Youth Justice Service and increasing opportunities to divert these young people away from prisons, or to deliver appropriate therapeutic support and interventions (Tedeschi and Junewicz, 2018). In Scotland, Youth Justice Services underwent significant service development following a punitive period in youth justice policy which was greatly opposed in practice (Robertson, 2017). The Whole Systems Approach (WSA) presented a novel approach to improving long-term outcomes for children and young people in the youth justice system by diverting them away from statutory measures. The WSA provided a clear focus since its implementation in 2011 (Scottish Government, 2015). One of the identified priorities for Youth Justice Services was partnership working and shared learning across agencies.

### ***Rationale for this study***

Cross-nation research has established that there is a disproportionately high prevalence of young people with NDDs involved in offending. Understanding the pathways or risk factors increasing the likelihood of a young person with an NDD offending would improve early and effective identification and interventions (Hughes, 2015). In addition, a more in-depth understanding of the specific needs of young people with NDDs regarding preventative intervention, assessment, or underlying needs relevant to offending behaviour and the use of Youth Justice Services would contribute to the improved long term outcome for this disproportionately disadvantaged group of young people (Hughes *et al.*, 2012); in line with Scottish Government priorities (Scottish Government, 2015).

### ***Objectives***

This study aimed to explore the perceptions of pathways into offending experienced by young people with NDDs from the perspective of service providers. The project also explored the service providers' experiences of working with young people with NDDs, their specific service needs and use of Youth Justice Services, and the methods by which the service providers assess the needs of this group within their services.

### ***Research questions***

Four research questions were identified:

- (1) What are the service providers' perceptions of pathways into offending experienced by young people with neurodevelopmental disorders?

- (2) What are the service providers' experiences of working with young people with neurodevelopmental disorders in Youth Justice Services?
- (3) What are the service providers' perceptions of any potential specific needs young people with neurodevelopmental disorders have from Youth Justice Services?
- (4) What methods do service providers use to assess the needs of young people with neurodevelopmental disorders in Youth Justice Services?

## **Methods**

### *Design*

This study utilised a qualitative design which involved conducting semi-structured interviews with staff members of youth justice social work services across Glasgow. In-depth qualitative interviews allowed participants to explore and reflect on their experience at a deeper level than a structured interview or qualitative questionnaire would have. The semi-structured design allowed for follow up questions to be asked, eliciting a more detailed response. Interview flexibility allowed for exploration of new and emerging themes; ultimately reducing potential bias from the researcher as to what data might be expected from participants. Interview questions [Appendix 3 pg. 93] were prepared ahead of time and were based on the objectives and research questions stated above. The interview guide allowed for a degree of consistency of the topics explored in the review, however, the order in which the pre-formulated questions arose was flexible. This was to allow the interviews to have a natural conversational flow, attempting to reduce any anxiety from participants.

### ***Inclusion and exclusion criteria***

To be included, staff members needed to be employed by youth justice social work services across Glasgow who came into frequent contact with young people with NDDs in a professional capacity. Two or more years of experience was required to ensure that participants could draw adequately on their professional experiences. Additionally, the staff members needed to have some involvement in writing social work reports which may involve the identification of NDDs and subsequent recommendations for interventions.

### ***Participants***

A member of the research team contacted the Youth Justice Social Work Service team leads to inform them of the research. Participant information sheets [Appendix 4, pg. 94] were circulated to staff within the teams, along with the contact information of the principal researcher. Staff members were invited to contact the principal researcher directly if they were interested in taking part in the research. Ten staff members across two arms of the youth justice teams (Intensive Support and Monitoring Services and Youth Justice Social Work) who met the inclusion criteria, contacted the principal researcher, and interviews were arranged. Recruitment occurred between August 2021 and November 2021. All interested individuals were able to attend the arranged interviews, so recruitment ceased following completion of the final interview. Therefore, the final sample consisted of ten participants.

### ***Participant demographics***

Of the ten participants who were interviewed for this project, 6 were female and 4 were male.

### ***Participant experiences of working in services***

At the time of the interview, the mean number of years working within youth justice social work was 10.3 years, with a range of 2-17 years. Nine were qualified social workers, and one participant was a social care support worker. Of the nine qualified social workers, four were currently working as team leaders, seven were working with the Intensive Support and Monitoring Services (ISMS) and three were working within the local area social work teams [Appendix 10, pg. 100]. Most participants stated that they had received training from the Forensic Child and Adolescent Mental Health Service (FCAMHS) on using formulation approaches to understanding an individual's presentation, which included how this can be affected by NDDs.

### ***Data collection***

Interviews were conducted using Zoom online video conferencing software as on-going Covid-19 restrictions did not allow for interviews to be conducted face to face.

Interviews were audio and video recorded and they were all conducted by the principal researcher who had not had any contact with the participants prior to the research. At interview, participants were invited to read the information sheet again to ask any questions. Eligibility to participate was checked by the researcher. As consent forms had been signed and returned to the researcher ahead of the interview, verbal consent was obtained before commencement of the interview, to ensure consent was fully informed. Participants were given an opportunity to debrief at the end of the interview

if they felt distressed by any of the content. All interviewees participated from their own homes with no one else present. Interviews lasted between 40 and 60 minutes, and no repeat interviews were required. All identifiable information was removed when the interviews were transcribed, and participants were assigned a pseudonym to protect their anonymity.

