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The prevalence of severe personality disorder in perpetrators of homicide

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ABSTRACT

Background – *Current UK evidence on the prevalence of personality disorder in homicide is lacking. The aims were to estimate the prevalence of personality disorder in homicide perpetrators from court reports and carry out a dimensional assessment in keeping with the new ICD-11 classification of the prevalence of severe personality disorder. Associations between severe personality disorder and sociodemographic, historical and offence-related characteristics were then explored.*

Methods – *Six hundred court reports from a national case series of homicide perpetrators in England and Wales were analysed using a document-derived version of the Personality Assessment Schedule (PAS-DOC), providing categorical and dimensional personality assessments. The prevalence of personality disorder and severe personality disorder was estimated. Factors associated with the diagnosis of severe personality disorder were examined.*

Results – *The prevalence of personality disorder using the PAS-DOC was 56.3% (95% confidence interval 52.3%, 60.3%), compared with 16% as diagnosed in reports. Severe personality disorder was present in 62% (n = 338) of all those with a personality disorder and was significantly associated with homicides of strangers and previous violence.*

Conclusions – *Severe personality disorder is highly prevalent among perpetrators of homicide, and the finding that it is more prevalent when strangers are the victims stresses both the need for early identification of those at risk of developing severe personality disorder and the development of appropriate early preventive interventions. There is also a need for the development of effective treatment and interventions for those with established severe personality disorder and better identification of this level of disorder by psychiatrists. The forthcoming ICD-11 classification should help in this endeavour. © 2021 The Authors Personality and Mental Health Published by John Wiley & Sons Ltd*

Introduction

Personality disorder (PD) was described as a label for 'the patients psychiatrists dislike' in 1988.[1] Over a quarter of a century later, it is questionable how far this pejorative perception has changed, with suggestions that it tends to be stigmatizing rather than clinically useful.[2] Often, patients with personally disorder are seen as not being truly ill or as undeserving of care and treatment when compared with individuals with severe mental illness.

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It is also highly likely that the condition is underdiagnosed. Previous studies have examined PD in homicide but reported prevalence estimates have varied widely from 33%[3] to 70%.[4] Many of these studies have significant limitations including small sample sizes and varying assessment procedures. There is a lack of evidence on the prevalence of dimensional measures of PD, such as severe PD, in this literature, as it is only recently that severity of PD has been addressed diagnostically. There is also a lack of consistent evidence concerning method, type of violence, and victim type. Studies suggest an association with PD and the use of guns, blunt weapons, sharp weapons hitting and kicking or ligature strangulation as methods.[5,6] Some evidence suggests an association with reactive violence[5] whereas other evidence links PD with instrumental violence.[7,8] There is also inconsistency in evidence regarding victim type, with associations with killing an acquaintance[5] and with stranger homicides.[8] There is, therefore, a lack of any robust evidence derived from studies with (1) an adequate sample size; (2) a standardized assessment of PD; (3) exploration of associations between PD and specific homicide offence variables.

The aims of this study were to estimate the prevalence of PD and carry out a dimensional assessment of the prevalence of severe PD, in a national case series of homicide perpetrators using a standardized tool on psychiatric reports prepared for court. Associations between severe PD and sociodemographic, historical and offence-related characteristics were then explored.

Methods

The National Confidential Inquiry into Suicide and Safety in Mental Health—formerly the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness collected data on all homicides occurring in England and Wales from sources including psychiatric reports prepared for court, mental health services, the Homicide Index at the Home Office, and Greater Manchester Police, which provided data at a national level.[9] Data were gathered on sociodemographic, clinical and forensic variables. The court reports provided information including the perpetrator's mental state at the time of the offence, the contribution of alcohol or drugs and the clinician's opinion on diagnosis.

