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High functioning autistic spectrum disorders, offending and other law-breaking: findings from a community sample

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Abstract

The prevalence and pattern of offending and other law-breaking among groups of men and women with High Functioning Autism/Asperger Syndrome (ASDs) living in the community has not, so far, been examined empirically. In this study, the illegal behaviours of a small sample ($N = 25$) of people with ASDs were investigated. Unexpectedly, both self-report and 'official' data indicated that the rate of law-breaking, including offending, was very low. Indeed, it was significantly ($p < 0.05$) lower than that of a stringent non-ASD comparison group ($N = 20$). Despite similarities, however, there were some striking differences between the patterns of illegal behaviours in the two groups. The participants with a diagnosis of an ASD were significantly ($p < 0.01$) less likely to report that they had engaged in illicit drug-taking; in contrast, they were significantly more likely ($p < 0.05$) to report activities which could be categorised as 'criminal damage'. Moreover, they tended to have a greater history of violent behaviours. The methodological limitations of this study, particularly the difficulties of recruiting an adequate community sample of people with ASDs, are discussed, together with the implications for the development of services for the small minority of men and women with this diagnosis who are involved in criminal offending and other law-breaking.

Keywords: *Autistic spectrum disorders, Asperger Syndrome, offending, law-breaking, mental disorder*

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Introduction

In the UK, the *Review of Services for Mentally Disordered Offenders* (Department of Health, 1992) concluded that greater understanding of the prevalence and pattern of offending and other law-breaking among people with autistic spectrum disorders (ASDs) was needed to inform the development of appropriate services to meet the needs of this group and recommended that priority should be given to research in this area. Similar recommendations have been made subsequently (Powell, 2002). However, whilst there is a developing literature, from a number of different countries, relating to people with putative or diagnosed ASDs and illegal behaviours (Baron-Cohen, 1988; Barry-Walsh & Mullen, 2004; Chen et al., 2003; Chesterman & Rutter, 1993; Hare et al., 1999; Kohn et al., 1998; Mawson et al., 1985; Murrie et al., 2002; Palermo, 2004; Scragg & Shah, 1994; Silva et al., 2002, 2004), internationally, this has had little impact on the development of mental health services which address clinical issues around the rehabilitation of people with ASDs who engage in these behaviours; current treatment and support services remain inadequate (Murphy, 2002).

ASDs describe a group of behavioural syndromes of childhood onset that are characterized by a core phenotype of difficulties with social interaction, communication and flexible patterns of behaviour. Among higher functioning people with ASDs, a subgroup, with a typical history of early acquisition of language skills, are described as having Asperger Syndrome (AS). However, there is no consistent empirical evidence for a distinction between AS and High Functioning Autism (HFA; Folstein & Santangelo, 2000; Mayes & Calhoun, 2004; Volkmar et al., 1998) and, at present, the favoured approach is to conceptualize all forms of the disorder as a spectrum (Wing, 1997).

The relevant published studies describing an apparent association between ASDs and law-breaking are primarily of two kinds (for a more detailed review, see Howlin, 2004). First, there are case studies involving one or more individuals (Baron-Cohen, 1988; Barry-Walsh & Mullen, 2004; Chen et al., 2003; Chesterman and Rutter, 1993; Everall & Le Couteur, 1990; Kohn et al., 1998; Mawson et al., 1985; Murrie et al., 2002; Palermo, 2004; Silva et al., 2002, 2004). A number of these, exemplified by the work of Silva and his colleagues (ibid.), use retrospective analysis to examine whether people convicted of serious crimes show the characteristic autistic phenotype. Problematically, none of these studies provides a detailed developmental history so that it is uncertain whether the individuals meet the criteria for a diagnosis of an ASD, rather than some other disorder; their contribution to understanding of issues relating to the prevalence and pattern of law-breaking and offending is therefore limited. An alternative approach, adopted by, for example, Baron-Cohen (1988), uses the symptoms to attempt to explain the behaviour of people in whom

ASDs can clearly be established and whose illegal behaviours, whilst they have not necessarily resulted in any contact with the criminal justice system, have brought them to the notice of mainstream or specialist mental health services. While these studies contain interesting clinical insights, their contribution to the task of informing service development is limited.