### ***Process of analysis***

*Transcription:* Zoom generated automated transcriptions of the interviews, and these were reviewed and edited by the lead researcher to ensure the transcriptions were verbatim. This was completed as close to the interview as possible to allow on-going familiarisation with the data. For an example extract of a transcription see Appendix 5 [pg. 95]. Transcripts were not returned to the participants for checking due to time constraints.

*Thematic analysis (TA):* This research was concerned with getting an in-depth understanding service providers' experiences of working with a neurodiverse population. The theoretical freedom of TA allowed for an inductive, 'bottom-up', approach to analysis, focussed on patterned meanings, rather than trying to fit themes into pre-existing theoretical frameworks. (Braun and Clarke, 2021). Following the six-stage process of TA (Braun and Clarke, 2021), transcriptions were systematically and thoroughly coded by the principal researcher. From here, initial themes were generated through identifying broader, shared meanings across the dataset. A thematic map of the main themes was generated, and from this themes were refined, defined, and redefined in an on-going process, through discussions with supervisors, until the final themes and subthemes had been identified.

### *Reflexivity*

The main researcher took a reflexive approach to TA, allowing for reflection on their role, assumptions and biases which could have otherwise influenced the research process. The principal researcher conducting the interviews was a female Trainee Clinical Psychologist on the Doctorate in Clinical Psychology programme at the University of Glasgow. They were also a qualified Clinical Associate in Applied Psychology and a registered Mental Health Nurse, with work experience in both forensic settings and with Child and Adolescent Mental Health Services (CAMHS).

The principal researcher therefore deemed themselves as working within their level of competence, in terms of conducting and understanding the content of the interviews, as well as interpreting the meanings of the data. The researcher's clinical work has involved carrying out comprehensive psychological assessment and intervention for individuals with NDDs in community Child and Adolescent Mental Health Teams. The authors interpretation of data has likely been influenced by this experience, for instance though a knowledge of best practice guidelines of assessment and interventions for young people with NDDs (National Institute for Health and Care Excellence, 2021).

Although having a subjective researcher has been identified as a key feature of reflexive thematic analysis (Luttrell, 2019), to reduce any potential bias, time was spent reflecting on any potential bias that arose from interviews; ensuring the focus was on participant's experiences rather than personal assumptions. Anonymous field notes were kept during the collection of data to aid this reflection. Two members of the research team reviewed the transcripts relating to proposed themes and rich verbatim

quotes were included in the findings to consolidate findings. Attempts to uphold academic rigour were made at every stage of the research process.

The principal researcher, though clinical work, is used to maintaining self-awareness and avoiding leading questions. This should have reduced any potential verbal or non-verbal influencing. The researcher had their microphone muted when not talking to ensure that the recordings were picking up the participant's voice. Although having visual feedback from the researcher in the form of non-verbal communication, at times there was a sense that participants felt they needed to keep talking about a point due to limited verbal feedback. This may have increased social desirability bias to 'do well', and therefore influenced findings, with one participant asking if they 'passed'. After this was recognised in the first two interviews, the rationale for the researcher muting their microphone was made clear to the remaining participants, to reduce any inference that the lack of verbal feedback could mean they needed to continue giving information.

### ***Ethical issues***

Prior to the research commencing, ethical approval was granted by the College of Medical, Veterinary & Life Sciences Ethics Committee for Non-Clinical Research Involving Human Participants [Appendix 6, pg. 96]. Following this, ethics approval was granted by Glasgow City Health & Social Care Partnership (HSCP) [Appendix 7, pg. 97]. As this research involved staff members as opposed to service users, NHS Research and Development approval was not required. A Data Protection Impact Assessment [Appendix 8, pg. 98] and Privacy Notice [Appendix 9, pg. 99] was completed and approved before sharing the latter with participants to inform them of



how their data would be collected, stored, and used, in line with current data protection regulations. Informed consent was obtained, and anonymity of participants, maintained.