The National Confidential Inquiry into Suicide and Safety in Mental Health was notified of 5 808 homicide perpetrators during the 11-year period 1996–2006. Given the lack of evidence regarding the prevalence of PD among homicide perpetrators, the sample size calculation for this study was based on the prevalence of PD and its specific clusters in the UK prison population.[10] This indicated that a sample size of 600 would be required to estimate the prevalence of any PD and that of specific clusters to within 5% of the true value with 95% confidence from a population size of 5 000 male and 500 female cases, and with 357 male and 217 female cases sampled. A proportionate number were selected from 1996 (data collection began in April 1996), and an equal number from each subsequent year, giving 373 male and 227 female patients. Within each year and gender group, cases were selected by systematic sampling from the national consecutive case series, which is ordered by date of conviction. An initial case was randomly selected and every *x*th case was selected, with *x* being the total in the group divided by the sample size.

The aim was to examine 600 psychiatric reports. A diagnosis of PD and its position on the ICD-11 severity spectrum[11] was made using the PAS-DOC,[12,13] a version of the Personality Assessment Schedule (PAS)[14] designed for use with documents. The PAS has 'personality created maladjustment' as the central component, with 24 personality variables rated on a nine-point severity scale. Results can then be presented as four domains, 13 categories and a dimensional severity scale. The domains map on to the cluster model of PD classification within DSM 5: schizoid to A (withdrawn); externalizing to B (flamboyant); internalizing to C (dependent); anankastic onto D (inhibited). The PAS is widely used to assess personality and is a standardized tool based on rigorous factor and cluster analysis.[12] The inter-rater reliability of the PAS-DOC has been shown to be good, with intraclass correlation coefficients ranging between 0.67 and 0.83 for all clusters except cluster A (0.41).[14]

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Data collected from the PAS-DOC analysis of 600 reports were analysed using STATA.[15] Scores from domains were completed as per the algorithm within the PAS schedule, and cases classified as 'personality disorder' (sufficiently high score), 'probable personality disorder' (high overall score, not sufficient in one domain), 'possible personality disorder' (high scores for three variables, insufficient data for full rating), 'personality difficulty' (high scores in three variables with adequate data), 'no personality disorder' and individuals who were impossible to classify owing to missing data (if missing data in any case exceeded 12 variables, i.e. 50% of all variables). Two discrete prevalence estimates were calculated using the following two denominators: (1) total number of cases; (2) total number of cases minus cases with inadequate data.

Dimensional measures of PD allow further classification of persons with a severe level of personality pathology as 'severe' PD (high scores on the externalizing, cluster B, domain and another domain, or on aggression or callousness). Logistic regression was then carried out to identify any associations between sociodemographic, clinical and criminological factors and severe PD by initial univariate analyses, followed by multivariable modelling. A stepwise estimation model, with alternate forward and backward selections for validation purposes, was then implemented. Statistical significance was set at 5% (p = 0.05; two sided) throughout.

Results

Preliminary exploratory work was carried out which indicated that, of the 5 808 homicides that occurred in England and Wales during calendar years 1996–2006, PD was diagnosed in the court report in just 16% of cases. When compared with robust figures from a UK offender population, with prevalence estimates of 50–70%,[10] 16% seemed likely to be a marked underestimation and prompted us to conduct this study.

The 600 psychiatric reports were analysed using the PAS-DOC. Inter-rater reliability was assessed by up to five raters simultaneously rating a random sample of 30 (5%) court reports. Agreement was measured using the intra-class coefficient giving a median of 0.58 (interquartile range = 0.8); this is comparable with a previous assessment of reliability of the PAS-DOC.[13]

The prevalence of PD for the sample is reported in Table 1. The majority (338; 56.3%) of cases fulfilled the criteria for definite PD. Of the remaining 262 cases, 13 fulfilled criteria for probable PD, 96 possible PD and 6 for personality difficulty. Only four cases fulfilled criteria for a definite absence of PD. The other 143 cases had missing data for over 50% of the variables and therefore were not classified further. It is difficult to determine whether these cases represent those without PD, or individuals among whom PD was not assessed. Confidence intervals (CIs) were calculated for both denominators; 600 (total cases) and 457 (total cases minus missing data) giving prevalence estimates of 56.3% (95% CI 52.3, 60.3) and 74.0% (95% 70.1, 77.9), respectively. It was agreed that the full denominator of 600 would be most appropriate because if clinically significant levels of personality pathology were present, they would be likely to have been noted by the clinician. Thus, on this basis, we assumed that most

