

The Prevalence of Autism in the Criminal Justice System: A systematic review

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Background

- * Autistic people who engage in offending behaviour are at risk of becoming involved with the Criminal Justice System (CJS).
- * Autistic people are reportedly more likely to have negative experiences within the CJS, such as use of force within police interactions (Archer & Hurley, 2013).
- * Within prison or forensic psychiatric services, autistic individuals appear more vulnerable to experiencing bullying, exploitation, social isolation and altercations (Allely, 2015).
- * Autistic offenders have differential clinical and forensic profiles and needs to the general offender population.

Aims

- * Understanding autism prevalence within the CJS has significant implications for understanding their clinical and forensic needs, assisting in the planning of autism-specific CJS responses, potentially improving outcomes.
- * The aim of this review therefore was to systematically identify and synthesise studies that investigate autism prevalence within CJS cohorts, and the prevalence of CJS involvement in autistic cohorts.

Method

- * The search strategy combined autism and forensic related search terms.
- * The following electronic databases were searched from inception to 6th June 2023;
 - * Allied and Complementary Medicine (AMED)
 - * Cumulative Index to Nursing and Allied Health Literature (CINAHL)
 - * Excerpta Medica
 - * Database (EMBASE)
 - * ERIC
 - * MEDLINE
 - * PsycINFO
- * Backward searching of articles that met the eligibility criteria for inclusion was completed.
- * All titles and abstracts of articles that remained following removal of duplicates and non-English language results were screened against the eligibility criteria.
- * Upon initial screening, if papers met the inclusion criteria, full texts were accessed.
- * The review was registered on the PROSPERO database (Registration No. CRD42018087125).