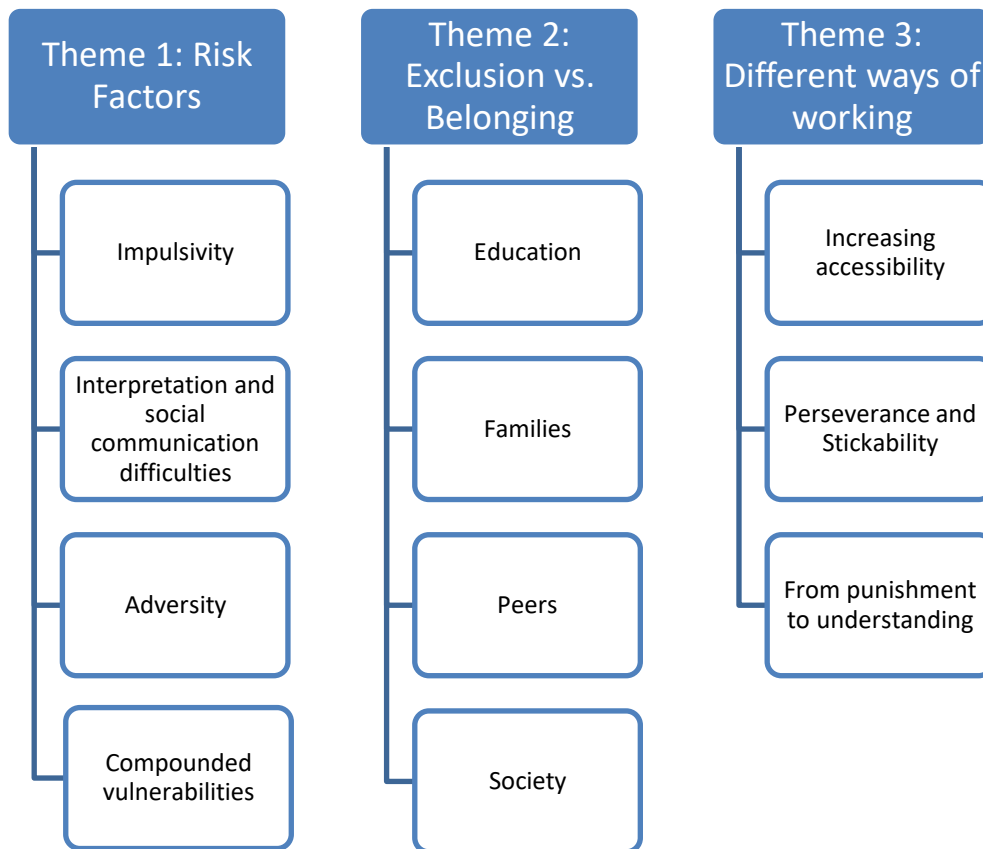
## **Results**

This section will explore the three key themes that were identified from the interviews. Thematic analysis offers a robust method for developing, analysing patterns across an entire qualitative dataset (Braun and Clarke, 2021). As participants were encouraged to reflect as freely as possible about their experiences of working with young people in their services who had a formal diagnosis of an NDD, or those with elevated traits of an NDD, the themes that were developed had some degree of overlap across research questions. Aspects of the main themes and subthemes will be reported on with reference to the research question being addressed.

### ***Data analysis***

All 10 participants had experience working closely with individuals with, both diagnosed and suspected, NDDs. Participants were able to reflect on their general experiences of working with this group of young people, their experiences of their specific service needs in comparison to neurotypical young people who offend, as well as their professional experiences of the pathways and risk factors for offending for young people with NDDs. The NDDs referred to within the interviews consisted of ASD, ADHD, HI (including TBI), FASD, LDs and dyslexia, and participants were encouraged to reflect on their experiences of working with young people with NDDs both at present, and in the past. The findings are discussed within an analytic narrative

and presented under three superordinate themes: ‘Risk Factors’, ‘Exclusion vs. Belonging’ and ‘Different Ways of Working’ [Figure 3]. Extracts from the transcripts have been provided to illustrate the themes.



*Figure 3 Super-ordinate and sub-ordinate themes*

***Theme 1: Risk Factors***

Risk factors increasing a young person’s likelihood of committing criminal offences appear to be complex and multi-faceted. From participants reflections, two subordinate themes were developed relating to factors that were exacerbated for individuals with a suspected or diagnosed NDD (‘Impulsivity’ and ‘Interpretation and Social Communication Difficulties’), one subtheme (‘Adversity’) was developed from reflections on the impact of various traumas on an individual, not-specific to having a

NDD, and one subtheme ('Compounded Vulnerabilities') was developed from reflections on there being a combination of factors both NDD specific and non-NDD specific which could increase a young persons' propensity to commit crime. This theme addressed Research Question one by exploring the service providers' perceptions of why young people with NDDs offend.

*Impulsivity:* A theme of impulsivity, and how that can impact on a young person's ability to think through their actions, was evident. For some participants, this was related specifically to a predisposition to acting impulsively due to having a diagnosis of ADHD. This impulsivity appeared to be associated with an inability to think through the consequences of impulsive actions.

*'So sometimes if they have the additional complexity of ADHD, for example, [...] they are less likely to take a minute and have a think about the consequences and just charge straight in.'* [Participant 7]

*'And they certainly don't realise that they are putting other people at risk because it's just a very low impulse control they get involved very quickly. A burst of aggression and then move, they don't move from zero to 10 slowly, they do it very quickly in the moment and, unfortunately, they end up in some very serious situations in front of the sheriff, or the Procurator Fiscal, or the police.'* [Participant 3].

For other participants, this was described as impulsivity in the sense of thrill-seeking, and how this could naturally result in a young person being more vulnerable to

committing crime. A few participants reflected on how for young people this impulsivity might be exacerbated through substance misuse.

*'With ADHD I suppose impulsivity, like that real sensation seeking thrill seeking 'I'm bored, I'm bored, I'm bored', and then that just leads to substance misuse, and running about the Southside of Glasgow robbing every shop.'*

[Participant 1]

Although most participants spoke about impulsivity relating specifically to those with an ADHD diagnosis, there appeared to be some participants who reflected on impulsivity across NDDs in general. Some participants also reflected that this impulsivity manifests across settings, including at school, and can be a risk factor for poor educational attainment.

*'You know, you're talking about poor attention span [...] generally speaking, being really impulsive and unable to concentrate in a classroom or any kind of structured setting.'* [Participant 9]

*Interpretation and Social Communication Difficulties:* All the participants mentioned at least one risk factor for engaging in offending behaviours. One of these were communication difficulties exacerbated by an NDD and included difficulties interpreting interpersonal and social communication such as body language, social nuances, or understanding consent. This was particularly apparent when participants were discussing young people with ASD diagnoses.

*'There's that marked difference in the quality of their interactions that that feels very different from a neurotypical child [...] They struggle with inference and*

*nuance and conversation, and they would be quite blunt or deemed to be rude often, or cheeky, but in actual fact that's their either undiagnosed or misunderstood autism.* ' [Participant 1]

Participants highlighted these reflections by drawing on examples of sexual offences.

