Comorbid Autism Spectrum Disorder and Antisocial Personality Disorder in Forensic Settings

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Autism spectrum disorders (ASD) refer to a group of lifelong neurodevelopmental disorders, the core features of which include difficulties with social interaction and social communication and a preference for stereotypic, restricted, and repetitive behaviors or interests. The estimated prevalence of ASDs in the general population is thought to be one to two percent.[1] Although outcomes of individuals with ASDs vary, some experience repeated contact with psychiatric services, have psychiatric comorbidity, and are overrepresented in forensic settings relative to the general population.[2,3] In our clinical experience in a high security psychiatric hospital environment, those with an ASD who have violently offended and, by the criteria of admission, pose a grave and imminent risk to the public, often have a comorbid psychiatric diagnosis. This is supported by unpublished audit data conducted in 2020 that showed 52.9 percent of individuals with an ASD admitted to Broadmoor Hospital in the preceding five years had a comorbid personality disorder (PD). Of these, individuals with a dual diagnosis of an ASD and antisocial PD (ASPD) can present marked challenges in assessment and management. For consistency with the Diagnostic and Statistical Manual (DSM)[4] and clinical guidelines from the National Institute for Health and Care Excellence (NICE),[5] we will use the term "ASPD" though we do acknowledge that the term "dissocial PD" is preferred in the International Classification of Diseases (ICD).[6]

In this editorial, we start from the premise that the commonly held association of ASDs and violence is a misconception. We discuss topics that repeatedly arise in our clinical practice in treating men with an ASD and ASPD in a high security environment:

- whether ASDs are uniquely associated with violence;
- what the term "autistic psychopathy" (AP) means in clinical practice today as it relates to empathy and antisocial behavior;
- whether a person with an ASD can and should be diagnosed with a comorbid ASPD.

We then take a psychodynamic approach to considering the challenges in long-term management of such patients in a high security environment. Finally, we will consider steps that can be taken on a local scale by clinical teams, as well as wider cultural shifts required in mental health services to improve our care of this complex group of people. We acknowledge that there may be subtle differences in practice between the United Kingdom and the United States, but we anticipate the clinical challenges discussed in this editorial are common to all professionals involved in the care of those with ASDs and ASPDs.

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The Problem with Autistic Psychopathy

The term AP was used to describe what was later referred to as Asperger syndrome, a condition named after the Austrian pediatrician Hans Asperger who described a group of children displaying a specific group of characteristics in their social communication and preoccupations. The latter term is now being discouraged given evidence of Asperger's association with the Nazi eugenics program. Although devised independently, the clinical features (though not its proposed etiology) of AP corresponded with the manifestations of autism described by Kanner in the United States in 1943,[7,8] whereby it was seen as a lifelong, stable type of personality associated with a child's appearance, intellectual functioning, social behaviors, and what was described as "an impairment of emotions and instincts."[8–10] Here, the term psychopathy referred to the tendency for those with ASDs to behave in a way indicative of a lack of empathy toward others. Specifically, Asperger referred to "autistic acts of malice" within families that "typically appear to be calculated. With uncanny certainty, the children manage to do whatever is the most unpleasant or hurtful in a particular situation. . . . There can sometimes be distinctly sadistic acts. Delight in malice, which is rarely absent, provides almost the only occasion when the lost glance of these children appears to light up"[11] (translated in Ref. 12, p 77). Frith challenged this in part, advocating for the notion that athough the behaviors may be unpleasant, the intent is not malicious.[10] Indeed, Asperger went on to say that "since their emotionality is poorly developed, they cannot sense how much they hurt others, either physically, as in the case of younger siblings, or mentally, as in the case of parents" (Ref. 11, translated in Ref. 12, p 77). The important point is that the use of the term psychopathy in the context of AP referred to antisocial behaviors, with inferences made about how this relates to underlying empathy, which is different from today's understanding of psychopathy as measured using tools such as the Psychopathy Checklist—Revised (PCL-R) score.[13]

Some authors continue to suggest that traits of ASD may predispose a person to engage in criminal behaviors, explained, at least in part, by a lack of understanding of social norms and of the consequences of these behaviors.[14,15] In considering whether this is true, we ought to consider: whether a lack of empathy is actually a feature of ASD and, if so, how empathy differs in people with ASDs compared with those with ASPD; and whether the seemingly widespread perception of an association between ASDs and violence is supported by an objective evidence base.

