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Improving the detection of detainees with suspected ID in police custody.

Abstract

Purpose

The purpose of this study is twofold. Firstly to ascertain the efficacy of current police reception screening to detect detainees with ID. Secondly to assess the validity of a short targeted screen for ID among police custody detainees.

Method

The study comprised three stages. (1) 248 police custody detainees were assessed for a range of health morbidities, including a pragmatic clinical evaluation of ID. For those with suspected ID, the police custody screens were scrutinised for evidence that this had been detected. (2) A new police health screen, incorporating a short screen for ID, was piloted. 351 detainees were assessed in the same way as in part 1 with the pilot screens being scrutinised for evidence that ID had been detected where relevant. (3) The pilot police screen for ID was validated among a sample of 64 inpatients, some with ID and some without, from forensic inpatient services. Parts 1 and 2 were carried out in the Metropolitan Police Service, London. Part 3 took place in one NHS Trust.

Findings

In parts 1 and 2, the rate of detainees with suspected ID was 2-3%. The standard police screen detected 25% of these detainees in part 1. When the pilot screen was introduced in part 2, the sensitivity for ID increased to 83%. However there was no requisite improvement in the proportion of detainees with ID receiving an Appropriate Adult. In the inpatient study, the pilot screen showed a good level of sensitivity (91%) and reasonable specificity (63%).

Practical Implications

It is possible to improve the detection rate of detainees with suspected ID by introducing a short ID screen into the police custody officers' reception health screen.

Originality

The HELP-PC study is a project evaluating screening for health morbidity among police custody detainees. Other data from this study have been reported elsewhere, but this is the first time the data pertaining to ID screening has been reported in detail.

Keywords

Police custody, screening, appropriate adults, PACE.

Introduction

Intellectual disability in the police station

People with intellectual disability in police custody are among a group of detainees considered 'mentally vulnerable' under the Police and Criminal Evidence Act (1984). Mental vulnerability also covers other mental disorders such as mental illness and other causes of cognitive impairment. Nevertheless, most of the published literature has focused on intellectual disability.

Early work in the UK observed that only one of 196 police custody detainees had evidence of a low intelligence quotient (IQ) or mental handicap (Irving, 1980; Irving and McKenzie, 1989). Hampered by methodological constraints, these studies nonetheless paved the way for further research. Gudjonsson *et al.* (1993) measured full scale intelligence quotient (FSIQ) among 156 custody detainees. They found a mean FSIQ of 82, but 9% scored under 70 (ID range) and a further 42% between 70 and 79 (borderline ID range), although there was evidence that anxiety may have suppressed performance on cognitive tests. A study in Cambridge found that 12% of detainees reported having attended a special needs school for 'learning difficulties' or emotional and behavioural difficulties (EBD) (Lyall *et al.*, 1995b). It was additionally found that detainees in the EBD group were more likely to be remanded in custody or bailed for court than the 'mainstream school' group who were more likely to receive a police caution. Scott *et al.* (2006) in Northern Ireland found following a two stage screening technique of 9000 custody records that 1% of the sample had evidence of possible or definite ID.

A recent study administering the Learning Disability Screening Questionnaire (LDSQ) (McKenzie and Paxton, 2006) in police stations in West Yorkshire found 3% of 225 detainees screened positive (Middlemiss, 2012). In comparison, 13 (7%) of a sample of 200 detainees screened positive in a London based study using the LSDQ (Young *et al.*, 2013).

Elsewhere in the criminal justice system (CJS) estimates of ID prevalence range from 1-10% (Loucks, 2007; Fazel *et al.*, 2008). This wide range of estimates reflects methodological difficulties and variations in methods of estimation (McBrien, 2003). The problems in obtaining reliable prevalence data are augmented by a high throughput of detainees and a short window of opportunity in which to perform validated standardised tests (Lyall *et al.*, 1995a).

Although there appears to be a consensus that the prevalence of intellectual disability in police custody as well as in the wider CJS is somewhere above that seen in the general population (O'Brien, 2006) the extent of the problem remains unclear.