*'[...] for example, the misreading of a situation resulting in a sexual assault, it's not as simplistic to just talk about power and control and sexually harmful behaviour, we need to also set that context of limitations around that autism. How much understanding is there of that social relationship and boundaries and consent and all that stuff? [...] on occasion we will get quite a significant sexual offence in and you can always anticipate the young person being on the spectrum.'* [Participant 7].

There also seemed to be an element of how young people with more rigid thinking styles, a feature of ASD, provide a rationale for their offending.

*'I've got a boy just now who's on the [autistic] spectrum who's drug dealing. And he is quite open with me about it [...] and he's very black and white, 'well, I can't get a job that I want, I can do this, nothing's going to happen to me, and I'm making X amount of money a week, which I give my mum and that helps my mum, so what's the problem here?'* [Participant 7]

Most participants also mentioned how young people with NDDs can have difficulties understanding the intentions of others, which can put themselves at risk through vulnerability to exploitation.

*'They [young people with NDDs] are more at risk I think, generally speaking. You could argue less street savvy you know. [...] they're more likely to be the fall guy in situations as well, whether that's from peers or other exploitative adults.'* [Participant 9]

In addition to the risk factors for offending associated with having a NDD, participants also reflected on how communication risk factors can impede on an individual's ability to engage with services.

*'It was found [through assessment] actually she was functioning, even though she was like 14/15 years old, she was functioning at a level of a seven-year-old in terms of her speech and language and just kind of general cognitive development. She was supported in terms of like providing information to the court, in terms of like how she was to be questioned in the stand'* [Participant 9]

*'You know, language, how you speak and the way you speak to young people and often that's misunderstood or it's too complex.'* [Participant 1]

*Adversity:* Adversity was discussed in terms of social adversity, and familial adversity, including parental substance misuse, attachment difficulties, domestic violence, and significant familial bereavement. Participants also spoke of young people growing up in families where parents are in prison, or whereby attachment may have been disrupted through being accommodated. A combination of different forms of adversity appeared to be a feature in many young people's lives. Reference was made to how these events or lifestyles had a normalising effect on young people.

*'I think, I think we have lots of violent young people who have been exposed to bouts of violence, be that domestic, community, peer violence, and there's a real normalising of that for them.'* [Participant 7]

*'There will be a lot of drug and alcohol addiction within the families, there will be domestic abuse generally within the families. The kids might have experienced abuse or neglect, and they might have significant trauma as a result of all of those things...they might have witnessed someone in their family getting murdered.'* [Participant 4]

*Compounded vulnerability:* Within all interviews, a sense of high levels of complexity in the lives of the young people participants encounter within their work, was apparent. Participants often spoke about how difficult it was to differentiate between the impact of NDDs and the trauma young people had experienced on their propensity to offend. Participants also spoke about the importance of holding the various impacting factors in mind when formulating an individual's difficulties, as this would be what guides intervention development in collaboration with other professionals, rather than needing to fixate on whether a diagnosis was correct or not.

*'To kind of grasp the complexity, we have a child that both things are in the mix and we can't really separate what their interactions, the particular interactions on a day might be about ASD, it might be about significant trauma history, their really poor attachment, their sort of... stability and insecurity that they've had their whole life and, in this situation [offending], that all comes to the fore so it's trying to communicate that to other professionals. I think sometimes that you know we can't disentangle it, but we have to remember it. We have to remember both elements.'* [Participant 1]

## **Theme 2: Exclusion vs. Belonging**

Regarding participants experiences of risk factors and pathways into offending for the young people in their services, all participants reflected on the reasons why someone might continue a cycle of offending. Participants described how a lack of understanding of a young person's difficulties by those around them could result in a young person feeling excluded, and therefore becoming susceptible to seeking a sense of belonging through other avenues, such as a peer group of young people who also offend.

This sense of exclusion and belonging led to the development of four sub themes: 'Education', 'Families', 'Peers', 'Society'. This theme also answered Research Question one, but also touched on Research Question three by participants identifying the specific needs of young people with NDDs.

*Education:* Participants highlighted how schools can often mistake the difficulties associated with NDDs as misbehaviour. Exclusion from school was a factor the majority of participants associated with ongoing offending.

*'When education pick up these things [difficulties associated with NDDs], it's misunderstood as behavioural [...] there's probably a bit of prejudice and discrimination about people's backgrounds. These are kids from the worst socioeconomic groups, from areas that people behave badly, and they offend, and it's the culture of the place [...] rather than, we have a child here in the middle, who has a diverse neurodevelopmental disorder.'* [Participant 1]



The majority of participants reflected on how families do not have an adequate understanding of the young person's difficulties. This lack of understanding can lead to young people being excluded from birth families and foster families. Participants also referred to young people being moved around foster homes due to the complexity and challenging nature of their behaviours, resulting in repeated exclusions over time.

*'Families very often can't cope; they don't have that understanding of what that individual young person needs.'* [Participant 3]

*'If you've got a child who has got quite challenging ADHD or challenging behaviours in terms of opposition or conduct diagnosis, a foster carer will go 'do you know what, I can't handle it anymore, on to the next, on to the next, onto the next' [...] in in some of my most significant offenders, that's very clearly evidenced. They have had lots of relationships breakdowns and quite often those neurodevelopmental needs are what's contributed to the breakdown in that placement.'* [Participant 7]

*Peers:* All participants reflected on how the experience of feelings of exclusion are often mediated through peer groups, yet how this often is through associations with peers who also offend.

