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Disentangling Alcohol-Related Needs Among Pre-trial Prisoners: A Longitudinal Study

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Abstract — Aims: To disentangle the alcohol-related needs of short stay, revolving door, male prisoners, and offer a theoretically driven but practical approach for allocation of scarce service resources. **Methods:** A prospective longitudinal interview, questionnaire and records study of pre-trial men newly imprisoned in Wales and SW England. **Results:** Two hundred and forty-one pre-trial men completed an interview and questionnaires within a week of a new reception into prison; 170 completed follow-up 3 weeks later. Questions about problems with alcohol or illicit drugs revealed that problem drinkers were less likely than problem drug users to recognize their difficulty or seek or get help for this during their first month of imprisonment. Co-morbidity was common, but a third of the men had alcohol problems alone. Use of the Alcohol Use Disorders Identification Test (AUDIT) questionnaire identified 80% (195/241) men likely to require some intervention, twice the number identified by direct questions relying on prisoners' judgment about problem use. Furthermore it allowed categorization according to likely risk (dependency), need (problem recognition) and responsivity (wish for help). **Conclusion:** Alcohol misuse is recognized, worldwide, as fuelling crime and more common among prisoners than the general population. In England and Wales, it is a particular factor in brief but recurrent periods of imprisonment. There have been calls to pay more attention to its use in this context, albeit without any increase in resources. Adding two questions to standard screening enables application of the risk-need-responsivity model to problem drinkers and may identify those most likely to benefit from treatment.

INTRODUCTION

There is consistent evidence in many countries that the prevalence of pre-prison alcohol and drug misuse is high relative to that in the general population (Fazel *et al.*, 2006). There is some evidence that alcohol has become the most prevalent substance of abuse in both US and UK prisons (Jones and Hoffmann, 2006); one systematic review reported prevalence estimates of 18–30% for male and 10–24% for female prisoners, but the reviewers suggested that some studies may have underestimated prevalence because they relied on interview data. They recommended use of screening tools but, internationally, failures to use standard screening for substance misuse in prisons have been documented (Holmwood *et al.*, 2008; The National Centre on Addiction and Substance Abuse at Columbia University, 2010). For England and Wales, for example, a 2010 HM Prison Inspectorate report (H.M. Inspectorate of Prisons, 2010) noted that half of UK prisons do not do so, also concluding that underestimates of need are likely to follow reliance on questions which require prisoner judgment on whether s/he has a problem. Recognition of drinking as a problem may not happen readily, probably especially among young men in prison (Plant and Taylor, 2012). Individuals with alcohol problems may not seek help for other reasons too (Oleski *et al.*, 2010), including the range of their problems and treatment needs (Lukasiewicz *et al.*, 2007; Holmwood *et al.*, 2008). While some studies have attempted to disentangle these (Jones and Hoffmann, 2006; MacAskill *et al.*, 2011), needs for treatment among prisoners for alcohol misuse as a unique problem are not clear.

Despite alcohol-related concerns about both health and recidivism, there is limited funding for treatment (The National Centre on Addiction and Substance Abuse at Columbia University, 2010; Gatherer, 2013). One consequence of this is restriction on choices about whom to treat, even if there is some recognition of a problem. Prison programmes in the UK are almost invariably targeted at drug misuse (H.M. Inspectorate of Prisons, 2010) and Counselling, Assessment, Referral Advice and Throughcare (CARAT) Services are commissioned to provide services only to prisoners who misuse drugs or drugs and alcohol. There have been calls for more attention to alcohol (Taylor *et al.*, 2010), but without commensurate increase in funding. Adaptation of the three general principles of *risk-need-responsivity* in offender rehabilitation (Andrews *et al.*, 1990) might meet the consequently urgent need for a simple method of prioritizing access to services for problem drinkers. These principles postulate that intervention with offenders has most chance of being successful if it is matched to the *risk* posed (intervention has more impact on high than low risk offenders), targeted at unwanted (and therefore recognized) behaviours (*need*) and the style or mode of intervention matches the offender's learning style, abilities and motivation for treatment (*responsivity*). Not wholly unchallenged, the model has stood the test of time (Andrews *et al.*, 2011) and has been applied successfully with drug misusers (Gossop *et al.*, 2006).