Inclusion Criteria

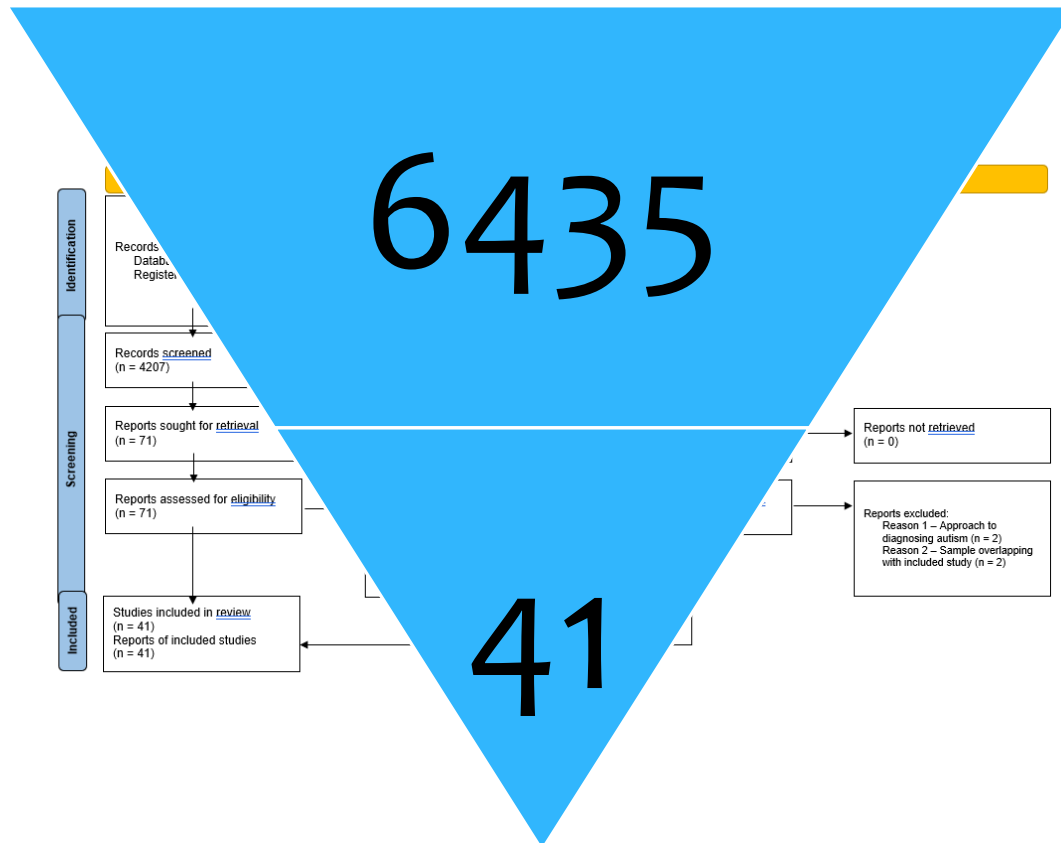
Inclusion criteria

- English-language
- Peer reviewed journal
- Participants had a diagnosis of autism according to clinical criteria (ICD-10 or DSM-IV-TR or 5), or with a reported procedure for assessing autism.
- Participants involved in the CJS, i.e. police, courts, prison service, secure hospitals, probation; or participants within studies from other clinical settings/populations, but which measured CJS involvement using a clear definition.
- Participants over the age of criminal responsibility in the study country (e.g. 10-years of age within England and Wales).
- Authors report prevalence data or data that can be extracted and used to compute a prevalence estimate.

Exclusion criteria

- Studies using measures of autistic symptoms
- Studies including participants with self-reported autism.
- Studies focused upon autistic witnesses/victims in the CJS.

Results

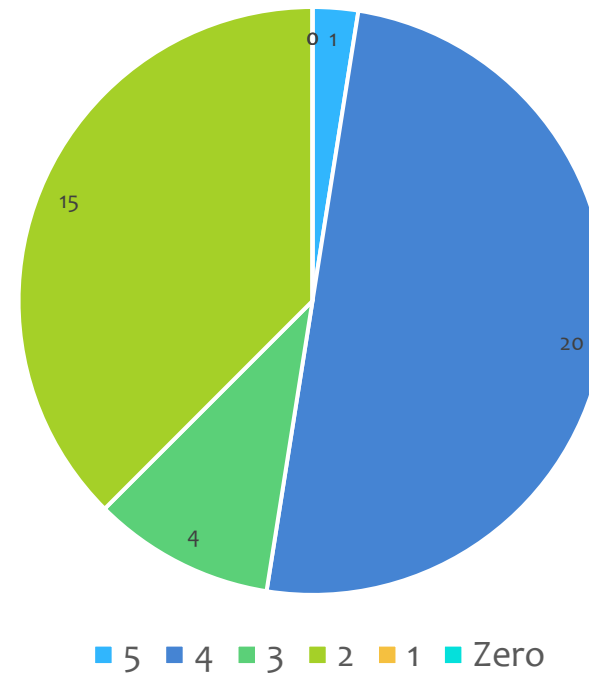


Study Characteristics

- * The data set consisted of 35 cohort studies, and 6 surveys.
- * The studies were based in 11 countries:
- * UK (n = 10), Sweden (n = 13), USA (n = 8), Canada (n = 3), Japan (n = 2). The following countries were the setting for one study each: Denmark, Finland, Netherlands, New Zealand and Norway.
- * The studies were largely based in high income countries.
- * Participants largely white male.

Research Quality Ratings - MMAT

- * Is the sampling strategy relevant to address the research question?
- * Is the sample representative of the target population?
- * Are the measurements appropriate?
- * Is the risk of nonresponse bias low?
- * Is the statistical analysis appropriate to answer the research question?



Results

- * The included studies fell into two categories:
 1. Studies that reported the prevalence of autism within CJS/forensic settings or cohorts (n = 27)
 2. Studies that reported the CJS/forensic involvement of autistic samples/cohorts (n = 14)

CJS Settings - prisons/court/youth secure

Court

- * Two studies focused on participants who had appeared in court, with autism prevalence rates of 1.1% (Chaplin et al., 2022) and 7% (Kumagami & Matsuura, 2009).
- * Chaplin et al. (2022) identified 100 defendants diagnosed with ASD according to ICD-10, from 9088 individuals referred to Court Mental Health Liaison and Diversion Services.
- * Kumagami and Matsuura (2009) examined prevalence of pervasive developmental disorder (PDD) in four juvenile courts.