Appropriate Adults

Detainees identified as 'mentally vulnerable' by police custody officers (COs) must have an Appropriate Adult (AA) present during the PACE interrogative interview. AAs exist across UK jurisdictions. In England and Wales AAs are a statutory provision under PACE (The Home Office, 2014), whereas in Scotland their basis derives from common law and governmental guidance (The Scottish Office, 1998). The purpose of the AA is to improve communication between the detainee and the police (Thomson *et al.*, 2007; Ventress *et al.*, 2008), thus reducing the chance of unreliable evidence during interview and potential inadmissibility (Rix, 1997). The effectiveness of AAs remains unclear but there is some evidence that adult detainees who have an AA present are more likely to

have more proactive legal representation and experience less interrogative pressure during the interview (Medford *et al.*, 2003).

A large survey of custody records from four police stations in England found that the need for an AA was documented on just over 2% of records, but an AA was called in fewer than 1% of cases (Bean and Nemitz, 1995). A study by Medford *et al.* (2000) estimated 4% of detainees in London required an AA with only 2% ultimately receiving them. Further work in London mirrored these findings revealing rates of attendance of AAs in custody ranging from 0.5% to 2% (Clare, 2003). Young and colleagues found an AA callout rate of 4%, with only two of the 13 who were positive on the LDSQ having an AA called (Young *et al.*, 2013).

Inconsistencies surrounding the use of AAs have been investigated. Nemitz and Bean (2001) suggest a lack of clarity on AA eligibility from the outset of their implementation. The Royal Commission on Criminal Procedure's list of 'vulnerable suspects' includes *"the mentally ill, the mentally handicapped, the old, the young, the deaf and dumb, and those for whom English was not a first language"*; Irving describes this as being of little use to COs (Irving (1995) in Nemitz and Bean (2001)). In their observational study Robertson *et al.* (1996) described police officers as less likely to consider the need for an AA than police doctors. Pearse and Gudjonsson (1996) also highlighted ambiguities around the AA role as well as the lack of a systematic approach to implementing AA schemes. There continues to be much variation of AA use between police forces with a recent survey by the National Appropriate Adult Network (NAAN) finding that only 12 of 34 England and Wales forces had any AA call-outs for mentally vulnerable adults (Bath, 2014). Over one-half of all the calls originated from London's Metropolitan Police Service (MPS) and one-quarter from the south-west of England.

Identification of detainees with ID in police custody

Given the potential numbers of 'mentally vulnerable' detainees the issue of identifying them is an important consideration. Annex E of the Police and Criminal Evidence Act (PACE) Code C (PACE-C) states that:

"If an officer has any suspicion, or is told in good faith, that a person of any age may be mentally disordered or otherwise mentally vulnerable, or mentally incapable of understanding the significance of questions or their replies that person shall be treated as mentally disordered or otherwise mentally vulnerable for the purposes of this Code."

(The Home Office, 2014)

In addition, identification of ID also represents an opportunity for court diversion and definitive health needs assessments for such detainees (Department of Health, 2009). Prior research suggests that where individuals with ID have received a 'non-custodial outcome' there is little information to explain how they were identified (Murphy and Clare, 1998; Mason and Murphy, 2002). Police COs have a statutory responsibility to screen all receptions into police custody as part of assuming responsibility for detainees' welfare, and as such this represents an opportunity to screen for ID.

This reception screen covers a range of health and welfare concerns. The structure and content of the screen varies and is invariably dependent on the choice of custody software package employed by the individual police force. As with a number of other forces in England and Wales the

Metropolitan Police Service (MPS) currently uses the NSPIS custody management package which has the screen embedded into the software.

There has been no evaluation of police health screening in the UK. One study aimed to improve the screening of vulnerable police detainees in the MPS (Clare, 2003). This study, which predated the introduction of electronic custody records, culminated in the development of a four question screen which was subsequently adopted by the MPS. It was validated in community samples rather than among police custody detainees, but it resulted in an increased AA call rate from 2 to 4% following implementation. However the introduction of the NSPIS computerised system in 2005 resulted in the four item screen being removed from the mandatory reception screen. Why this happened is uncertain, but the consequence was that detainees were no longer systematically screened for vulnerability using an evidence based method.