Empathy in ASDs and ASPD

Empathy is thought to consist of two main processes. First, cognitive empathy refers to the awareness of the feelings of another individual and the emotions that underpin a person's behavior, often referred to as Theory of Mind or difficulties with perspective taking. Anatomically, this has been linked to the dorsomedial and dorsolateral prefrontal cortex (PFC) and is therefore dependent on executive function.[16] Second, affective empathy refers to the resonation of those feelings that have arisen in another individual. This has been linked with the ventromedial PFC, limbic system, and basal ganglia.[16] Deficits in either can lead to behaviors that might suggest a lack of empathy or callousness toward others and, consequentially, are antisocial in nature. Although elevated traits of psychopathy as measured using the PCL-R and ASD may both be associated with difficulties in social information processing, more specific deficits in affective resonance have been associated with psychopathy, as opposed to ASDs, which have been associated with reduced cognitive empathy relative to affective empathy.[17] The commonly held view that ASD is associated with a lack of empathy is therefore a marked oversimplification.

Loureiro *et al.*[18] measured autistic traits in 101 inmates at a high security prison and found no correlation between traits of autism and psychopathy. Hofvander *et al.*[19] supported this, finding no difference in PCL-R scores between those with ASDs compared with those without an ASD in a group of violent offenders. Together, these data suggest that although traits of ASD may be overrepresented in forensic and custodial settings, there is no evidence of overlap between ASDs and psychopathy as measured using PCL-R. Indeed, using current nomenclature, the term AP could be considered a misnomer, or at the very least a point of confusion between cognitions associated with ASD and psychopathy as we know it based on PCL-R scoring. We acknowledge that psychopathy goes beyond the concept of empathy and how it might manifest with traits of callousness and antisocial behavior. We also acknowledge that the concept of psychopathy is not interchangeable with ASPD. The latter reflects, however, the

collection of symptoms that are commonly studied. In addition, in our experience, there seems to be a commonly held belief among health care professionals (usually without training in ASDs), that a lack of empathy sits in the overlapping region of what could be described as the psychological Venn diagram between ASDs and ASPD. In fact, we hope that we have started to prompt readers to see empathy as a more complex phenomenon with multiple parameters that may potentially distinguish between the two disorders.

ASDs and Violence

It was once hypothesized that there may be a common neurodevelopmental basis for ASDs and childhood antisocial behavior, with shared genetic and environmental factors linking ASDs with conduct disorder and oppositional defiant disorder.[20] Although Heeramun *et al.*[21] showed an increased risk of violent behavior in those with an ASD, this was negated once controlling for comorbid ADHD and conduct disorder. There is no evidence that clearly distinguishes patterns of violence and criminality in those with an ASD compared with the general population. Clinicians must therefore be alert to not falling into the trap of diagnostic overshadowing and explaining violence through manifestations of ASDs. Much like in the general (or neurotypical) population, there must be something else. Indeed, we know that there are high rates of psychiatric comorbidity in those with ASDs. For the rest of this discussion, we will consider the challenges of diagnosis and management of an ASPD in individuals with an ASD. These conditions can occur independently of one another but can co-occur, leading to unique difficulties in forming therapeutic relationships and a consistent approach within a multidisciplinary team.

Comorbid ASPD Diagnosis in ASD

The DSM-5 merged diagnoses of autistic disorder, Asperger syndrome and pervasive developmental disorder not otherwise specified into a single category of ASDs when it was published in 2013.[4] At the time of writing this, the upcoming ICD-11 proposes to align itself with that of the DSM-5 when it is implemented in 2022.[22] The DSM-5 also updated the diagnosis of personality disorders (PDs). The DSM-IV defined PDs as an "enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in adolescence or early adulthood, is stable over time, and leads to distress or impairment" (Ref. 23, p 689). An exclusion criterion stated, "the enduring pattern is not better accounted for as a manifestation or consequence of any other mental disorder" (Ref. 23, p 689) PDs were classed as an Axis II disorder, which, if strictly adhering to a hierarchical diagnostic system, meant that an ASD diagnosis would take precedence over a PD diagnosis. Both the axial system and the aforementioned exclusion criterion were removed in the DSM-5. This brings the DSM in line with that of the current ICD-10, enabling potential dual diagnosis of ASDs and PDs.