Prison

- * Three studies were set within European prison settings, and the prevalence rates were between 0% (Robinson et al., 2012) and 10% (Billstedt et al., 2017).
- * In a study of 270 male offenders (18–25 years of age) sentenced for violent offences and serving time in any of nine correctional facilities in Swedish Prison Service, Billstedt et al. (2017) reported an autism prevalence of 10% (26/270).
- * McCarthy et al. (2015) found that of 240 male prisoners within a category C prison, 12 met criteria for autism, yielding a prevalence rate of 5%.

CJS Settings continued

Youth Secure

- * One study investigated autism prevalence within the youth secure estate.
- * Hales et al. (2022) reported the number of those diagnosed with Autistic Spectrum Condition among 1322 young people within secure establishments.
- * These establishments included Secure Children's Homes, Secure Training Centres or Young Offender Institutions, and within these settings, 48 (4%) were autistic.

Forensic Settings – Secure Psychiatric

- * Eight studies were conducted in inpatient secure hospitals, low-high secure.
- * Between these eight studies, autism prevalence ranged from 4% (Krona et al., 2017) to 60% (Sutton et al., 2013).
- * Griffiths et al. (2018) reported that 49 (14%) of 347 admissions to four UK locked, low, and medium secure inpatient mental health services between 2007 and 2015 had Asperger Syndrome according to ICD-10.
- * Krona et al. (2017) examined DSM-IV autism among 125 individuals sentenced to forensic psychiatric in-patient treatment during 1999–2005 in Sweden, reporting a prevalence of 4% (5/125).
- * Esan et al. (2015) reported that 42 (30%) of 138 inpatients within a medium secure forensic intellectual disability service in the UK had ASD according to ICD-10 diagnostic criteria (World Health Organization, 1992).
- * Stinson and Robbins (2014) reported that within 235 persons with intellectual disabilities within a secure forensic psychiatric hospital in the United States which had maximum, intermediate, and minimum security units, 15% were reported to be autistic according to DSM-IV-TR.

Referrals for Forensic Psychiatric Examination

- * Thirteen studies examined autism prevalence among patients referred for forensic psychiatric examination and among these studies, rates of autism prevalence ranged from 0.4 (Slaughter et al., 2019) to 33% (Sturup, 2018).
- * Enayati et al. (2008) reported that among people referred for an inpatient forensic psychiatric examination (FPE) in Sweden, the rate of as autism or Asperger's syndrome diagnosed using the DSM-IV was 7% (15/214).
- * A study examining 25 serial-homicide and 201 single-homicide offenders in Sweden between 2007 and 2009 reported 33% (8/25) of serial-homicide offenders and 3% (5/201) of single-homicide offenders had autism (Sturup, 2018).

Section Summary

- * Across studies examining autism prevalence in CJS/forensic cohorts and settings, rates varied from 0-60%.
- * Differences in rates reflected the wide-ranging definitions of autism, diagnostic approaches, inclusion/exclusion of people with intellectual disabilities, alongside forensic factors, such as narrow focus on those convicted of specific crimes.
- * In 23 of 27 included studies, rates of those with autism were higher than the general population autism prevalence estimate of 1%, with two studies having rates equal to the general population, and two studies having lower rates.

Prevalence of CJS involvement in Autistic Populations

Prevalence of CJS involvement in Autistic Populations

- * Prevalence rates of CJS involvement in autistic populations were examined in 14 studies.
- * These studies varied considerably in the definition of CJS involvement with some authors having focused upon self reported offending behaviour, others on police contact, and criminal convictions.