The aim of our study was to apply the principles of *risk-need-responsivity* to evaluation of newly received pre-trial prisoners, by using validated screening tools to measure their alcohol and co-morbid drug use prior to their detention, and examining patterns of problem recognition, desire for help and service access during the first 3 weeks of imprisonment. Our hypotheses were that:

- hazardous and dependent drinkers are more likely to be identified using simple screening tools than asking whether they have a problem with alcohol;
- there will be a distinct group of problem drinkers for whom alcohol is the only substance of abuse;
- service providers not using screening tools will fail to prioritize prisoners with the greatest alcohol-related needs, problem recognition or desire for help.

METHOD

Participants

The sampling procedure has been described in detail previously (Taylor *et al.*, 2010). In brief, participants were drawn from all men newly remanded to await trial in one of three prisons, between 19 January 2007 and 2 September 2008. Twenty-four hours was allowed to lapse between giving study information and taking written, informed consent. Of 555 eligible men, 257 agreed to take part and completed the first interview. A comparison of interviewed (257) men with non-interviewed men (298) confirmed that the two groups were similar in terms of country of residence, ethnicity and most serious charge, but the interview group tended to be younger; 112 (44%) of the 18–20 year-olds completed compared with 68 (24%) of the 21 + year-olds ($X^2 = 23.17$, $P < 0.001$). No man refused the second interview, but 87 had left the prison by then, so just 170 completed it. There were no differences on a range of demographic, criminological and mental health variables between those who stayed and those who left (Taylor *et al.*, 2010).

Materials

The semi-structured interview covered social context and previous offending. Two self-rating questionnaires were administered to assess men's substance use: an alcohol use questionnaire, which incorporated the Alcohol Use Disorders Identification Test (AUDIT) (Saunders *et al.*, 1993), used alongside two additional items designed to reflect routine clinical questions that might be asked on reception: (a) Do you think you had a problem with alcohol when you came into prison? (b) Would you like any help with drinking? A drug use questionnaire incorporated the Drug Abuse Screening Test (DAST, (Skinner, 1982)) and equivalent additional items. A follow-up questionnaire asked men whether they had received any help within the last 4 weeks from a counselling, assessment, referral advice and throughcare (CARAT) worker, the first point of contact for substance misusers and the gateway to further services for such problems.

Procedures

Approval for the study was obtained from all relevant health service and prison ethics bodies. Each man was assured of confidentiality except in three areas—an explicit intent to harm himself, to harm others or to escape from the prison. Men were interviewed within a week of reception. Interviews took place in a private room where possible, otherwise in an area of the prison where they could not be overheard. The alcohol and drug questionnaires were given to the men to complete on their own, rating for the year prior to imprisonment, however help with reading was given if needed. Men were included from a range of locations in the prison, including 'ordinary location' wings, healthcare, detoxification and segregation units.

Analyses

Prisoners who scored 8–19 on the AUDIT were classified as hazardous drinkers, distinct from those who scored 20+, who were classified as dependent, according to the guidance on interpreting AUDIT scores (Babor *et al.*, 2001). For illicit drug misuse, those scoring 6–14 were classified as hazardous users and those scoring 15+, dependent, again according to standard guidance (Skinner, 1982). Descriptive statistics were then applied, using SPSS version 16.