Our clinical experience suggests that this dual diagnosis may be particularly common in forensic settings, where histories of early trauma and dysfunctional attachments are common, and a developmental history may be difficult to obtain. We have already established that ASDs in and of themselves are not associated with a distinct pattern of violence or criminality. Given this, and the distinct cognitions that separate ASDs and psychopathy, clinicians should be able to distinguish the features of an ASPD that could not otherwise be explained by an ASD. This requires assessment beyond antisocial behavior alone (which constitutes most of the diagnostic criteria of ASPD). In addition, assessing and diagnosing this dual diagnosis is made difficult by the lack of clinical guidance on the assessment of individuals who present with an ASD and a PD. For example, the United Kingdom's NICE guidelines for ASD and PD each make no mention of the other.[5,24] Furthermore, the sensitivity and specificity of diagnostic aids such as the Autism Diagnostic Observation Schedule (ADOS)[25] and the International Personality Disorder Examination (IPDE)[26] in individuals who present with co-morbid ASD and ASPD have not yet been established. What also remains unclear is whether there is any synergistic interaction between the two disorders that might increase an individual's risk to others and provide a possible hypothesis as to why those with ASDs might be over-represented in forensic and custodial settings. A comparison of the clinical features of ASD and ASPD is provided in Table 1.

We have provided two case composite vignettes below that have been constructed based on a culmination of experience in identifying key clinical features that have prompted assessment and diagnosis

of ASPD in someone with an ASD (Case Vignette 1) and an ASD in an individual with ASPD (Case Vignette 2). Both highlight the importance of a wide differential diagnosis for new assessments, regardless of the individual's length of stay in other forensic or custodial settings and the risk of diagnostic overshadowing where features of a comorbidity may be incorrectly attributed to the person's primary diagnosis at that point in time. These cases also highlight the importance of clinical judgment without overreliance on assessment tools such as the IPDE or ADOS where the cut-offs have not been validated in diagnosing a PD or ASD, respectively, in the presence of the other.

Case Vignette 1

A 25-year-old male (fictional initials AC) was transferred to a high security psychiatric hospital from prison while being held on remand for attempted murder because of concerns over a possible psychosis (subsequently dismissed). Mr. C had an established diagnosis of an ASD made during childhood and spent large parts of his childhood in residential care. Although presenting with no previous convictions, Mr. C had a history of persistent rule breaking, numerous assaults on care staff and verbal threats. Discussion with Mr. C suggested he viewed those actions as instrumental in achieving a wish or justified following a perceived injustice toward him. Mr. C lacked any victim empathy and expressed no regret for actions. Although assessment excluded psychosis and confirmed the presence of an ASD, this highlighted clinical features suggestive of an ASPD. This was supported by the semistructured clinical interview tool, the IPDE.

Case Vignette 2

A 44-year-old male (fictional initials GB) was transferred to a high secure psychiatric hospital from medium secure care following verbal threats to staff and a risk of absconding. Although very little information was available regarding Mr. B's developmental history, he was believed to have spent a significant amount of his childhood in care and was the victim of sexual abuse. Mr. B's index offense was a rape of an adult female. Mr. B entered high secure care with the diagnosis of an ASPD, largely based on his apparent offense denial (interpreted as a lack of remorse, perceived demanding and manipulative behavior, and tendency to blame others for negative experiences). Further clinical assessment identified additional difficulties in interpersonal communication (including atypical eye contact), preoccupations, sensory sensitivities, and concrete thinking. This led to suspicion of a comorbid ASD that was supported with screening aids such as Autism Quotient,[27] Ritvo Autism & Asperger Diagnostic Scale (RAADS)[28] and ADOS. Confirmation of this diagnosis enabled the formation of an ASD-informed risk management plan.

Potential Benefits of Such Dual Diagnosis

Just because, theoretically, we can make a dual diagnosis, there is still the question of whether this adds value to diagnosis, formulation, and management of mental disorder and risk. In our opinion, accurate identification of a dual diagnosis of an ASD and ASPD is beneficial to the patient and professionals within health care and criminal justice settings. Difficulties associated with an ASD may be managed with a combination of biopsychosocial approaches. It is not, however, a treatable disorder. Indeed, although some individuals experience difficulties associated with an ASD, for many this same condition can provide strengths, particularly in nonverbal tasks.[29] On the other hand, PDs, by definition, cause impairment to a person's function. Contrary to widely held beliefs among health care professionals (and, dare we say, stigma), ASPDs have been shown to be treatable conditions, particularly with therapeutic community approaches.[30,31] The accurate assessment and identification of a PD in an individual with an ASD opens the opportunity to provide more customized, ASD-informed treatment. Identification of an ASD in an individual with a PD can ensure that psychotherapeutic interventions are contextualized to a person's communication and social cognition. In forensic and custodial settings, this may help with accurate risk assessment and, in turn, interventions to try and reduce the risk the individual poses to themselves and others.