The second kind of study attempts to address explicitly the issues relating to the prevalence and pattern of offending by people with ASDs. It involves surveys of the patients of high security psychiatric hospitals for the presence of autistic spectrum disorders. Such surveys have been carried out in England by Scragg and Shah (1994) and Hare and his colleagues (Hare et al., 1999), using the diagnostic criteria of Gillberg and Gillberg (1989). Comparing their figures with reasonable estimates of community prevalence (see review by Williams et al., 2006), they conclude that, since people with ASDs are over-represented in high security hospitals, they are at particular risk of engaging in illegal behaviours, particularly violence. Unfortunately, such a conclusion is problematic. First, the findings may simply reflect sentencing policies and practice, which use mental health, rather than criminal justice, facilities for the detention of violent offenders with ASDs. In any case, as Ghaziuddin et al., (1991) point out, the figures produced by Scragg and Shah (1994) and Hare et al. (1999) are still much lower than that of some general population groups. Secondly, it is difficult from these studies to ascertain whether there is a typical pattern of illegal behaviour. Patients in maximum security settings have normally been involved in very serious offences and more 'everyday' kinds of law-breaking may be under-represented.

To address these issues, community-based studies are needed. Surprisingly, there has been only one relevant investigation. Focussing on violence, Ghaziuddin and his colleagues (Ghaziuddin et al., 1991) reviewed 132 published studies relating to people with high functioning ASDs. They concluded that men and women with ASDs were at less risk of engaging in this form of behaviour than their general population counterparts. Unfortunately, though, because of their reliance on the information available in published data, it is not possible to exclude the possibility that the prevalence of violence was underestimated.

In terms of assessing issues of prevalence and patterns of law-breaking, most criminological research has focussed on offending, using conviction data obtained from official statistics. A criminal conviction, and, indeed, contact with the criminal justice system, is by no means invariably the consequence of illegal behaviours (for reviews of the issue, see Farrington, 2001; Hindelang et al., 1981; Huizinga & Elliott, 1984). Even for offenders from the general population, conviction data have a complicated relationship with the 'dark figure of hidden crime' (Bottomley, 1981, p. 21); when people with a 'mental disorder' are involved, matters may be even more complex. In an attempt to overcome the biases resulting from the of the

criminal justice system, self-report questionnaires of illegal behaviours have been developed. There is empirical evidence that their test-retest reliability and concurrent and predictive validity is satisfactory (Farrington, 2001; Hindelang et al., 1981; Huizinga & Elliott, 1984), and they have become an established methodology in cross-sectional studies of prevalence (for example, Gold, 1970; Flood-Page et al., 2000).

The aim of the preliminary study reported here was to inform service development by using both self-report and official statistics to examine the prevalence and pattern of offending and other law-breaking among an administrative sample of adults with high functioning ASDs living in the community. While no specific hypotheses were made about the pattern of their illegal behaviours, we predicted that, compared with their 'general population' counterparts, the 'ASD' group would be at increased risk of engaging in such behaviours.

Methods

Recruitment and procedure

Ethical approval for this study was granted by the Cambridge Local Regional Ethics Committee. An attempt was made to recruit as near as possible a population sample of adults (aged 18 years or more) with ASDs living in one Health District (adult population: 203,000) through primary care services, mental health services, specialist learning disability services, and local media. There were two criteria for the inclusion of participants. First, they had to meet the diagnostic criteria for an ASD according to the International Classification of Diseases (ICD-10, WHO, 1992). The ADI-R (Lord et al., 1994) was used to make or confirm the diagnosis. Men and women for whom no developmental history was available from informants were not included in the study. Secondly, participants had to be of 'normal' intellectual ability, defined as a tested FSIQ of 70 or above on the Wechsler Abbreviated Scale of Intelligence (WASI, The Psychological Corporation, 1999).

One hundred and two adults with definite or possible high functioning ASDs were identified. Unfortunately, fifty-seven did not respond or did not wish to take part in the study. Of the remainder, twenty were subsequently excluded: ten whose tested FSIQs lay below the 'cut off' of 70, six for whom it was not possible to obtain a developmental history, and four who did not meet the diagnostic criteria for an ASD. Twenty-five adults with ASDs were finally included in the study, all of whom were able to give or withhold consent. Each person was interviewed individually in their own homes or a quiet room located in the university, and paid a small amount as an acknowledgement of their participation. All the interviews were carried out by a psychiatrist (MWS) experienced in working with this group of men and women.