*'I think they're more susceptible in some ways to becoming involved in offending, and some of that really is down to a feeling of need for connectedness to their peers.'* [Participant 9]

*'But they really struggle with, whether that be ASD or learning disability, about how to gain a place, to gain acceptance and a sense of belonging. They gravitate to a negative peer group and often either get involved in all this offending, or they are that kid in that group that will take it that little bit further, because they think they have to compensate.'* [Participant 1]

Two participants reflected that the influence of peer groups on an individual was not unique to individuals with NDDs, but rather that it was a normal part of adolescent development:

*'As we all know, the adolescence is a very specific time of belonging to a group and finding yourself what you want to do in your adult life.'* [Participant 3]

*Society:* A few participants also reflected on the wider society aspects that can perpetuate, and normalise, offending for young people.

*'Depending you know, on where you might live, and your access to peers, um may be pro social but equally, you may live somewhere where the communities are more pro criminal, before you know, those elements will determine your route into the criminal justice system.'* [Participant 10]

### **Theme 3: Different ways of working**

This superordinate theme encompasses the full range of adaptations that participants felt services needed to make to work effectively with a population of young offenders with NDDs. This theme addresses Research Question two, three, and four through exploring service providers experiences of working with young people with NDDs. It also draws on specific needs and assessments of these.

*Increasing accessibility:* All participants identified at least one way in which they needed to adapt their approaches to increase the accessibility of services to facilitate a young person with a NDD engaging with the assessment and intervention process. One

participant described that often an individual's NDD is not considered in terms of accessing services, yet if the difficulties were physical in their nature, this might not be overlooked.

*'I think if a young person walked in with a physical disability, it would be, how do we make this better for you, what can we sort out to help you get to this building.'* [Participant 10]

Regarding assessing the needs of young people with NDDs, participants reflected that if they suspected mental health difficulties, or an undiagnosed NDD, the young person may need to attend community Child and Adolescent Mental Health Services (CAMHS) if the young person's care was under the social work area teams. All participants reflected that often an approach to service accessibility through sending out appointment letters with a time, date and location, was not appropriate for this group. Some participants highlighted the difficulties that young people with NDDs can have with reading and writing, and how receiving appointment letters can be a barrier to accessibility. Most participants reflected on how services like CAMHS, can be particularly inaccessible to this group of young people, as appointment letters are often the chosen communication method, and rigid discharge policy.

*'I think mental health services need to move from their white rooms and expecting young people to turn up at 10 o'clock on the button, not under the influence, and able to pour their hearts out about a trauma journey. It's unrealistic [...] We have CAMHS who will say, 'they've not showed up for 2 appointments, so we're closing the case' [...] I would like to see CAMHS work less rigidly, more proactive.'* [Participant 7]

Most participants reflected on how they spend a lot of their time doing outreach work in the communities, away from the “corporate” and “clinical” office spaces and found that this increased an individual’s likelihood to be able to build a therapeutic relationship with a worker. There was also a sense across interviews that the proactive outreach, often required to increase engagement, was the responsibility of the service provider.

*‘I think that’s about how we engage, rather than how the young people engage, because I think it’s our responsibility.’ [Participant 4]*

*‘We need to soften our approaches and be more outreach and connecting and meeting young people on their levels, rather than expecting them to grow up and do all these big grown-up things when really there’s been so much that they’ve had to face in their lives.’ [Participant 6]*

*Perseverance and Stickability:* Many participants recognised that a proactive and persevering approach is needed to initiate contact with a young person and their families due to them being a hard-to-reach group.

*‘We are quite proactive because they are hard to reach, it can be weeks and weeks and weeks and weeks of trying and supporting, in order to do that.’*

[Participant 4]

It was evident that participants placed high importance on the strength of the therapeutic relationship for being able to provide meaningful assessment and support to a young person.

*'If that legwork is put in at the outset in terms of building a relationship, and the stickability and perseverance is there, it sets you in good stead to form a really positive therapeutic relationship.'* [Participant 9]

*'We use our relationships a lot, so I mean, that's the main thing, the relationship, no question about it. The interventions will be unsuccessful across the board if there is there's no relationship.'* [Participant 7]

All participants also reflected on how, within their teams, they had the ability to persevere and provide outreach to young people. They also recognised that other services, for example CAMHS, may not have the resource to facilitate this in terms of staff availability, long waiting lists, and service funding.

*From punishment to understanding:* There was a sense that, although there have been improvements over the past few years, the police and the courts still tend to approach their work with a punitive stance, which can result in decisions being made that do not consider a young person's NDD-related needs.

*"Their [police] lens is punishment, punitive and public safety, and I'm going right okay, I hear you, but actually, what about the fact he's been in 16 homes up to now? What about the fact that his mum died of a drugs overdose, and he found her? And they go "aye I know, we hear all that, but that still doesn't mean it's alright to do x,y&z" [commit crime]. I know, but can you see the link? Can you think about the link? And that's quite difficult and that's the same with court and quite often in other services [...] you canny punish them [young*

*people with NDDs] better. We are not going to punish anybody better, we know that, so can we please look at something different. ' [Participant 7]*

Service providers, working within the ISMS teams in particular, highlighted the benefits of working closely with the Forensic CAMHS (FCAMHS) service.