RESULTS

The recruited sample is detailed elsewhere (Taylor *et al.*, 2010). In brief, the mean age of the 257 men who agreed to participate was 26.5 years (range 18–65) and the majority (228, 88%) were white natives. One hundred and four men (38%) were charged with a violent offence, 74 (27%) with acquisitive offences, 30 (12%) with drug-related offences, 9 (3.5%) with sexual offences, 18 (7%) with criminal damage and 21 (8%) with other offences. Of the 257 men interviewed, 242 completed the AUDIT and 243 the DAST (241 both) within a week of reception. For the category of men scoring under a problem drinking threshold (8) the median score was 5 (range 0–7); in the hazardous drinking category (<20) the median was 12 (range 8–19) and in the dependent drinking category (20+) the median was 28 (range 20–40). One hundred and ninety-five (81%) men exceeded the hazardous drinking threshold on the AUDIT, 94(48%) of whom had scores indicative of dependency. The prevalence of illicit drug use was lower; 157(65%) scored 8 or more on the DAST, of whom 43 (27%) had scores indicative of dependency.

Alcohol in the year before prison

Figure 1 shows that the AUDIT identified more than twice as many men with problem drinking than the direct question asking them whether they considered they had a problem with alcohol (195:70). Almost all of the men who told us that they had any problems with alcohol were within the dependent range on the AUDIT (61, 87%; $X^2 = 68.659$, $P < 0.01$). A third of probably dependent drinkers according to the AUDIT did not recognize their problem (33/94), and almost all (90/98) (3 of the 101 hazardous drinkers did not respond to the question about having a problem) non-dependent, hazardous drinkers failed to do so.

By contrast, Fig. 2 shows that the DAST identified only 10 additional men over those who owned a problem with drugs. Everyone in the dependent range reported an illicit drug problem; more than two-thirds (114, 71%) of those who acknowledged drug problems, however, were in the non-dependent, hazardous score range according to the DAST.

Co-morbidity of alcohol and illicit drug misuse

Although most of these remanded prisoners with alcohol problems were using illicit drugs (129/195), about a third of all AUDIT cases (62/195) had alcohol problems alone (Fig. 3), including 21 (34%) dependent cases.

Of the 129 men who were co-morbid cases on AUDIT and DAST, over half (73) had scores indicating alcohol dependency, most of whom (52, 71%) scored well under the dependent threshold for their associated drug use. Thus, their main needs related to alcohol dependence.

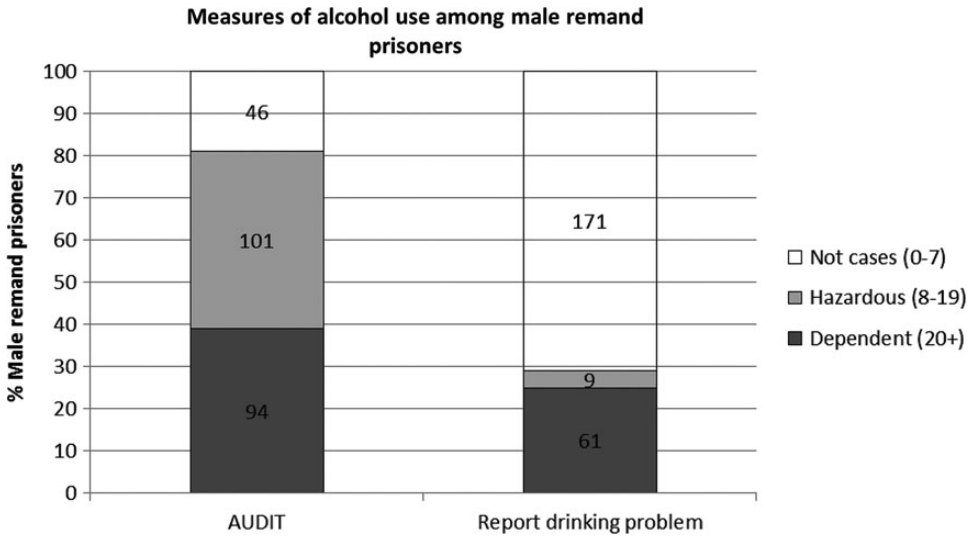

Fig. 1. Alcohol use among male remand prisoners.