A comparison group of twenty volunteer participants, none of whom fulfilled the criteria for an ASD, was recruited from among the paid employees of a large local company. Individual interviews were carried out in a quiet room at their place of work by a research assistant who had been trained in the administration of the assessments.

Measures

Self-reported law-breaking. This was assessed using the Self-Reported Offending Questionnaire (Farrington, unpublished), which includes 52 behaviours which could lead to arrest by the police, prosecution, and conviction by a court (breaking into gas or electricity meters, making an obscene phone call to a stranger, taking non-prescription drugs). The respondent is asked to reply 'yes' or 'no' to each in turn to indicate whether they have ever engaged in that behaviour. Methodological studies examining different forms of administration of self-report measures suggest that there is no difference in rates of reporting under conditions of anonymity and non-anonymity (Farrington, 1973); nor does it appear to matter whether they are completed by the respondent on his/her own or during an individual interview (Krohn et al., 1975). It has been argued, however, that because it allows the interviewer to check that an item has been understood, an individual interview is preferable (Farrington, 1973); this was the method we used.

Official statistics. The Home Office (UK) Offenders' Index was used to provide information on convictions among the ASD group. This Index, which is updated quarterly, contains data for 'standard list' offences: all those which must be tried by a judge and jury in a Crown Court because of their seriousness (such as manslaughter), those which are 'triable either way', and can be tried in a Crown Court (such as robbery), and some of the more serious offences which would be tried by a Magistrate's Court (driving whilst disqualified).

Analysis

Data were analysed using Stata Version 8 (Stata Corporation, 2003). Definitions from the UK Home Office were used to categorise the individual 'illegal behaviour' items from the self-report questionnaire into different offences (such as burglary, criminal damage). For each item to which they responded affirmatively, participants were coded positive for the relevant offence. The proportions of participants in the ASD and general population groups who admitted each offence were then compared. Chi-squared analysis was used to determine the statistical significance of any differences between the groups, with Fisher's exact test

used for cell sizes of five or less. Significance was set at the conventional 5% level.

Results

The characteristics of the participants in the two groups are summarised in Table I. There were no statistically significant differences between the mean ages and gender proportions of the two groups.

Table II summarises the responses of the participants in each group to the questionnaire. Contrary to expectations, only 12 (48%) of the 25 participants in the ASD group reported that they had ever engaged in the illegal behaviours included in the self-report schedule, compared with sixteen (80%) of their peers in the general population; this difference was statistically significant ($p < 0.05$). Consistent with their low level of self-reported offending, only two (8%) people in the ASD group were listed on the Offenders Index, both for offences that do not form part of the self-report questionnaire. The first person had been Conditionally Discharged following

Table I. Characteristics of the participants in the ASD and comparison groups.

	ASD group (N = 25)	Comparison group (N = 20)
FSIQ, mean (SD)	104.7 (17.7)	118.7 (10.0)
VIQ, mean (SD)	102.4 (17.1)	116.2 (10.0)
PIQ, mean (SD)	105.9 (17.1)	117.2 (10.0)
Age, mean in years (SD)	29.8 (7.9)	40.7 (11.9)
Ratio of men to women	6:1	2:1

Table II. Comparison of the proportions of participants in each group who reported law-breaking (by category of offence).

Law-breaking (as category of offence)	ASD group: proportion (N) responding 'yes'	Comparison group: proportion (N) responding 'yes'	χ^2
Burglary	4% (1)	0% (0)	0.9
Robbery	0% (0)	0% (0)	0
Theft: handling stolen goods	9% (2)	10% (2)	0.1
Theft: shoplifting	11% (3)	20% (4)	0.7
Theft: other (see text)	0% (0)	0% (0)	0
Drug offences	11% (3)	55% (11)	10.6**
Criminal damage	19% (5)	0% (0)	4.1*
Violence (all offences)	30% (8)	25% (5)	0.1
History of conviction‡	7% (2)	NA	

Notes: *$p < 0.05$; **$p < 0.01$; ‡History of convictions according to the Home Office Offenders' Index (see text). NA = No figures available.

a conviction for arson; the other, who reported his offence spontaneously during the self-report interview, had received a Probation Order after he had been convicted for an assault on a female aged less than sixteen years.