Self report

- * Weiss and Fardella (2018) focused on violent offending, comparing rates between 45 autistic adults and 45 adults without autism. The Juvenile victimization questionnaire-adult retrospective (JVQ-AR) was used as a self-report measure of violence perpetration. Autism assessed using the ADOS-2.
- * Analysis focused on whether participants endorsed at least one of the nineteen forms of violence perpetration on the JVQ-AR, which was 71% (32/45) for the autistic group compared to 60% (25/45) of the non-autistic group, a difference which was not statistically significant.
- * Woodbury-Smith et al. (2006) examined offending behaviour among a community cohort of 25 autistic adults, compared to a non-autistic group of 20 adults.
- * Significantly fewer in the autistic group reported a history of engaging in illegal behaviours, 48% (12/25), compared to 80% (16/20) of their non-autistic peers.

Psychiatric Case Notes

- * Kawakami et al. (2012) examined rates of offending behaviour as reported in the clinical records of 175 individuals diagnosed with high functioning ASD according to DSM-IV (American Psychiatric Association, 1994).
- * Of this sample, 21% (36/175) had criminal behaviour recorded.
- * Allen et al. (2008) examined offending behaviour among 126 adults with Asperger syndrome identified from: community mental health teams, local health boards, forensic/mental health/learning disability practitioners, mental health practitioners, community learning disability teams, specialist autism providers, probation services and prisons in Wales. Information on offending behaviour was collected from case-notes using questionnaires.
- * Within this sample, 33 (26.6%) had engaged in offending behaviours that had or could have resulted in involvement in the CJS.

Police contact

- * Three studies examined police contact with individuals with autism residing in the community, with rates ranging from 3% to 23.6%. In this category, the highest rates were reported among adolescents and young adults.
- * Tint et al. (2017) investigated police involvement among 284 adolescents with autism in Canada followed over a 12–18-month period. During the study period, 16% (46/284) of the autistic adolescents had been involved with the police, as reported by the parent on behalf of their child.
- * Reporting a national birth cohort study which linked health and criminal justice system data, Bowden et al (2022) compared the incidence of police proceedings between 1197 people diagnosed with autism (DSM or ICD-10) and 147,879 without autism. During the eight-year window covered by the study, 282 young people with autism were proceeded against by police, yielding a prevalence of 23.6%.
- * Reporting the lowest rate in this category, and the only study focused on adults, Tint et al. (2019) examined self-reported police contact among 40 autistic adults over 12-18 months in Canada, highlighting that 3% (13/40) reported involvement with the police during the study period.

Convictions

- * In studies examining convictions, rates varied from 7.2 and 12.8%.
- * Bowden et al. (2022) examined convictions in 1197 people diagnosed with autism compared to those without (n = 147,879): 12.8% were convicted contrasting with 7.2% of the comparison group.
- * Mouridsen et al. (2008) examined the offending behaviour of 313 former child psychiatric inpatients with PDD, including 113 with childhood autism, 86 with atypical autism and 114 with Asperger's syndrome, and compared rates to a matched non-autistic comparison group of 933 children. This cohort was followed up until adulthood, and convictions were obtained from the nationwide Danish Register of Criminality. The PDD group were less likely to have been convicted (29/313, 9%), compared to 18% (168/933) in the non-autistic comparison group.
- * Långström et al., 2009) investigated convictions for violent or sexual offenses among 422 adolescents hospitalized with autistic disorder or Asperger syndrome (diagnosed according to ICD9/10) during 1988-2000. Thirty-one individuals with ASD (7%) were convicted of violent nonsexual crimes and two of sexual offences.
- * Lundström et al. (2014) examined violent offences among 954 autistic children compared to 33,910 matched (by age, sex, and residential area) comparison children from population-based registers of all child and adolescent mental health services. They reported that autistic children were not significantly more likely to commit violent offences relative to their non-autistic peers.
- * Three of the four studies in this category had comparison groups, and in all these studies, the autistic groups number of convictions were lower.