Table 1: Prevalence of personality disorder and personality disturbance

Degree of personality disorder	*n*	Prevalence %[a] (95% CI)		Prevalence %[b] (95% CI)
Any personality disorder	338	56.3	(52.3, 60.2)	74.0 (70.1, 77.9)
Probable personality disorder	13	2.2	(1.3, 3.7)	2.8 (1.3, 4.3)
Possible personality disorder	96	16.0	(13.3, 19.1)	21.0 (17.3, 24.7)
Personality difficulty	6	1.0	(0.5, 2.2)	1.3 (0.3, 2.3)

CI, confidence interval.

[a]Prevalence values calculated using the full denominator of N = 600 homicide cases, including 143 individuals with no assessment of personality disorder.

[b]Prevalence values calculated using the denominator of N = 457 homicide cases, that is, total cases minus those with inadequate data.

subjects with missing data probably did not have a diagnosis of PD.

The severity of personality disturbance present was calculated as per the algorithm. Severe PD is characterized by those who score particularly highly on the externalizing domain (cluster B) and who additionally either fulfil criteria for another domain, or have very high scores for aggression or callousness. Of the 600 cases, 209 (35%) were diagnosed as suffering from severe PD. This constituted 62% of all those (n = 338) with a diagnosis of any PD.

The results of the univariate analysis are shown in Tables 2 and 3, with the caveat that, if interpreted as prevalence ratios, the values of the odds ratios (ORs) are distorted as a result of the high prevalence of severe PD in the PD group (62%) and therefore must be interpreted with caution. A number of variables were significantly associated with the presence of severe PD, and these are highlighted in bold in Tables 2 and 3. Several of the variables pertaining to previous convictions were significant: a history of any conviction for violence (OR 3.22; $p < 0.001$; 95% CI 1.98, 5.24); previous threats of violence (OR 2.93; $p = 0.002$; 95% CI 1.48, 5.75); previous offence of possession of a weapon (OR 3.90; $p = 0.001$; 95% CI 1.68, 9.02); previous criminal damage (OR 3.28; $p < 0.001$; 95% CI 1.90, 5.65). There was also a significant association between severe PD and killing a stranger (OR 2.47; $p = 0.017$; 95% CI 1.17, 5.19).

In the multivariate analysis for severe PD, previous convictions both for threats of violence and for criminal damage were omitted from the final model due to non-significance leaving a set of three variables that remained independent with mutual adjustment. The presence of severe PD was significantly associated with prior convictions for both any violent offence and for possession of an offensive weapon, and with killing a stranger. These results are shown in Table 4:

Discussion

Prevalence of personality disorder

This study found a prevalence of PD of 56% in a nationally representative sample of 600 perpetrators of homicide. This represents a conservative estimate as it was assumed that all those with missing data (n = 143, 23.8%) did not have PD. We know of no other published studies to have reported the prevalence of PD in this population in the UK, and there are few robust studies internationally. However, this figure is similar to prevalence estimates in the UK offender population of 50–70%[10] and a Swedish population of offenders convicted of homicide or attempted homicide of 54%.[16]

Correlations between severe personality disorder and circumstances of the offence

Within the severity spectrum analysis, of the 62% of the total with a PD, more than half (35% of the total sample) had a severe PD. This is clearly a very high proportion but, given the nature of the sample, is not surprising. Indeed, in a sample of

Table 2: Univariate analysis for severe personality disorder: sociodemographic and historical variables