By 2009, the NSPIS custody screen used by the MPS consisted of 16 questions and nine observational cues. There were no questions specifically relating to the detection of ID, although *“Are you experiencing mental health problems or depression?”*, *“Are there any other issues that might affect your care whilst in custody?”*, and *“Do you require and help with reading/writing?”* were those of closest relevance to identifying ID. Among the nine observational cues *“Has difficulties with communication?”* and *“Is vulnerable?”* were included but without any specific guidance on how to evaluate this evidence.

Hypotheses

In response to a request from the MPS, the HELP PC study was designed to investigate the effectiveness of the NSPIS health screen across a range of morbidity areas in London police stations. This paper reports data related specifically to the identification of detainees with ID and considers the following hypotheses:

1. Police custody detainees with suspected ID are poorly detected by the NSPIS screen;
2. The sensitivity of the police screen can be improved by the introduction of simple targeted prompts;
3. The AA call out rate for detainees with suspected ID can be improved.

Due to the anticipated recruitment of detainees coupled with an estimated modest prevalence of ID in this population, it was postulated that the confidence intervals of any estimates or effect sizes would be wide. Furthermore the absence of definitive diagnostic data from police custody detainees would limit the validation of a short screen for ID. Therefore a fourth hypothesis was postulated:

4. The short screen has validity among an inpatient group with known diagnoses and similar characteristics to custody detainees.

Ethical approval

All parts of the study described below received a favourable ethical opinion. Parts 1 and 2 were granted by Newcastle and North Tyneside Research Ethics Committee (08/H0906/130 and 11/NE/0057). Part 3 was granted by Sunderland Research Ethics Committee (12/NE/0064).

Methods

The HELP-PC study is a prospective descriptive study of reception health screening by police COs. The project covers a range of morbidities and health concerns, with ID screening only part of the remit of the project. Data from other parts of this project have been reported elsewhere (McKinnon *et al.*, 2013; McKinnon and Grubin, 2013; McKinnon and Grubin, 2014). However data relating specifically to ID screening have not been previously reported.

1. Evaluation of the existing screening tool (NSPIS screen)

248 consecutive detainees were recruited from two police custody suites in London from 2009 to 2010. Each detainee was evaluated for a range of health morbidities including physical health, injuries, alcohol and substance misuse, mental illness and suicide. Details of the methodology and participant recruitment have been previously published and will not be repeated here. (McKinnon *et al.*, 2013; McKinnon and Grubin, 2013).

Part of this clinical evaluation was a pragmatic evaluation of ID. The ID evaluation comprised two short tools (Schonell and Schonell, 1960; Ammons and Ammons, 1962) which supported a structured clinical assessment based on guidance published by Bradley and Lofchy (2005) as well as the researchers' overall clinical impression. All researchers were psychiatrists who had experience working with people with ID, and were therefore well placed to identify such individuals. Researchers were asked to consider whether or not a detainee had probable ID, and as such would be suitable for ID services where they had worked clinically.

Clinical research data from the 248 detainees were compared to documentation on the police screen. Police screen data were scrutinised for the presence of words indicating that ID had been considered (words such as "learning disability" or "learning difficulties", "has special needs" etc.), and whether an AA had been called for these individuals. The sensitivity of the tool was estimated. Due to the lack of specific inquiry for ID on the NSPIS screen it was not possible to make a valid assessment of false positives. As a result the specificity of the NSPIS screen with respect to ID is not reported.

2. Evaluation of a new screening tool (HELP-PC screen)

A new custody screening tool was developed to improve detection of the range of health morbidities mentioned above. Data from the evaluation in part 1 above were used to develop a short screen for ID that could be inserted into the new HELP-PC police screen. The result of this analysis was three questions and one observational cue to assist COs in identifying detainees with ID. The elements comprised:

1. whether the detainee had any access to LD services;
2. whether subjectively the detainee could read;
3. whether the detainee required extra help in class or needed special schooling;
4. an observational cue to prompt officers to look for evidence of cognitive problems in the apparent absence of intoxicating substances.