Section Summary

- * Prevalence rates of CJS involvement in autistic populations were examined in 14 studies and reported rates varied from 3% to 71% between studies.
- * Two major approaches to measuring criminal behaviour; official records; and self-reports (Gomes et al., 2018).
 - * Official crime reports underestimate offending. Not all offences are reported to the police, recorded by the police, only some offenders are convicted and even fewer sentenced to custody (Gomes et al., 2018).
 - * Self-report methodologies were developed, and research concluded that this technique had predictive validity, while noting it should not replace officially recorded data, and that the most accurate measure is likely to be a combination of official records and a self-report questionnaire (Gomes et al., 2018).
- * In the present review, the highest rates of offending behaviour among autistic cohorts were within the studies utilising self-report methodology, in accordance with the general literature. While the validity of self-report methodology has not been explored with autistic populations, there is no reason to suggest that it would be any less valid. Likewise, the lowest rates utilised officially recorded criminal statistics.
- * Eight studies included a comparison group, and rates of offending were lower in the autistic group in five studies, and equivalent in three studies. As such, across studies, the rate of offending behaviour, however defined, was equal to, or lower among the autistic group compared to the study comparison group.

Large variation in rates

Autism diagnosis factors

- * Range of approaches to screen and diagnose autism were employed.
- * Some used diagnoses recorded in clinical case notes, meaning that not all study participants was screened for autism, and affected by autism awareness among clinicians and within services over time.
- * Systematic screening is likely to identify more cases of autism.
- * Focus only on Asperger Syndrome, a subgroup within the autistic spectrum.
- * Whether studies included participants with comorbid intellectual disabilities, increased probability for autism.
- * Procedures for diagnosing autism via a diagnostic manual ICD-10 or DSM-5, with no further information provided.
- * Others reported the use of specific tools or structured assessments to supplement the consideration of manualised diagnostic criteria.
- * A minority of studies reported approaches closer to the “gold standard”.

Forensic factors

- * Some small sample sizes within single services, while others included large cohorts of offenders across multiple settings, likely to be more representative.
- * Forensic psychiatric services specifically for mentally disordered offenders had higher rates of autistic inpatients, while prisons had lower rates. Whether this is true difference, or reflective of reduced autism awareness in CJS settings such as courts and prisons, compared to forensic psychiatric services where awareness is typically higher, requires further research.
- * Studies focused on specific offence types, such as violence, arson or sexual offending, also had high rates of autism. It is possible this reflects biases within the referral of autistic offenders convicted for such offences to forensic psychiatric settings, or conversely, difficulties discharging such offenders.

Discussion

- * These findings raise questions as to why autistic people can simultaneously appear to be equally or less likely to engage in offending behaviour, as suggested by studies investigating the prevalence of CJS/forensic involvement of autistic cohorts, and yet over-represented in studies examining autism prevalence in CJS/forensic settings.
- * Explanations lie within the bias and methodological difficulties within these studies, alongside the vulnerability of autistic people within the CJS, pre- and post-sentencing.

Reasons for over representation – Pre sentencing

- * Autistic people appear disadvantaged at various stages of involvement with the CJS, including in their interactions with police, and during the court process.
- * Autistic people may be more likely to be caught for their criminal behaviour (North et al., 2008).
- * Within police custody as suspects, autistic people may experience intrusive processes, e.g. fingerprinting, swabbing, drugs testing and police interview, alongside being detained in a cell during investigation (Holloway et al., 2020). The sensory aspects of autism may exacerbate this, increasing the likelihood of confession (Murrie et al., 2002).
- * Communication - The legal/court process is highly verbal, and if legal information is not accessible, this could lead to autistic detainees making ill-informed decisions in custody or enter a guilty plea, difficulties advocating for their rights in court, mounting a successful defence, instructing legal professionals, and cause difficulties following court proceedings.

Reasons for over representation – Pre sentencing

- * There are schemes to support autistic arrestees or defendants, such as Appropriate Adults during police interviews, or Registered Intermediaries during the court process, however these are not consistently applied, and dependent on autism awareness by police or court staff.
 - * Autism awareness across the CJS concluded that knowledge among staff is low, and many autistic offenders only receive their diagnosis post-conviction (Helveschou et al., 2015).
 - * Only 20% of law enforcement officers could identify defining features of autism (Modell and Mak, 2008).
- * Indeed, within liaison and diversion court services, Chaplin et al. (2022) felt the lack of expertise in the identification of neurodevelopmental disorders within services traditionally developed for severe mental illness was evident and affected their reported prevalence rate.
- * As such, training in autism is recommended for all people likely to encounter autistic people at risk of contact with the criminal justice system to ensure equality in outcomes.