Variable	Subcategory	Severe PD n (%) (n = 209)	All other PDs n (%) (n = 129)	Odds ratio	p value	95% CI
Gender	Male	135 (65)	75 (58)	0.62	0.167	0.32, 1.22
Previous convictions	**Any violence**	**105 (50)**	**31 (24)**	**3.22**	**0.000**	**1.98, 5.24**
	Threats of violence	**48 (23)**	**12 (9)**	**2.93**	**0.002**	**1.48, 5.75**
	Possession of a weapon	**38 (18)**	**7 (5)**	**3.90**	**0.001**	**1.68, 9.02**
	Sexual offence	8 (4)	3 (2)	1.69	0.445	0.44, 6.48
	Criminal damage	**81 (39)**	**21 (16)**	**3.28**	**0.000**	**1.90, 5.65**

CI, confidence interval; PD, personality disorder.
Subcategories in bold are significant at the level of $p < 0.05$. This is the case in all tables.

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Table 3: Univariate analysis for severe personality disorder: offence related variables

Variable	Subcategory	Severe PD *n* (%) (*n* = 209)	All other PDs *n* (%) (*n* = 129)	Odds ratio	*p* value	95% CI
Contributed to offence	Alcohol	15 (14)	5 (7)	2.14	0.157	0.74, 6.19
	Drugs	4 (5)	0	*	*	*
	Alcohol or drugs	16 (19)	5 (9)	2.53	0.088	0.87, 7.35
Victim number	Multiple (over 1)	8 (4)	6 (5)	0.82	0.712	0.28, 2.41
Victim relationship	Family	34 (18)	25 (20)	0.82	0.507	0.46, 1.46
	Son/daughter	20 (10)	19 (16)	0.62	0.167	0.32, 1.22
	Parent	5 (3)	5 (4)	0.62	0.455	0.18, 2.18
	Spouse/partner/ex	57 (30)	42 (35)	0.79	0.342	0.49, 1.29
	Family/spouse	91 (48)	67 (56)	0.72	0.160	0.46, 1.14
	Acquaintance	65 (34)	43 (36)	0.92	0.745	0.57, 1.49
	Stranger	**35 (18)**	**10 (8)**	**2.47**	**0.017**	**1.17, 5.19**
	Male stranger	26 (22)	8 (12)	2.11	0.087	0.90, 4.96
	Female stranger	9 (13)	2 (4)	3.56	0.115	0.73, 17.22
	Infant	8 (4)	11 (9)	0.43	0.077	0.17, 1.10
Method	Sharp instrument	97 (48)	59 (47)	1.04	0.852	0.67, 1.63
	Blunt instrument	20 (10)	13 (10)	0.95	0.896	0.46, 1.99
	Hitting/kicking	28 (14)	15 (12)	1.19	0.617	0.61, 2.32
	Strangulation	16 (8)	10 (8)	0.99	0.990	0.44, 2.27
	Shooting	6 (3)	4 (3)	0.93	0.913	0.26, 3.37
	Burning	2 (1)	1 (1)	1.25	0.858	0.11, 13.89
	Suffocation	4 (2)	4 (3)	0.61	0.496	0.15, 2.50
	Arson	8 (4)	4 (3)	1.25	0.717	0.37, 4.25

CI, confidence interval; PD, personality disorder.

Table 4: Variables independently associated with severe personality disorder from multivariate analysis

Variable	Odds ratio	*p* value	95% CI
Stranger	2.26	0.039	1.04, 4.89
Previous violent conviction	2.60	0.000	1.53, 4.43
Previous conviction possession of weapon	4.28	0.009	1.43, 12.78

CI, confidence interval.

prisoners selected for assessment for the Dangerous and Severe Personality Disorder programme, 67% ($n = 50$) were assessed as having a complex or severe PD.[17] It is arguable that this population may exhibit a similar level of psychopathology to the sample of homicide perpetrators. In examining the diagnosis of PD from reports in these cases, authors were significantly more likely to diagnose PD in individuals whom the PAS-DOC identified as severe (34% vs. 9%, $p < 0.001$). This might be considered an expected finding and, indeed, would be concerning in many respects if those with much more significant personality pathology were not more likely to be so identified.