If any the four components yielded a positive response (i.e. 'Yes' for 1, 3¹, or 4; 'No' for 2), the ID screen was considered to be positive. These prompts were integrated into the new police screen which comprised a further 20 questions as well as numerous observational cues² relating to other conditions. Unlike the incumbent NSPIS screen, the HELP-PC screen guided COs to call an AA or at least ask the HCP for an opinion on whether an AA is required when the screen yielded a positive result. The HELP-PC screen was designed using 'form design' software (MS InfoPath 2010) allowing functionality and bespoke guidance to be built into the screen.

The HELP-PC screen was evaluated in the same way as the existing NSPIS screen in 1 above. The pilot took place at one police station in London in summer 2012 during which 352 detainees were clinically evaluated. Determination of the presence of ID remained the same as in 1 above with the addition of a screening questionnaire from a local forensic ID service in London (Galloway and Ali, 2011). Detainees who scored above the referral threshold were offered further assessment by the local forensic ID service.

Data relating to any detainee scoring above threshold additionally received further scrutiny. This entailed a post-hoc inter-rater reliability exercise. Data were scrutinised independently by two ID clinicians (one senior nurse and one consultant clinical psychologist) to determine whether they considered that the detainee had probable ID based on the clinical evidence. The experts were blinded to the researchers' conclusions. Three pairs of agreement coefficients (Expert 1 vs Researcher, Expert 2 vs Researcher, Expert 1 vs Expert 2) were averaged using the using the Fleiss Generalised Kappa (Fleiss, 1971).

3. Validation of the ID screening questions among people with known diagnoses

The three ID screening questions from the HELP-PC screen were administered to patients within forensic services for people with diagnosed mental disorders. Participants were recruited from forensic mental health and forensic ID departments of one NHS Trust. The three question screen was embedded into a longer questionnaire to prevent it being the sole focus of the encounter. The questionnaire was delivered by a research nurse or doctor. The responses were recorded on a paper proforma and transferred onto an electronic database.

The results of the three question screen were cross tabulated against two criteria:

1. The presence or absence of a diagnosis of ID;
2. The presence or absence of a diagnosis of a developmental disorder. This included patients with ID, borderline learning disability or another developmental diagnosis such as Autism Spectrum Disorder.

¹ A detainee answering 'Yes' to 3 was additionally asked for the reason for the additional education support. Responses relating to 'educational needs' rather than pure behavioural support was considered a screen positive.

² The HELP-PC screening tool is available from the lead author on request.

Results

1. Existing police screen (NSPIS)

248 detainees from two London police custody suites were recruited over 53 days between 2009 and 2010.

Researchers judged that eight (3%, 95%CI 1-6%) of the 248 detainees had evidence supporting probable ID. The table describes the findings of the researchers for the 248 detainees. 186 detainees completed the QT whilst 187 completed the GWRT.

	Researcher assessment (n=248)		
	Probable ID	Not ID	
Number	8	240	
IQ estimate: mean (SD)	n=5: 77 (17.0)	n=181: 90 (12.1)	Two sample t (df=194): 2.369, p= 0.019
GWRT age estimate: median	n=5: 8y 0m	n=182: 12y 4m	Mann-Whitney U: 58.0, p<0.001

Police screen data were available for all eight detainees with suspected ID. The table describes the outcome of the NSPIS police screen for these detainees. It can be seen that an AA was called for seven of these individuals, although ID was detected in only two cases.

		n (% , 95%CI)
Detected by the police screen (sensitivity)		2 (25, 3-65)
Appropriate Adult	1. Called by CO in the first instance	4 (50, 16-84)
	2. Recommended following HCP opinion	3 (38, 9-76)
	3. No AA called	1 (12, <1-53)

2. New screen (HELP-PC)

352 detainees were recruited by researchers over the three month HELP-PC screen pilot in 2012. One detainee was inadvertently screened using the existing NSPIS screen and was excluded from the comparison to the HELP-PC screen. Therefore data from 351 detainees was analysed.