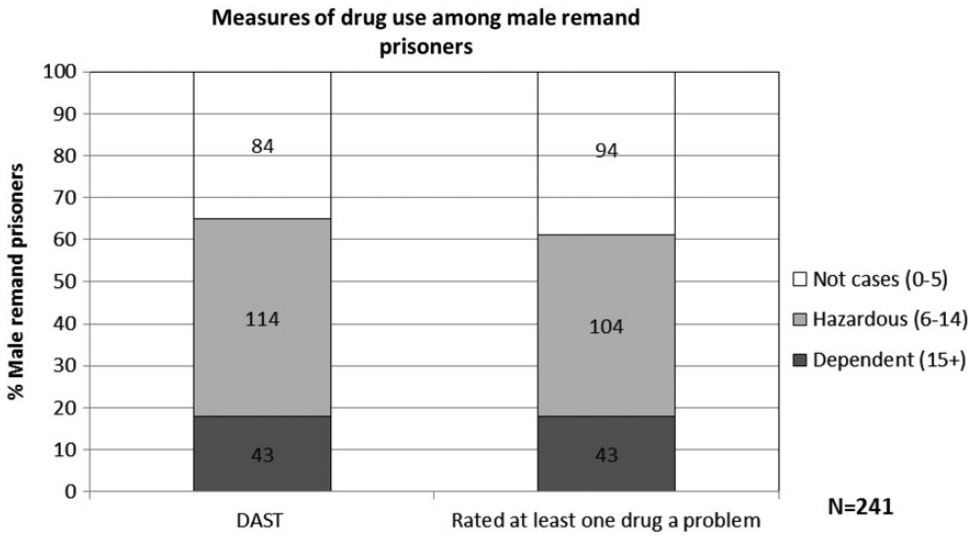

Fig. 2. Drug use among male remand prisoners.

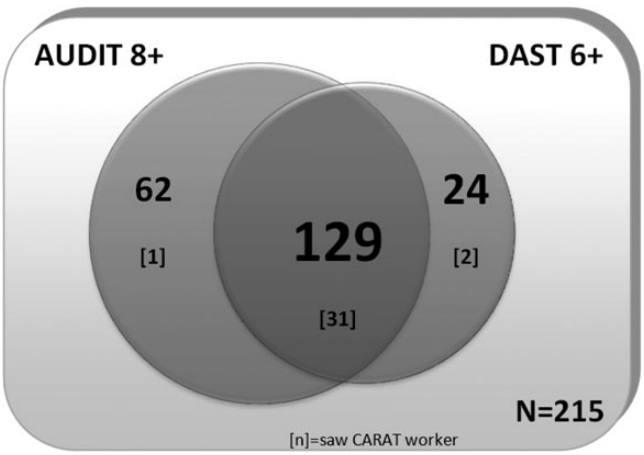

Fig. 3. Co-morbidity of AUDIT and DAST cases.

Help seeking during the remand period

The 170 men who stayed in prison long enough for follow-up were interviewed a median of 28 days after reception (range 19–44 days). Of these, 133 men were AUDIT (8+) cases and 106 were DAST (6+) cases; 39 (27%) were AUDIT cases only, 93 (65%) were cases on both measures and 12 (8%) on DAST only. There were no differences between men who left prison before follow-up and those who stayed in terms of alcohol or drug problems as rated on the AUDIT or DAST ($X_3^2 = 5.305$, $P = 0.151$).

Few men with alcohol and/or drug problems who remained in prison received any help from the CARAT team (32/133, 25% AUDIT cases; 35/108, 32% DAST cases). For those not seen, pharmacological support for withdrawal was the only help received for substance use problems. Thirty-two of the 35 men who saw a CARAT worker had co-morbid alcohol and drug problems; just one of the three remaining had alcohol

Table 1. Risk-need-responsivity categories for alcohol

	Stayers ($N = 132$[a])			
	Saw CARATs		No CARATs	
Alcohol dependency, problem recognition and desire for help	*N*	%	*N*	%
A. Not dependent, no problem recognition, no help wanted	2	3	64	97
B. Not dependent, problem recognition, no help wanted	10	56	8	44
C. Not dependent, no problem recognition, want help	0	0	3	100
D. Not dependent, problem recognition, want help	1	25	3	75
E. Dependent, no problem recognition, no help wanted	2	100	0	0
F. Dependent, problem recognition, no help wanted	8	50	8	50
G. Dependent, no problem recognition, want help	0	0	2	100
H. Dependent, problem recognition, want help	9	43	12	57
Total	32	24	100	76

Alcohol dependency, problem recognition and desire for help among those drinking at least to hazardous levels who stayed in prison for follow-up.
[a]One stayer did not answer the question about seeing a CARAT worker.