Offence-related variables significantly associated with severe PD were previous convictions for violence and possession of a weapon and killing a stranger. The presence of PD within the externalizing domain (cluster B in DSM5) is necessary for severe PD in PAS-DOC. Thus, given the well-documented association of cluster B PDs with criminal convictions,[18] it might be expected that these individuals would have significantly more previous convictions. Moreover, evidence

indicates a much stronger association between criminal convictions and severe PD, than with antisocial PD alone.[19] Similarly, there is thought to be an increased prevalence of antisocial PD in serial killers,[20] who are predominantly characterized as killing strangers. There is also an association between psychopathy and stranger homicide victimization.[21] Although psychopathy could not be assessed in our study, it seems probable that individuals with psychopathy in the sample would fall within the severe PD group.[11]

Concerns have been raised at the approach to assessing severity necessitating the presence of significant personality pathology across a number of domains/clusters. It is thought that potentially high risk individuals with severe personality pathology in one domain may not be identified as sufficiently severely disordered.[22] Studies show, however, that pathology spanning domains leads to much greater social dysfunction, even if mild, compared with very severe pathology in only one domain.[23] It is also the case that increasing severity of personality pathology tends to result in individuals fulfilling criteria for more than one domain.[11]

Strengths and limitations

This is the first study to examine the diagnosis of PD in a nationally representative sample of homicide perpetrators in the UK using a standardized assessment tool. A key limitation was the use of the assessment tool on psychiatric reports, as opposed to face-to-face clinical interviews. A reliable and comprehensive assessment would necessarily incorporate perpetrator and informant interviews along with a well-validated interview-based assessment of personality. However, it would not be feasible to conduct such interviews with 600 perpetrators, and it is likely a substantial number of patients would not consent to being interviewed. This would then introduce a strong participation bias. The time delay between offence and conviction, often around 12–18 months, would mean that certain types of information such as the mental state at the time of the offence would be less accurate. The psychiatric reports, however, combine contemporaneous subject and informant information along with relevant background information from medical records. Moreover, the psychopathy checklist-revised (PCL-R) has well-documented reliability and predictive validity[24] and is another instrument based on the examination of reports.

Personality was assessed by the PAS-DOC. This tool has the advantage of allowing a dimensional assessment of both current personality and premorbid personality, which decreases bias introduced by concurrent mental illness or recent events. A limitation of using court reports is that the assessment is dependent on the quality of available information in them, which is often dictated by particular questions the clinician has been asked to address. Although variables such as background history and symptoms at the offence were addressed well, it is concerning that it was not possible to classify nearly one quarter of cases as a result of missing data. This provides a clear message for training and education within psychiatry.

Implications of receiving a diagnosis of personality disorder

Personality disorder remains a stigmatizing and pejorative diagnosis. Clearly, psychiatrists are reluctant to attribute the diagnosis as only one quarter of all cases diagnosed by the PAS-DOC were given a diagnosis in the report. The impact of the diagnosis for the individual is significant in several ways. Within the criminal justice system, it can result in increased sentences and a lower likelihood of parole.[25] Despite policy changes implemented in the UK over 10 years ago to address this issue,[26] it is still used to exclude patients from mental health services,[27] although PD is also now a diagnosis permitting compulsory admission to hospital. The diagnosis can have wider implications on employment, housing and legal matters, including custody of children.[28] Nonetheless, most patients prefer to be told of their diagnosis,[29] and failure to specify the condition only further increases stigma.[30] Moreover, the increased mortality and comorbid mental illness[31] associated with PD and the fact that it strongly predicts treatment outcome[2] means that giving the diagnosis

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and addressing difficulties associated with it is critical in medical practice. Indeed, failing to diagnose PD would preclude individuals from accessing treatment such as that provided within the Offender Personality Disorder pathway programme in England,[32] which specifically addresses the management of severe PD.