As Table II shows, more detailed examination of the individual offence categories highlighted some differences between the pattern of law-breaking in the two groups. First, while only three (11%) of the ASD group reported activities relating to drugs that they had not been prescribed, such behaviour was reported by eleven (55%) of the comparison group. Secondly, and in striking contrast, none of the 'general population' participants reported that they had been involved in activities which could be categorised as 'criminal damage' (defacing a wall by spraying paint or writing on it; deliberately damaging property such as a phone box, a car, a window or a street light (but without stealing anything)). This behaviour was reported by five (19%) of the ASD group. However, there were also similarities between the pattern of offending of the two groups: like their 'general population' peers, people with ASDs were unlikely to report involvement in burglary, robbery or theft.

Discussion

Though small-scale, this is the first study attempting to examine the prevalence and pattern of law-breaking and offending in a community sample of intellectually able people who fulfil strict diagnostic criteria for an ASD. Contrary to expectations, the official statistics suggested that very few of them had been convicted of criminal offences, and that their involvement in illegal behaviours for which they had not been convicted was also very limited. Nevertheless, though there were some similarities, there were also differences between the patterns of law-breaking of the 'ASD' and a comparison 'general population' group. The participants with a diagnosis of an ASD were significantly more likely to report illegal activities resulting in criminal damage, and tended to have a greater history of violent behaviour; in contrast, according to their self-report, they were less likely to have engaged in illicit drug-taking.

The findings contrast with those obtained from studies carried out in high-security settings (Scragg & Shah, 1994; Hare et al., 1999), though they are consistent with the conclusions drawn by Ghaziuddin and his colleagues (Ghaziuddin et al., 1991) which challenge any particular association between violence and ASDs. Indeed, consistent with the argument made by Howlin (2004), the findings suggest that people with ASDs may adhere to lawful behaviour more consistently than their general population counterparts. Admittedly, the small sample size places great constraints on the extent to which conclusions can be drawn, but the comparison group was reasonably stringent (Farrington et al., 2002). While the differences were not statistically significant, their mean scores were higher on all three

measures of IQ and they included a higher proportion of women; they were also all in paid employment.

It was not anticipated that the sample of participants with ASDs would be so small. A recent estimate of prevalence (Scott et al., 2002), based on primary-school children within an area encompassing the one where this study was carried out, led us to expect many more than one hundred and two people would be identified for recruitment. One possible explanation, which is consistent with our experience as clinicians, is that, whilst expertise in identifying and diagnosing children has improved hugely, many adults remain unidentified or undiagnosed. It has also been suggested that the behavioural phenotype of ASD may be more obvious in childhood (Williams et al., 2006), appearing in more subtle forms among adults. Of those men and women who were identified as potential participants, fewer than half agreed to take part. Most people did not refuse but simply did not reply to our attempts to contact them; adhering to ethical procedures, these attempts were all made in the form of letters with stamped addressed envelopes to facilitate responding. Since we had established that the letters were easy to understand and were presented in acceptable language, that has not demeaning or confusing, and there were not similar difficulties in recruiting participants in another part of the project, which involved people detained in hospital or prison following criminal convictions, it seems most likely that the low response rate reflects problems among this group in arranging to respond. If this explanation, which is supported by clinical experience, is correct, then our sample may contain a disproportionate number of men and women who are supported by family members or social carers and may not be representative of the population of people with ASDs (Millson, 2005). The rates of engaging in illegal behaviours among other, perhaps more socially isolated individuals, may be different; we have no way of knowing. This difficulty cannot easily be overcome with cross-sectional studies; longitudinal studies, following up samples identified in childhood (Baird et al., 2001; Scott et al., 2002) may be more useful.

Though it was encouraging that, as far as could be established, people with ASDs seemed prepared to admit their illegal behaviours, there were problems in the way that offending and other law-breaking were assessed. The limitations of using criminal convictions, such as the Home Office Offenders' Index, are well-known (Bottomley, 1981), but the self-report measure used in this study, the Self-Reported Offending Questionnaire (Farrington, unpubld), was also unsatisfactory. It is too biased towards minor illegal behaviours. Moreover, because, like the HO Offenders' Index, it focuses on the criminal justice system, it did not identify the two participants who, following police investigation of alleged harassment of others, had been 'diverted' to the forensic mental health services. A self-report measure needs to be developed which encompasses a wider range of

illegal behaviours, including serious behaviour, and information about the consequences needs to be collected from a range of agencies.