During this stage of the project, researchers judged that six detainees (2%, 95%CI 1-4%) had evidence of probable ID.

The table describes the findings of the researchers for the 351 detainees. Only 194 detainees completed the QT and 175 completed the GWRT.

	Researcher assessment (n=351)		
	Probable ID	Not ID	
Number	6	345	
IQ estimate: mean (SD)	n=6: 71 (14.7)	n=188: 93 (11.2)	Two sample t(df=192):4.683, p<0.001
GWRT age estimate: median	n=5: 8yrs 3mths	n=170: 12yrs 6mths	Mann-Whitney U:28.5, p<0.001

Three questions for ID

The following table describes the outcome of the HELP-PC screen (three questions for ID) for the six detainees suspected of having ID. Police screen data were available for all six detainees.

		n (% , 95%CI)
Detected by the police screen (sensitivity)		5 (83, 36-99)
Appropriate Adult	Called by CO in the first instance	3 (50, 12-88)
	Recommended following HCP opinion	0
	No AA called	3 (50, 12-88)

Observational cue

None of the detainees with ID in this sample scored positively on the observational cue. It did however yield a positive response for two detainees with psychosis and one other with cognitive impairment due to Parkinson's disease.

False positives

Overall 46 of the 351 detainees screened positive for ID. The 41 false positives yielded a specificity of 88% (95%CI: 84-91), but due to the low prevalence of observed ID, the positive predictive value was low (11%, 95%CI: 4-24%). Nevertheless of the 41 false positives, all but 16 had some form of mental disorder (psychiatric disturbance or a cognitive impairment not related to ID).

Custody officers had difficulty with the negative scoring of question 2 ("Can you read?") There were occasions where researchers observed a detainee to say "Yes", but the officer pressed "No" as they habitually selected "No" to indicate the absence of a problem. Post-hoc analysis of the data suggested that when errors were removed the number of false positives fell to 26.

Post-hoc inter-rater reliability exercise

Twenty-four detainees scored above the referral threshold for the local forensic ID diversion service. The 24 detainees comprised the six suspected of ID described above, along with 18 detainees who were judged not to have ID. Each case was scrutinised by two 'ID experts' as described above. The Fleiss Generalised Kappa for agreement between the three pairs of Kappas (expert 1 vs. researcher, expert 2 vs. researcher & expert 1 vs. expert 2) was 0.769 (95%CI: 0.538 to 1.000).

3. Validating the ID screening questions

All inpatients in the forensic service of one NHS Trust were identified in April 2012. In all 158 were eligible and invited to take part in this validation exercise: 109 patients in the forensic ID service and 49 from the forensic psychiatry service. Over a 12 month period 54 (50%) of the ID patients and 10 (20%) of the non-ID patients were recruited. The characteristics of these 64 patients are presented in the Table.

Characteristics of 64 patients recruited to the study

	Forensic Psychiatry (non-ID) (n=10)	Forensic ID (n=54)	
<u>Origin of 64 patients</u>			
Medium Secure Unit n (%)	2 (20)	16 (30)	p=0.712*
Low Secure Wards n (%)	5 (50)	38 (70)	p=0.231
Rehabilitation services	3 (30)	0 (0)	p=0.003*
<u>Gender of 64 patients</u>			
Male	10 (100)	48 (89)	p=0.578*
Female	0 (0)	6 (11)	
<u>Other characteristics</u>			
Mean Age	43	32	p=0.010
Median length of admission	35 months	31 months	Mann Whitney U=255, p=0.781
FSIQ Mean (SD) Range	No data available	64 (8.5) 48 to 86	-
Reading age (various tests) Mean (SD)	No data available	7y 4m (1y 7m)	-

* Fisher's exact test

Fifty-three (98%) of the patients in the forensic ID setting had undergone psychometric testing as inpatients. Eight of the patients lay outside the strict category of ID (see table below). No-one in the forensic psychiatry service had undergone such testing. These patients' Responsible Clinicians indicated that all had obtained at least average educational achievements.