Table 2. Risk-need-responsivity categories for drug use

	Stayers ($N = 106$)			
	Saw CARATs		No CARATS	
Drug dependency, problem recognition and desire for help	*N*	%	*N*	%
A. Not dependent, no problem recognition, no help wanted	1	7	14	93
B. Not dependent, problem recognition, no help wanted	8	22	28	78
C. Not dependent, no problem recognition, want help	1	25	3	75
D. Not dependent, problem recognition, want help	5	25	15	75
E. Dependent, no problem recognition, no help wanted	0	0	0	0
F. Dependent, problem recognition, no help wanted	7	58	5	42
G. Dependent, no problem recognition, want help	0	0	0	0
H. Dependent, problem recognition, want help	12	63	7	37
Total	34	32	72	68

Drug dependency, problem recognition and desire for help among those who used drugs to at least hazardous levels who stayed in prison for follow-up.

problems without illicit drug misuse while two had illicit drug problems without hazardous alcohol use.

Table 1 shows the distribution of problem drinkers according to *risk-need-responsivity* principles—whether they were dependent (high risk of harm), recognized their problem (need) and/or wanted help (likely to be responsive), and relates these characteristics to whether they saw a CARAT worker. The 21 (16%) problem drinkers with scores indicating alcohol dependency, problem recognition and wish for help (category H) were more likely than any other problem drinkers (categories A-G) to access help during their 4-week remand, but still less than half of them (9/21, 43%) saw a CARAT worker compared with one-fifth of the others (23/111, 21%). Thus, most alcohol dependent, problem-recognizing, help-seeking men got no help. Furthermore they fared worse than their dependent drug-using, problem-recognizing and help-seeking peers. Almost two-thirds of the men with these characteristics (12/19, 63%) managed to access a CARAT worker (Table 2).

DISCUSSION

As hypothesized, the alcohol use screening tool, the AUDIT, identified many more problem drinkers, even at dependency levels, than clinical questions which relied on the men to judge their own state. In contrast, similar screening for illicit drug misuse identified no additional likely dependent cases and few additional hazardous users than asking about problem use. A third of AUDIT cases—one-quarter of all participating prisoners—were at least hazardous drinkers without using illicit drugs. Further, nearly three-quarters of the co-morbid alcohol and drug misusers crossed the dependency threshold only for alcohol. Very few men in either of these drinking groups accessed a CARAT worker, the gatekeeper to services beyond supportive medication during detoxification. Classification according to *risk-need-responsivity* principles, based on the AUDIT, was simple but not used by service providers. It was more likely than not that the alcohol-dependent men who recognized their problem and wanted help failed to get it, although illicit drug users had no such difficulty. This is likely, in part, to be a reflection of the remit of CARAT services to work with prisoners with drug problems. Given that a third of prisoners in our sample had alcohol problems alone and that those with co-morbid problems scored more highly for alcohol, it is crucial that prison services are given the remit and resources to pay as much attention to problem drinking as to illicit drug problems. In our cohort, only 16% of alcohol using prisoners fell into the highest RNR/need-for-treatment group. Although this represents the most parsimonious number as

many men needing treatment left prison before follow-up, in England and Wales, the government's target is to treat 15% of *dependent* drinkers in prison (HM Government, 2009), so identification of the high RNR group would be worthwhile. In this cohort, 75% of the men had been in prison before, which is similar to recidivism rates for short sentenced men (National Audit Office, 2010) and many expressed interest in change or a need to be away from drink and drugs (Williams *et al.*, 2013). There will usually be little time available for prison-based interventions with such men; we found that ~65% will be held for a month or less (Palmer *et al.*, 2011). Though brief, 28 days may, however, be enough to offer interventions with the potential for improving health and re-offending risk (Carroll *et al.*, 2001; McMurran, 2009), providing they can be accurately targeted.