In this study, which aimed to focus on the prevalence and pattern of offending and other law-breaking by people with ASDs living in the community, motivation was not explored formally. The informal accounts of several of the participants suggested that their illegal behaviours were carried out in response to perceived victimisation. For example, among the participants who had damaged property, one woman reported that she had scratched a the car of a female neighbour because she was 'jealous' of what she described as the other woman's 'normality', while a man described how he had 'trashed the toilets' at his work when he was made redundant. Another man recalled that, when he was younger, he had used a knife to rip the seats of a bus, which, he believed, had deliberately failed to stop when he had been running to catch it the previous day. Consistent with these anecdotes, Wing (1997), reflecting on many years of clinical experience with people with diagnosed ASDs, has remarked on the possible importance of 'feelings of resentment... leading to unprovoked assaults' (p. 254). Tantam (1999) has developed this idea, arguing that feelings of powerlessness may lead some men and women with ASDs to engage in acts that are deliberately intended to cause shock and disruption and are most appropriately characterised as malicious. However, he does not view these behaviours simply as a reaction to the social exclusion, which, too often, characterises the experience of people with ASDs (Barnard et al., 2001; Broach et al., 2003). Instead, he argues, individuals who act with malice form a subgroup, differing from others with their diagnosis in appearing immature and naïve rather than eccentric and clumsy. Clinically, his argument makes sense (see, for example, the first two cases described above), it warrants empirical investigation. Research is also needed to investigate whether the unhelpful, albeit understandable, feelings that may contribute to illegal behaviours and, sometimes offending, can be challenged, for example, by cognitive-behavioural therapy.

What are the implications of these preliminary findings? While they suggest that most of the sample of people with ASDs did not engage in illegal behaviours, and that the rate of offending was very low, the identification of a small but significant number of men and women who had carried out more serious law-breaking raises the issue of how the health needs of such individuals should be met. The sample in this study suggested a range of responses. Of the four participants (all men) who had engaged in the most serious illegal behaviours, one was receiving treatment and support through generic community-based secondary adult mental health services, two through similar services for people with learning disabilities, and one through a tertiary forensic mental health service. While the heterogeneity of the population with a diagnosis of an ASD means that a range of responses is likely to be needed, we found no

evidence of any framework for considering the pathway to particular treatment services.

This is, perhaps, unsurprising given that, both in the UK and other countries, little research is available that could be used to inform the development of a range of appropriate services for people with ASDs who engage in law-breaking. In the UK, two initiatives have attempted to address the needs of men and women with particularly severe difficulties: the National Autistic Society, which provides information and services to people with ASDs and their families, has opened a specialist semi-secure facility, and Broadmoor Hospital, which provides high security provision, has also begun to develop particular expertise (Murphy, 2002). It is not clear, however, how relevant the experience of these national services is to other people with ASDs who engage in illegal behaviours or offending, the overwhelming majority of whom live in the community. Local services, many of whom now rely on independent hospital or social care, often far from the district of origin of the person, need to develop skills and confidence in working, often over long periods of time, with these men and women. Part of this task will involve liaison with the police service so that alleged offences are investigated independently even if that does not necessarily lead to further involvement with the criminal justice system. The appropriate type of health care provision will depend on the person's needs. Generic adult mental health services, including in-patient services, may be most appropriate for men and women whose illegal behaviours appear to reflect a co-morbid mental illness or particular psychological problems. In contrast, the care provided by learning disabilities services may be most helpful for men and women whose social functioning is grossly impaired, even if their intellectual ability lies well within the average range. Finally, the involvement of forensic mental health services may be required for the small group of individuals for whom generic teams are unable to provide an appropriate level of community supervision, or where detention under conditions of security is required. Health care provision is, however, only one of the elements of an adequate service to meet the needs of people with ASDs who engage in illegal behaviour. Based on clinical experience, and surveys of the broad group of men and women and their carers (Powell, 2002), opportunities for training and employment, accommodation, and socialising with others urgently need to be developed.

The findings of this study are preliminary, and need to be replicated with a larger sample that is more representative of people with ASDs living in the community. In the meantime, in order to inform the development of appropriate services, it may be helpful to investigate in much more detail the individual and social factors which contribute to law-breaking and offending among a minority of people with the core phenotype associated with the diagnosis; this is the issue we are now attempting to address.

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