Characteristics of the ID inpatient sample

Developmental diagnosis (n=54)	n (%; 95%CI)
Moderate ID (FSIQ <50)	2 (4%, 0.5-13%)
Mild ID (FSIQ 51-69)	43 (80%, 66-89%)
Borderline ID (FSIQ 71-80)	8 (15%, 7-27%)
Low average intelligence (FSIQ 81-90)	1 (2%, 0.1-10%)

Screen vs diagnosis of ID

Table 1. Contingency table of screen outcome vs. the presence or absence of ID

		ICD-10 diagnosis of intellectual disability (ID)		Total
		ID present	ID not present	
Screening questions	Positive	41	7	48
	Negative	4	12	16
Total		45	19	64
		Estimate	95% Confidence Interval	
Sensitivity		0.91	0.79 to 0.98	
Specificity		0.63	0.38 to 0.84	

There were seven false positives when comparing the screen to an ICD-10 diagnosis of ID in the notes. Of the seven, six were in the forensic ID service and all had borderline ID. The remaining false positive was in the non-ID service and had a formal diagnosis of ASD. Five of the seven false-positives said that they had been open to 'learning disability' services at some time prior to coming into hospital. All seven said that they had had extra educational help, of whom six told researchers that it was because of some kind of 'learning' or 'educational' problem. All but one said that they could read.

There were four false negatives, all of whom were in the forensic ID service and were in the mild ID category.

Screen vs developmental disorder diagnoses.

For each case, the outcome of the screen was cross-tabulated against whether the patient had been diagnosed with a developmental disability (ID, borderline ID, ASD) (Table 2). When comparing the screening questions to the presence of DD, there were no false positives. There were however six false negatives, all of whom had mild or borderline ID.

Table 2. Contingency table of screen outcome vs. the presence or absence of developmental disability

		Developmental disability (DD) diagnosis		Total
		DD present	DD not present	
Screening questions	Positive	48	0	48
	Negative	6	10	16
Total		54	10	64
		Estimate	95% Confidence Interval	
Sensitivity		0.89	0.77 to 0.95	
Specificity		1.00	0.66 (95% lower bound)	

Discussion

Three parts of the HELP-PC study have been described in this paper. Together they demonstrate that there is potential to substantially improve the identification of detainees in police custody where there is a suspicion of ID or other developmental disorders. It is not the purpose of the screen to make a definitive diagnosis. As with all screening instruments there is a trade-off between sensitivity and specificity which requires a judgement as to where to locate the threshold. Given that previous research has consistently highlighted deficiencies in identifying such individuals this is potentially a valuable addition to the existing literature and knowledge base.

The focus of the police custody parts (1 and 2) of the study was health screening in general. This must be taken into account when considering why a pragmatic clinical evaluation of ID in this setting such as that described. These limitations were the reason for conducting the more focussed validation among a similar patient group with known diagnoses (part 3).

Custody study (parts 1 and 2)

A higher proportion of the detainees who were considered clinically likely to have ID by researchers were detected by the 'learning disability' section of the new HELP-PC screen compared to the existing NSPIS screen. This is perhaps not a great surprise given the lack of any focussed inquiry on the NSPIS screen. However the number of individuals with suspected ID were very low and should be considered with caution.

It was disappointing that the introduction of clear guidance on the HELP-PC screen regarding when to call for an AA led to no improvement in the rate of detainees with suspected ID for whom an AA was called. There was an overall increase in the rate of AAs called between part 1 (6%) and part 2 (13%), but this also includes AAs called for reasons other than ID.