Psychodynamic Perspective on Management

There are currently no clinical guidelines regarding how best to manage individuals who present with both an ASD and ASPD. This is significant as such patients often generate a lack of consensus in how presenting behaviors and underlying motivations are

Table 1 Comparison of Developmental History, Co-Occurring Difficulties, Presenting Behaviors, and Cognition between ASD and ASPD

History, Co-Occurring Difficulties, Behavior, and Cognition	Typical Presentation in	
	Autism Spectrum Disorders	ASPD
Developmental history where known	Pattern of developmental disturbance such as with speech and language development (sometimes delayed), play (often a lack of make-believe play with others), preoccupations, motor coordination difficulties, and atypical sensory function	No evidence of delayed early motor, language, or social development. Conduct disorder is common. This is a currently a requirement for the diagnosis of ASPD in the DSM-5 (but not the ICD-10).
Adverse early life experiences	Children with development disabilities had 1.5- to 3-fold higher risk of maltreatment compared to neurotypical controls.[32,33]	ASPD is associated with adverse early life experiences. One study found that the severity of childhood maltreatment was linked to severity of psychopathy and ASPD in adulthood.[34]
Psychiatric comorbidity	Affective, anxiety and psychotic disorders are more common in those with ASDs compared to the general population.	Anxiety disorders are common. The combination of anxiety disorders and ASPD may predispose to depressive and substance use disorders.[35]
Presence of other neurodevelopmental disorders	Estimates in children with ASDs suggest comorbidity is more common than not, including ADHD, tic disorder, intellectual disabilities, and obsessive-compulsive disorder.[36]	ADHD is common in children with conduct disorder and increases the risk of developing ASPD in adulthood.[37]
Sensory functioning	Altered sensory sensitivity is common across a range of stimuli (light, sounds, textures, etc.). This usually manifests as sensory hypersensitivities and sensory avoidance.	No evidence that altered sensory sensitivities are characteristic.
Social communication difficulties during interviews	Common features include a lack of intonation, literal interpretation of comments, unusual eye contact, repetitive behaviors, and difficulties with reciprocal discussions.	Often one-sided interactions, but no difference in speech, use of language and nonverbal communication compared with the general population.
Personal need for routine and predictability in the immediate environment	Often very important for an individual, with any deviation resulting in heightened anxiety levels	Not usually present or associated with impaired function. If deviation of personal routines occurs, however, this may be viewed as a personal insult or injustice.
Preoccupations and restricted range of interests	Tendency to develop preoccupations and have a restricted range of interests	Preoccupations typically related to perceived critical comments and actions to self rather than to nonpersonal interests.
Emotion regulation	Difficulties in emotional regulation are common, including alexithymia	Difficulties in emotional regulation are common, including being quick to anger and hostility in response to personal stresses or perceived criticisms.
Neuropsychological characteristics and thinking style	Difficulties with central cohesion (failing to appreciate the bigger picture) and a tendency for literal thinking and problems generalizing (learning from one situation to another) are common	No overt profile of any neuropsychological difficulties; however some features of executive dysfunction may be present, including difficulties with attention, working memory and planning, inhibitory control and response reversal, which manifest in impulsivity and short-term thinking.[38]
Empathy (the ability to understand and share the emotions and feelings of others)	Deficits in cognitive empathy (Theory of Mind and perspective taking) relative to affective empathy are noted.	Deficits in affective empathy are more notable.
Mentalization	Theory of Mind deficits that can lead to difficulties in perspective taking and understanding the thoughts and feelings of others and how this influences behavior	Tendency for negative interpretations of others' motives and behavior that may be used as justification for one's own behavior in response.
Attitudes towards others and society in general	Often expressed as a need for others to follow consistent rules and fairness	Tends to hold a critical view of the intentions of others, or that if other people step out of line, criticisms and negative consequences are justified.

ADHD = attention-deficit hyperactivity disorder; ASD = autism spectrum disorder; ASPD = antisocial personality disorder.

interpreted, including how best to prioritize their needs. Viewed from a psychodynamic perspective, such individuals can elicit differing counter-transferences in health care professionals. These biases in interpretation might be particularly apparent where there is a perceived overlap in the cognitive, affective, and behavioral presentations of ASD and PD. As we have discussed, antisocial behavior may be seen as an overlapping feature of both an ASD and a PD, yet the cognition driving the behavior differs between these two pathologies.