Participants spoke of how formulation is being used across the service to provide a means through which to understand the young persons' difficulties and life stories.

Understanding was occasionally discussed as being deemed more important than whether a young person suspected of having a NDD, has a diagnosis or not.

*'In social work, I think we've changed a lot [...] So its whether CAMHS diagnose or not, I just want to understand [...] I don't really care about the label, I just want to understand, because if we can understand, we can help. '[Participant 4]*

It was evident that this understanding or formulation was invaluable for providing appropriate support, and that if a formulation was completed by FCAMHS, it was important to share this with the young person, their families, and other agencies such as education or the courts, to achieve the best outcomes for young people.

*'It's [formulation] a professional sounding board about where different agencies can come together, and FCAMHS have got a specific role to play in that. They can actually observe and assess young people's Mental health needs or developmental needs. Whereas we are coming from a social perspective [...] Its about bringing it together. ' [Participant 3]*

Understanding the interplay between many complex and interrelating factors appeared to be the most significant factor in obtaining the best outcomes for this population.

FCAMHS had a valued role in developing that understanding and service providers felt that moving from a position of punishment and punitive working, towards one of understanding, was a priority for all services working with young people who offend.

### ***Other results to consider***

*Training:* Participants were asked about whether they thought themselves and their colleagues had an adequate understanding of NDDs. All participants commented that they had received training on NDDs. Five participants' thought they did have an adequate understanding and would welcome continued training. Four participants reflected that they did feel they had an adequate awareness and highlighted that its support with the application of the learning that they find the most important for guidance with. One participant felt that they did not have an adequate awareness and stated that they were actively seeking out training.

## **Discussion**

### ***Main findings in the context of existing literature***

The main aim of this study was to explore the pathways into offending experienced by young people with NDDs, from the perspective of service providers. The project also explored the service providers' experiences of working with young people with NDDs, their specific service needs, and the methods by which they assess the needs of this population within their services. Three main themes were identified: "risk factors"; "exclusion vs. belonging"; and "different ways of working".

Resembling previous research by Hughes (2015), participants all reported working with large numbers of young people, with a variety of diagnosed or suspected NDDs. The lives of young people who offend are highly complex, and adversity is a prominent feature. The main findings from this research demonstrate that pathways into offending for these young people are multi-faceted and inter-related. Thus, the aetiology of offending for young people with NDDs may be a result from several personal and systemic factors.

Firstly, as mentioned by a participant in this study, teenagers go through a period of acting impulsively, whereby they appear to act without thinking and take more risks, as part of normal child development (Zimmermann, 2010). However, as a core feature of the NDDs (Young *et al.*, 2018; Holland, Reid and Smirnov, 2021), impulsivity could be exacerbated for young people with NDDs. Difficulties thinking through the consequences their actions, when coupled with the other findings of this study, discussed below, appear to be risk factors for offending for young people with NDDs.

Secondly, NDDs can predispose an individual to experiencing difficulties with communication and social interaction (Holland, Reid and Smirnov, 2021). In this study, reference was made to social and communication difficulties making it harder for young people with NDDs to appropriately interact in relationships, understand the nuances of consent, and learn within mainstream education. This could leave them at increased risk of committing offences or being excluded from school. Furthermore, as demonstrated in this study, the impact of social communication difficulties on peer



relationships could result in either the young people seeking belonging in a peer group that also offend, or them being at risk of exploitation from others.

The impact of wider societal factors, such as deprivation and the postcode-lottery associated with disadvantage and subsequent offending (Giles, 2020), were highlighted in this research. Findings suggested that exclusion from school, a lack of understanding from families, and experiencing adversity (such as trauma or abuse) throughout their lives, placed individuals with NDDs at higher risk of offending. Neglected, traumatised, or abused young people can often experience a decrease in concentration, and an increase in hyperactivity and behavioural difficulties (Kerns, Newschaffer and Berkowitz, 2015). As these mimic features of ADHD, young people with NDDs may be at even further disadvantage of elevated offending risks through compounded vulnerabilities.

When considering the needs and of young people with NDDs using youth justice services, overall, the findings from this research are in line with findings by Heanue *et al.*, (2022). They sought to understand the experiences of youth justice staff in Australia and focused their study on the practices, needs and support for young people with NDDs. They found very similar results to this study with the needs being: practical and adaptable strategies; clear language, more resources, preventative interventions/ restorative justice, and liaison with other stakeholders. There is overlap between these, and the subthemes identified in this study of: interpretation and social communication difficulties, increasing accessibility, and from punishment to understanding.

Finally, is a clear sense that communication difficulties can act as a barrier to young people with NDDs accessing, and engaging with, support from services, including the courts. Communication barriers appeared to remain present across community mental health services, with traditional ways of contacting and engaging with young people with NDDs, being questioned by participants. It was recognised by this study, and Heanue *et al.*, (2022), that limited resource in community services can act as a barrier to young people with NDDs getting the support they require.

### ***Implications for policy, practice, and future research***

Overall, considering the results from this study, supported by Heanue *et al.*, (2020), there are clearly important implications for practice and policy that need to be considered when working with individuals with NDDs in youth justice services.

Firstly, adaptations are required to allow meaningful access and engagement with youth justice services. The language used by all professionals engaging with this population needs to be simple and clear. This becomes especially pertinent when taking into account the level of impairment in this population that is unrecognised and underestimated (Holland, Reid and Smirnov, 2021).