Future developments

The 11th ICD revision significantly changes the classification of PD as it entails abolishing individual categories and replacing them with a single spectrum of severity of personality disturbance.[11] Severity is determined by the impact of PD on interpersonal relationships and on social and occupational functioning, with increased risk to self and others being a feature at moderate and severe levels. This is then qualified by empirically derived domain traits to indicate the most prominent features of personality: negative affectivity, detachment, dissociality, disinhibition, and anankastia, with the option of adding 'borderline pattern' if needed.

Another change is that, given the temporal instability of PD, the diagnosis can be given, with caution, to young people. To address concerns regarding conflating normal adolescent development with emerging PD, the diagnosis of personality difficulty may be used to enable identification.[33] A developmental trajectory for the development of later severe PD, starting in childhood has been proposed[34] and needs further enquiry. Children already vulnerable due to genetic and perinatal risk factors alongside early developmental risk factors are likely to have serious attachment problems, potentially compounded by abuse and neglect. They therefore are increasingly likely to develop comorbid axis 1 disorders and encounter adverse life events leading to a pathway through the care system, with probable criminal justice system involvement. This model incorporates causal and maintaining factors and allows for resilient children to leave the pathway and vulnerable children to join it at various stages of development.

In the Dunedin cohort, a taxonomy of 'life course persistent' antisocial behaviour was developed, as opposed to that which was restricted to adolescence.[35] The 'life course persistent' group, 6% of the cohort, was characterized by early onset of 'difficult' behaviour of high risk young children, triggered and maintained by an adverse social environment. Cognitive deficits, a difficult temperament or hyperactivity were early, but identifiable, indicators of neuropsychological abnormalities, either genetic or acquired. They displayed restlessness, inattention and negativism at 3 and 5 years and social alienation at 18 years. Environmental risks including inconsistent parenting, poor family attachments and poverty expanded to include poor peer and teacher relations in later years. They also had higher rates of comorbid diagnoses such as conduct disorder, attention-deficit hyperactivity disorder and low IQ. During childhood and adolescence, maladaptive child and environment interactions increased, resulting in maladaptive personality traits, characterized by aggressive and antisocial behaviour that is maintained throughout adulthood. Uncontrolled behaviour at 3 years was shown to be associated with the development of antisocial PD, violent offences at 21 years and increased levels of recidivism.[36] This pattern has been supported by evidence from several countries, and by follow up within the Dunedin cohort.[37,38] It has also been shown that the aggressive behaviour of 'life course persistent' individuals is highly stable, whereas those in the 'adolescent limited' group have increased rule breaking predominantly between 10 and 17 years.[39] The 'life course persistent' group scored much more highly on psychopathic traits, particularly callousness and impulsivity, and also showed weaker bonds to family and were likelier to leave school early. 'Life course persistent' behaviour shows a high degree of heritability, but 'adolescent limited' does not.[40] Family and environmental factors seem more important for 'life course persistent' antisocial behaviour, with association with deviant peers exerting more influence in 'adolescent limited' behaviour.

It is hoped that the identification of those at risk of early onset severe PD will lead to the development of appropriate preventive interventions, at a point where interventions are more

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effective,[41] yet avoid unnecessary stigmatization at an early age.

One of the factors dissuading psychiatrists from diagnosing PD is the lack of availability of effective treatment and services. Until effective treatment is available and accessible, it is liable to remain a stigmatizing diagnosis that clinicians are reluctant to make. To increase detection of PD, there is a need to develop and provide services with demonstrable evidence of improvement in outcomes. There is some evidence of the effectiveness of certain interventions[30] and increasing recognition of how management of patients with PD can be improved across all services.[42] But there is still great reluctance for most psychiatrists to get meaningfully involved in the management of PD despite its obvious importance.[43] They need to engage with the planning and delivery of services such that the most appropriate and effective, service model for managing these challenging individuals can be developed. Once this has been performed, together with further development of services and potential treatments, the myth that all those with PD are untreatable may start to be dispelled, along with some of the stigma and prejudices surrounding the diagnosis.