Problematic questions may arise such as whether we feel more empathy for an impulsive act attributed to ASD compared with a PD, particularly at times of emotional distress. We may also rely on the use of heuristic techniques to reduce the complexity of such emotionally charged clinical situations and guide decision-making. These cognitive shortcuts may then reinforce our preexisting biases. For example, first impressions of a behavior (or how an individual might be described by others) may result in an anchoring effect that is difficult to shift or challenge, and a confirmation bias might result in selecting information to suit a preexisting idea.[39]

These differences in opinion could be viewed as a form of splitting within a treating team that can lead to feelings of therapeutic fatalism and therapeutic nihilism. Some may even call for the rejection of an ASD diagnosis. The challenge is then reflecting on the countertransference, where acting out can reinforce the split and increase difficulties in forming a therapeutic relationship. As a result, many of these individuals make slow therapeutic progress and appear stuck within services for many years. There can be differences in opinion within a multidisciplinary team regarding an individual's outstanding treatment needs and where these are best addressed. Such differences in opinion can also be understood in terms of cognitive dissonance and the preference to hold a consistent position rather than a state of discomfort when two conflicting views or beliefs are held. Specifically, it may be difficult to hold the position that an individual can have both an ASD and PD, with many behaviors being a product of the combination rather than each alone.

Improving Consistency

A multidisciplinary approach is central for those with dual diagnoses to progress within services, as well as to move beyond an impasse in opinions of risk and areas of need. Although an individual may receive a good level of individual therapeutic input, this can be hampered by a wider systems failure to acknowledge and consider difficulties associated with a dual diagnosis of an ASD and ASPD. This also needs to be reflected in improved clinical guidance for ASD-informed treatment of PDs.

Mandatory training in ASDs and PDs is of benefit and is in line with recommendations from the U.K.'s "right to be heard" consultation on learning disability and autism training for health and care staff.[40] But the application of this knowledge is important and perhaps most difficult. On an individual level, we would like to encourage more use of psychodynamic formulations and reflective practice. Although some of us are adept at identifying the cognitions and emotions that precipitate and perpetuate certain behaviors in patients, the culture of medicine and mental health care is perhaps less good at helping us pause and reflect on the emotions driving our own behavior. We all have biases to some degree and we all may become caught up in splits within therapeutic settings. It is the nature of working with individuals with severe mental disorders, particularly when those individuals are deemed an imminent risk to others (as they are in high security). This might be greater still for those with emotionally laden index offenses which may attract media attention. A culture of robust and meaningful reflective practice will help improve clarity on interpersonal interactions and our understanding of these disorders, and increase our empathy, and in some cases, compassion toward those with these diagnoses. This also needs to be supported by evidence-based assessment tools that may inform clinical guidelines for the treatment of difficulties associated with each disorder in the presence of the other. Until then, the management will undoubtedly be clouded by a high degree of subjectivity and inconsistency, which may be counter-therapeutic for a group of individuals so reliant on routine and consistency.

Personal Reflections

In the spirit of encouraging more reflective practice, we thought it might be helpful to include some personal reflections to conclude this piece. Elliott Carthy's experience comes from interacting with several patients with these diagnoses.

> I noticed that when aware of this dual diagnosis, I tended to more readily identify features associated with ASD than ASPD. This was likely accentuated by the more fleeting

nature of my interactions with these patients to manage specific clinical situations. This is as opposed to my nursing colleagues, for example, whose interactions are continual, thus negotiating everything from manifestations of mental illness to frustrations over meals and squabbles with other patients. Indeed, I often found that the same antisocial behaviors were given different attributions: I tended to see more of the ASD whereas others saw them as manifestations of the PD. It got me wondering why this difference in clinical opinion continually arose and how much of this was a true reflection of how these two disorders manifested, and how much of this was a way of different members of the multidisciplinary team managing their own emotions in these situations. It made me reflect on how managing our own emotions affects patient progress; psychodynamic perspectives provided an alternative framework for understanding an individual's difficulties and how to plan long-term treatment.

David Murphy's views are shaped by several years of clinical practice of working with high-risk individuals who present with an ASD and a PD:

While an accurate and reliable diagnosis can be problematic, I am particularly struck by how much a specific behavior can be interpreted differently by members of the same team and how often many key decisions are based on personal biases with questionable evidence. Working with such differences in opinion and views with a team can be extremely challenging, particularly when offense behaviors and risk management concerns are being debated. Although a diversity of views can be positive, there is a skill in presenting alternative perspectives and interpretations that bring other members of a team to a shared understanding. Despite many years' experience, such situations also highlight the value of personal reflection and a regular questioning of one's own practice.

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