Secondly, a recognition of the importance of increasing liaison between families, young people, and other professions, was present in this study. The Whole Systems Approach (WSA) aims to improve long-term outcomes for children and young people in the youth justice system, and advocates for joined-up working between agencies (Scottish Government, 2015). Participants in this study evidenced the benefits of working closely

with other services, such as FCAMHS, thus, continued implementation of this approach is of benefit. However, it was recognised that with community CAMHS teams, this was more difficult due to a lack of resource and funding. Future practice, policies and funding opportunities should aim to continue with the progress made on joined up working if young people with NDDs in the youth justice system are to experience increasingly positive outcomes. Schools may also benefit from more training around the presentation of NDDs in young people, to improve understanding, reduce exclusion, and perhaps to increase earlier recognition of NDDs. As one of the priorities for Youth Justice Services set out in the WSA was for shared partnerships and shared learning across agencies, future research could focus on the understanding and upskilling of professionals on the identification of NDDs within education. This could in turn, reduce the risk factors that result from the misattribution of difficulties to behavioural problems, as well as the risk factors that school exclusion can have on the development of offending behaviours.

Further, a desire to increase formulation type approaches to youth justice, to increase understanding of NDDs for stakeholders, was evident in this study. Along with this came a desire to reduce punitive approaches. Considering the United Nations for the Convention on the Rights of the Child's recent statement (UNCRC, 2019), there was a sense from participants that, although there had been progress in recent years, there remained a punitive approach from legal stakeholders. Further research into the courts understanding of the impact of NDDs and adversity on a young person's behaviour, communication and social difficulties, could be beneficial.

Research question four related to methods of assessment for young people with NDDs. Participants tended to answer this question through reflection on engagement and relationship building, and access to CAMHS and FCAMHS. Participants reflected that engagement was crucial for getting buy-in from the young person, ahead of considering assessment. Suggestions for improving a services engagement with young people included: increasing perseverance, stickability and flexibility; adapting communication methods (e.g. consider changing from sending letters to texts); and considering outreach approaches and moving away from ‘*white clinic rooms*’.

### ***Strengths and limitations***

This study provided insights into the pathways of offending, and service needs, of young people with NDDs who offend. From the generated themes, key implications for policy and practice were identified, and despite this being a small-scale study, limited to youth offending services in Glasgow, the findings could be of great benefit in improving outcomes for young people with NDDs.

Regarding data analysis, themes were data driven, rather than from a predetermined coding framework. This should have resulted in themes being generated that were an accurate reflection of participant experiences. Participants had a wealth of experience working in youth justice, who felt overall that they had adequate knowledge of the impact of NDDs on young people. Included quotes were decided on based on demonstrability and conciseness of the point being made. Therefore, while three participants do not have quotes included. the resulting themes encompassed, and were an accurate representation of, all the participant experiences.

There are, however, criticisms of qualitative research in general, which emerge from the subjectivity of data analysis and the interpretation of findings. Following the process of TA set out by Braun and Clarke (2021) enabled academic rigor to be upheld at all stages of the research. Additionally, the principal researcher made every effort to maintain a reflexive stance by reflecting on potential bias and assumptions throughout. Lastly, on occasion, internet connections disrupted the flow of the interview, and some data was lost through the programme ‘freezing’. Attempts were made to encourage the participant to recap what they had said prior to the disruption, however, the impact of this is unknown.

## **Conclusions**

This research explored the pathways into offending, and service needs of young people with NDDs, from the perspective of service providers. The sheer complexity of these young people’s lives was highlighted, and several risk factors, both personal and systemic, were identified for increasing the risk of offending. Services need to take responsibility for reducing the barriers to access and engagement faced by this population, so that the complex, yet vital, needs of young people with NDDs can be met. It is hoped that this research will influence future practice, policy, and research to improve outcomes for these young people.

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# Appendices

## Appendix 1. Search strategy

1. ((disab\*) adj3 (intellectual or learning)).tw.
2. ((mental\*) adj3 (handicap\* or retard\*)).tw.
3. ((delay\* or disorder\*) adj3 (development\*)).tw.
4. 1-3/or
5. (disorder\* or disab\*) adj3 (neurocognit\* or neurodevelop\*).tw.
6. autis\* or ASD or ASC or PDD or Asperger\*.tw.
7. (disorder\* or impair\* or disab\*) adj3 (communicat\* or language\* or speech\* or sound\*).tw.
8. ADHD or “ADD” or attention deficit hyperactivity disorder\*.tw.
9. (disorder\* or deficit\* or impair\*) adj3 (attent\* or hyperactiv\* or hyperkinetic\* or impulsiv\* or innatentiv\* or overactiv\*).tw.
10. ((specific learning disorder\*) or dyslexi\* or dysgraphi\* or dyscalculi\*).tw.
11. ((motor disorder\*) or tic\* or Tourette\*).tw.
12. ((Foetal alcohol) or (fetal alcohol)) adj3 (spectrum or disorder\*) or (FASD).tw.
13. 5-12/or
14. ((head or brain or traum\*) N3 (injur\* or traum\* or damage\*))
15. 4 or 13 or 14
16. (justice or crim\* or legal or law\* or polic\* or judicial or court\* or sentence\* or correction\* or (youth offen\*) or offen\* or prison\* or incarcerat\* or delinquen\* or jail\* or perp\* or arrest\* or inmate\* or penitentiari\* or recidiv\* or re-offend\* or cybercrime).tw.
17. ((peer pressure\*) or choice\* or moral\* or motivat\* or reason\* or justif\* or path\*).tw.
18. ((understand\* or aware\*) adj3 (lack\*)).tw.
19. 17-18
20. 15 and 16 and 19