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References

1. Lewis G, & Appleby L. Personality disorder: the patients psychiatrists dislike. *Br J Psychiatry* 1988; **153**: 44–49.
2. Tyrer P, Reed GM, Crawford MJ. Classification, assessment, prevalence, and effect of personality disorder. *The Lancet* 2015; **385**: 717–26.
3. Eronen M, Hakola P, Tiihonen J. Mental disorders and homicidal behaviour in Finland. *Arch Gen Psychiatry* 1996b; **53**(6): 497–501.
4. Putkonen H, Collander J, Honkasalo M, Lonnqvist J. Personality disorders and psychoses form two distinct subgroups of homicide among female offenders. *J Forens Psychiatry* 2001; **12**(2): 300–12.
5. Hakkanen H, & Laajasalo T. Homicide crime scene behaviors in a Finnish sample of mentally ill offenders. *Homicide Stud* 2006; **10**(1): 33–54.
6. Hakkanen H. Homicide by ligature strangulation in Finland: offence and offender characteristics. *Forensic Sci Int* 2005; **152**(1): 61–64.
7. Williamson SE, Hare RD, Wong S. Violence: criminal psychopaths and their victims. *Can J Behav Sci* 1987; **19**: 454–62.
8. Cornell DG, Warren J, Hawk G, Stafford E, Oram G, Pine D. Psychopathy in instrumental and reactive violent offenders. *J Consult Clin Psychol* 1996; **64**(4): 783–90.
9. NCISH. Annual report: England, Northern Ireland, Scotland and Wales. University of Manchester. 2017.
10. Singleton N, Meltzer H, Gatward R. *Psychiatric morbidity among prisoners*. London: G. S. Service, Office for National Statistics, 1998.
11. Tyrer P, Mulder R, Kim YR, Crawford MJ. The development of the ICD-11 classification of personality disorders: an amalgam of science, pragmatism, and politics. *Annu Rev Clin Psychol* 2019; **15**: 481–502.
12. Tyrer P. Personality Assessment Schedule—Document-Derived Version (PAS-DOC). Department of Psychological Medicine: Imperial College. 2005.
13. Tyrer P, & Alexander J. Classification of personality disorder. *Br J Psychiatry* 1979; **135**(2): 163–7.
14. Tyrer P, Coombs N, Ibrahimi F, Mathilakath A, Bajaj P, Ranger M et al. Critical developments in the assessment of personality disorder. *Br J Psychiatry* 2007; **190**(49): s51–s59.
15. StataCorp. Stata statistical software: Release 11. College Station, TX: StataCorp LP; 2009.
16. Fazel S, & Grann M. Psychiatric morbidity among homicide offenders: a Swedish population study. *Am J Psychiatry* 2004; **161**(11): 2129–31.
17. Tyrer P, Cooper S, Rutter D, Seivewright H, Duggan C, Maden T et al. The assessment of dangerous and severe personality disorder: lessons from a randomised controlled trial linked to qualitative analysis. *J Forensic Psychiatry Psychol* 2009; **20**(1): 132–46.
18. Coid J, Yang M, Tyrer P, Roberts A, Ullrich S. Prevalence and correlates of personality disorder in Great Britain. *Br J Psychiatry* 2006a; **188**: 423–31.
19. Yang M, Coid J, Tyrer P. Personality pathology recorded by severity: national survey. *Br J Psychiatry* 2010; **197**(3): 193–9.
20. Geberth VJ, & Turco RN. Antisocial personality disorder, sexual sadism, malignant narcissism, and serial murder. *J Forensic Sci* 1997; **42**(1): 49–60.
21. Dowson JH, & Grounds AT. In: Dowson JHaG AT (ed). *Specified Personality Disorders: Clinical Features*, pp. 43–127. Cambridge: Cambridge University Press, 1995.
22. Adshead G, Brodrick P, Preston J, Deshpande M. Personality disorder in adolescence. *Adv Psychiatr Treat* 2012; **18**(2): 109–18.
23. Seivewright H, Tyrer P, Johnson A. Persistent social dysfunction in anxious and depressed patients with personality disorder. *Acta Pscyhiat Scand* 2004; **109**: 104–9.