Reason for over representation – Post sentencing

- * It has been suggested that defendants with ASD are sentenced more harshly, due to a lack of typically presented empathy or remorse (Archer & Hurley, 2013).
- * However, several studies suggest autistic people may be diverted from the CJS following sentencing. The high number of autistic people within forensic psychiatric cohorts supports this narrative. Esan et al. (2015) reported that those with autism were less likely to be subject to restriction orders, a Mental Health Act (1983) provision where discharge from hospital can only occur following a Mental Health Tribunal or consent from the Ministry of Justice. Bowden et al. (2022) reported that autistic young people are less likely to be charged and convicted and felt this reflected a responsiveness to autistic people and effectively diverting them away from criminal justice.
- * Lack of autism sensitive forensic rehabilitative programmes and risk assessments may contribute to longer stays. Autistic offenders are often placed among “neurotypical” offenders and (Murphy, 2010b) and expected to fit in with conventional therapeutic programmes (Murphy, 2010), primarily developed for patients with personality and psychotic disorders, with few manualised treatment programmes that have been robustly evaluated.
- * Esan et al., (2015) reported that the autistic group within their cohort of offenders within an inpatient intellectual disability service had higher rates of restrictive interventions such as physical intervention/restraint, and observations, compared to those without autism. These measures are often used as proxy measures for institutional violence or increased mental health needs. This could present challenges to autistic people within an inpatient environment, and may be linked to longer lengths of stay, as inpatient teams are reluctant to discharge patients who have recently required these interventions.
- * Forensic risk assessment and management often does not consider factors associated with autism (Gunasekaran, 2012) which may also contribute to clinician unease in discharging. It is therefore possible that autistic inpatients and prisoners may experience poorer outcomes following hospital admission or imprisonment.
- * However, research is lacking, and no studies have formally examined outcomes of autistic offenders as compared to general offender groups (Alexander et al., 2016).

Reason for over representation – Autistic Offender Factors

- * It is sometimes suggested that it is characteristics central to the autistic offender, or their offences, that explain their over representation within forensic settings.
- * For example, speculation that while autistic people commit offences at an equal rate to their non-autistic counterparts, when an autistic person does offend, they commit more serious offences, and so spend longer in forensic services.
- * Within the present review, rates of autism were high among the highly selected cohorts of mentally disordered offenders who had committed serious offences such as violence, arson, or those of a sexual nature (Enayati et al., 2008; Kumagami & Matsuura, 2009; Sturup, 2018; Sutton et al., 2013).
- * However, assessing the severity of offences by autistic people and non-autistic counterparts was beyond the scope of this review, and as such, this needs further exploration in future research.
- * Studies examining the characteristics of autistic offenders have emphasised the role of general criminogenic risk factors, such as low intelligence, poor school achievement, truancy, aggressive behaviour, and hyperactivity-impulsivity-inattention (Woodbury-Smith et al., 2005), as well as comorbid mental disorder in the offending behaviour of autistic individuals.
- * Assuming a causal relationship between autism and an individual's offending behaviour is a reductionist approach which can overshadow other pertinent risk factors for offending, and subsequently, a lack of tailored treatment (Pearce & Berney, 2016).

Conclusion

- * Despite over representation, a lack of responsivity to the needs of autistic offenders within forensic settings has been highlighted, with programmes primarily designed for offenders with psychosis or personality disorder.
- * Research indicates that autistic offenders have a poorer experience and heightened exposure to challenges within forensic settings, due to sensory issues, communication difficulties.
- * There is therefore a need to systematically review the literature on the socio-demographic, clinical and forensic profiles and needs of autistic offenders.
- * Examining these characteristics could develop an understanding of the risk factors for engaging in offending behaviour among this population, and assist the development of offending prevention and rehabilitative programmes.

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Thank you!

Any questions?

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