## Appendix 2: Original key themes from studies included in systematic review

Table 3

Reference	Key themes	Summary of the theme	NDD diagnosis
<b>Courtney, Rose &amp; Mason, (2006)</b>	1) Blaming others	Blaming the offence on others, mainly the victim, regardless of age or circumstance	ID
	2) Denial	Minimising their part in the offence, or denying any recollection or understanding	
	3) Poor me	Seeing themselves as the victim of mistaken intentions	
	4) Ignorance	Claiming ignorance of the skills required to initiate an appropriate social encounter, or the illegality of the offence	
<b>Tidefors, &amp; Strand (2012)</b>	1) Impulsivity	Difficulties controlling their impulses, in general as well as emotional regulation	ADHD
	2) Aggression	Aggression expressed by the participants, as well as reports of intergenerational expression of aggression from their families	
	3) Early Relations	The trauma, neglect, betrayal, unpredictable care from caregivers; often generational	
	4) Encounters with society	Difficulties at school, lack of support from professionals and frequently changing schools, families/homes/ friendship groups	
Reference	Key themes	Summary of the theme	NDD diagnosis

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<b>Payne <i>et al.</i> (2020)</b>	1) Social Difficulties	Difficulties interacting with, and understanding, other people, including knowing about social boundaries, how to approach others, feeling different and difficulties understanding others' reactions	ASD
	2) Misunderstanding	Being unaware of the consequences of their actions, the seriousness of their behaviour, a lack of perspective taking, misunderstanding the rules, and reasoning differences	
	3) Sex and relationship deficits	A desire to have a sexual experience; when this was not deemed accessible through conventional means, seeking individuals out online was easier; misunderstanding consent	
	4) Inadequate control	A sense of losing control, getting carried away in relation to their lack of experience of appropriate relationships and immaturity	
	5) Disequilibrium	The impact of significant life events, adversity, trauma, and a lack of support for difficulties from families and professionals	

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**Abbreviations:**

ADHD= attention deficit hyperactivity disorder

ASD = autism spectrum disorder

ID = Intellectual disability

NDD = Neurodevelopmental disorder

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## Appendix 3: Interview schedule

The interview schedule for this project can be accessed online at:

<https://mfr.osf.io/render?url=https://osf.io/7r9hp/?direct%26mode=render%26action=download%26mode=render>

## Appendix 4: Participant information sheet

The participant information sheet can be accessed online at:

<https://mfr.osf.io/render?url=https://osf.io/gbkez/?direct%26mode=render%26action=download%26mode=render>

## Appendix 5: Sample of a transcription.

The sample transcription can be accessed online at:

<https://mfr.osf.io/render?url=https://osf.io/5wsr8/?direct%26mode=render%26action=download%26mode=render>



Appendix 6: Project approval letters and other relevant correspondence;  
Ethics approval from MVLS

Appendix 7: Project approval letters and other relevant correspondence; Ethics approval from Glasgow HSCP Social Work

## Appendix 8: Data Protection Impact Assessment

The Data Protection Impact Assessment can be accessed online at:

<https://mfr.osf.io/render?url=https://osf.io/2feuv/?direct%26mode=render%26action=download%26mode=render>

## Appendix 9: Privacy notice

The privacy notice can be accessed online at:

<https://mfr.osf.io/render?url=https://osf.io/f7w5j/?direct%26mode=render%26action=download%26mode=render>

## Appendix 10: Characteristics of service providers

<b>Service providers</b>	<b>Gender</b>	<b>Job role within Youth Justice Social Work</b>	<b>Years in current role</b>
<b>Participant 1</b>	F	Social care support worker	<10 years
<b>Participant 2</b>	M	Social worker	>10 years
<b>Participant 3</b>	M	Social worker	>10 years
<b>Participant 4</b>	M	Team leader (qualified social worker)	>10 years
<b>Participant 5</b>	M	Team leader (qualified social worker)	<10 years
<b>Participant 6</b>	F	Team leader (qualified social worker)	>10 years
<b>Participant 7</b>	F	Team leader (qualified social worker)	>10 years
<b>Participant 8</b>	F	Social worker	<10 years
<b>Participant 9</b>	F	Social worker	>10 years
<b>Participant 10</b>	F	Team leader (qualified social worker)	>10 years

## Appendix 11: Final approved MRP Proposal

The final approved MRP proposal can be accessed at:

<https://mfr.osf.io/render?url=https://osf.io/9n2yt/?direct%26mode=render%26action=download%26mode=render>

Please note: Due to Covid-19 restrictions, the methods outlined in this final approved proposal were deemed by the research team to be unachievable within the limited time frame. Guidance at the time stated that where possible, work was to be completed remotely. I was informed by my field supervisor that the participants identified for the study could be difficult to engage and recruit under normal circumstances, so given this added layer of Covid-restrictions, recruitment could be even more difficult. As time was a factor to be considered, the decision was made to go with service providers as the participants and to collect data remotely using semi-structured interviews. To view an overview of the proposed project, please refer to the MVLS ethics application form which can be found in online at:

<https://mfr.osf.io/render?url=https://osf.io/hbw72/?direct%26mode=render%26action=download%26mode=render>