24. Hare RD, Clark D, Grann M, Thornton D. Psychopathy and the predictive validity of the PCL-R: an international perspective. *Behav Sci Law* 2000; **18**(5): 623–45.
25. Padfield N. Detaining the dangerous. *J Forens Psychiatry* 2000; **11**(3): 497–500.
26. NIMHE. *Personality Disorder: No Longer a Diagnosis of Exclusion. Policy Implementation Guidance for the Development of Services for People with Personality Disorder, Gateway Reference 1055*. London: NIMH(E), 2003.
27. Tetley AC, Evershed S, Krishnan G. Difficulties in the pathway from high to medium secure services for personality-disordered patients. *J Forensic Psychiatry Psychol* 2010; **21**(2): 189–201.
28. Bartlett P. DSM-5 and ICD-11 on personality disorder: A lawyer's perspective. *Personal Ment Health* 2011; **5**(2): 144–51.
29. Mitchell AJ. Reluctance to disclose difficult diagnoses: a narrative review comparing communication by psychiatrists and oncologists. *Support Cancer Care* 2007; **15**: 819–28.
30. Kealy D, & Ogrodniczuk JS. Marginalization of borderline personality disorder. *J Psychiatr Pract* 2010; **16**(3): 145–54.
31. Doyle M, While D, Mok PL, Windfuhr K, Ashcroft DM, Kontopantelis E et al. Suicide risk among primary care patients diagnosed with a personality disorder: a nested case-control study. *BMC Fam Pract* 2016; **17**: 106.
32. NOMS, NHS England. The offender personality disorder pathway strategy. London 2015.
33. Newton-Howes G, Clark LA, Chanen A. Personality disorder across the life course. *The Lancet* 2015; **385**(9969): 727–34.
34. Vizard E, French L, Hickey N, Bladon E. Severe personality disorder emerging in childhood: a proposal for a new developmental disorder. *Crim Behav Ment Health* 2004; **14**(1): 17–28.
35. Moffitt TE. Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychol Rev* 1993a; **100**(4): 674–701.
36. Caspi A, Moffitt TE, Newman DL, Silva PA. Behavioral observations at age 3 years predict adult psychiatric disorders. Longitudinal evidence from a birth cohort. *Arch Gen Psychiatry* 1996; **53**(11): 1033–9.
37. Caspi A, McClay J, Moffitt TE, Mill J, Martin J, Craig IW et al. Role of genotype in the cycle of violence in maltreated children. *Science* 2002; **297**(5582): 851–4.
38. Moffitt TE, Caspi A, Harrington H, Milne BJ. Males on the life-course-persistent and adolescence-limited antisocial pathways: follow-up at age 26 years. *Dev Psychopathol* 2002; **14**(1): 179–207.
39. Stanger C, Achenbach TM, Verhulst FC. Accelerated longitudinal comparisons of aggressive versus delinquent syndromes. *Dev Psychopathol* 1997; **9**(1): 43–58.
40. Edelbrock C, Rende R, Plomin R, Thompson LA. A twin study of competence and problem behavior in childhood and early adolescence. *J Child Psychol Psychiatry Allied Discip* 1995; **36**(5): 775–85.
41. Hawkins JD, & Herrenkohl TI. Prevention in the school years. In: Farrington DPaC JW (ed). *Early Prevention of Adult Antisocial Behaviour*. Cambridge: Cambridge University Press, 2003.
42. Duggan C, & Kane E. Developing a national institute of clinical excellence and health guideline for antisocial personality disorder. *Personal Ment Health* 2010; **4**(1): 3–8.
43. Tyrer P. Why we need to take personality disorder out of the doghouse. *Br J Psychiatry* 2020; **216**: 65–66.

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