Inpatient study (part 3)

The inpatient study compared screening question responses of forensic inpatients to the presence or absence of either (a) a diagnosed ID or (b) ID, borderline ID or other developmental disorders. The results show that the three questions have face validity in this setting. However despite the participants of this part of the study sharing a number of characteristics of the police custody detainee population, there are clear differences that must be taken into account. Inpatient participants were asked the questions by experienced researchers in the comfort of the ward environment. They had not just been arrested and were not facing the uncertainty and anxiety of a police interview under PACE. Although researchers were blinded to diagnosis, they could not be blinded to the setting in which the patients resided (forensic ID vs forensic psychiatry). However the absence of definitive diagnostic data from police custody suite meant that this approach represented the closest method to validation against a gold standard and mirrors the approach of a previous study (McKenzie *et al.*, 2012).

Recruitment among forensic psychiatry patients proved to be more difficult than from the forensic ID setting and explains the wide confidence intervals around the specificity estimates. Specificity was better when judging the screen against the broader 'developmental disorders' definition rather than a strict ID diagnosis. Given the mild-borderline ID profile of patients within forensic ID services and the CJS it may be that a screen that is slightly over inclusive is more clinically relevant to police and other criminal justice settings. However this requires more focussed research.

Limitations

The study from which the police custody data is drawn (parts 1 and 2) was pragmatic. Identifying detainees with ID is important but its priority must be considered in the context of other medically important conditions. These include head injuries, risk of alcohol withdrawal, psychosis, risk of suicide and chronic physical conditions with ongoing monitoring requirements such as diabetes and epilepsy (Rekrut-Lapa and Lapa, 2014). For a broad health screen to be workable in this environment it needs to be as 'lean' as possible. The addition of large numbers of additional questions for one disorder adds time to an already pressured process in an often chaotic environment (Skinns, 2011).

Additionally, researchers' time to perform comparator clinical assessments was limited to 20-30 minutes per detainee. In this time researchers had to obtain a clinical history of all of the conditions detailed above. Lack of time meant that even the briefest of standardised psychometric tests such as the K-BIT would have been impossible (Kaufmann and Kaufmann, 2004). The Quick Test and Schonell Graded Word Reading Test were intended to assist researchers in their clinical evaluations rather than provide diagnostic certainty. They were the only tests yielding an IQ estimate or reading age that would fit into the clinical battery. The pragmatic clinical approach, however, is commensurate with that used by on call clinicians attending police custody suites or accident and emergency departments (Bradley and Lofchy, 2005).

Mean IQ estimates for the detainees judged to have ID were above 70; it is recognised that performance on psychometric tests improves over time and this may partly explain why detainees thought to have ID obtained such scores (Trahan *et al.*, 2014). Although the agreement between clinicians' and experts' judgements on the presence of ID in part 2 was good, this approach clearly lacks the validity of standardised psychometric tests. Further work on evaluating vulnerable detainees in this setting should focus specifically on this in order to use a limited window of opportunity to its full potential. There is emerging validation data using the LDSQ (McKenzie *et al.*, 2012) and the HASI (Hayes, 2002; Hayes *et al.*, 2006) for this purpose in courts and prisons. These tools could form the basis of clinical evaluation for ID, but they are themselves screening tools and neither instrument has yet been validated in police custody.

There are clinical conditions other than ID that constitute mental vulnerability in police custody such as Serious Mental Illness, or cognitive impairment due to, say, dementia. The vulnerability of detainees with ADHD and childhood conduct disorders (Young *et al.*, 2013) as well as Autism Spectrum Disorders also arises. The question of how police custody officers identify these within the constraints of their reception screen remains unanswered.

Conclusion

This study has shown that it is possible to improve the identification of detainees with ID using a short targeted screen within a wider health screen. However the clinical efficacy of the screen needs to be judged against a standardised test of ID, but the feasibility of achieving this in police custody remains uncertain. The acceptability of such procedures to police officers, detainees and clinicians working in police health settings also merits investigation. Finally there is a need for further validation work in police custody as well as investigating the wider implications of the intervention:

the impact on AA callouts, custody diversion, and whether interventions for mentally vulnerable detainees can impact on rates of rearrest.

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Declarations

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