Strengths and weaknesses of the study

This is the first longitudinal study to measure rates of pre-prison substance use in pre-trial men arriving in prison, using standardized clinical assessments, and then access to relevant services. We measured seriousness of problem drinking, its co-morbidity with illicit drug use, problem recognition and help-seeking 1 month into custodial remand, and found distinct groups likely to have different treatment needs. Our study has, however, several limitations. First, numbers in the various subgroups were too small for detailed analysis. Despite efforts to retain participants, numbers followed-up were small—because men left prison. Our initial refusal rate was, however, low (17%), there was no follow-up interview refusal and about two-thirds of the original men remained in the study. Secondly, the follow-up period was only 1 month, and only at one time point. Most prisoners, however, stay only 28 days on remand (Palmer *et al.*, 2011) so this is the main window of opportunity for them. Thirdly, access to a CARAT worker is only a first step. A model longitudinal study would follow the men through prison and beyond to ascertain the value of this link, first for accessing, and then for using effectively, accurate interventions for their problems. The many difficulties facing such longitudinal studies should not, however, be minimized (Harding and Zimmermann, 1989; Andersen *et al.*, 2000).

Strengths and weaknesses in relation to other studies

Our finding that over 80% of these newly remanded prisoners had been drinking to at least to hazardous levels in the year before reception, about half of these with AUDIT scores indicative of dependence, suggests rising rates of problem drinking among prisoners over time. These figures are much higher, not only than those in 1990s' studies (Fazel *et al.*, 2006), but also than in those previously using the AUDIT. In England and Wales, for example, in 1997, 58% of male remand prisoners were problem drinkers, with one-third likely to be dependent drinkers even at the lower AUDIT cut-off used in this study (16+) [28]. This suggests that the higher rates of problem drinking are not simply an artefact of this screening tool which, in effect, the Fazel group said would yield higher prevalence figures. It would seem unlikely to be an exaggeration, as these men were not seeking anything in relation to their drinking, and their reported and screened illicit drug use rates were remarkably consistent with each other and with previous studies (Fazel *et al.*, 2006). A real increase in prevalence of problem drinking among people going into prison would fit with the greater availability of cheap alcohol in the UK (Newton *et al.*, 2007). There have been other suggestions of rising prevalence in US and UK prisons (Jones and Hoffmann, 2006); two other UK studies reported since 2009 reported similar rates using the AUDIT (Newbury-Birch *et al.*, 2009; MacAskill *et al.*, 2011). Taken together, these findings suggest that prison authorities should refocus resources on alcohol use disorders.

Implications for clinicians and policy makers

If the increase in prevalence of problem drinking among prisoners is real, and probably fuelling crime, this has implications for public health strategies. Our main focus, however, was on individual prisoners. One explanation for prisoners' poor recognition of alcohol but not drug problems in the UK, and perhaps elsewhere, might be that they are conditioned to expect some help on revealing illicit drug use, but none if they reveal problem drinking; three-quarters of these men had been in prison before (Taylor *et al.*, 2010). They were, however, talking in confidence with research workers who, explicitly, could not influence their treatment, so such differential reporting seems unlikely. A more probable explanation may be that many in this prisoner cohort were aged 18–20 and may, indeed, have experienced no problems with alcohol, even when drinking to levels normally associated with dependency, as their metabolism of alcohol remained robust (Plant and Taylor, 2012). Thus, although use of an alcohol consumption screening tool among newly remanded prisoners may be generally valuable, it may be exceptionally important for younger men (Oleski *et al.*, 2010). It has been suggested that the AUDIT, while acceptable in the wider community, may yield a low response rate (36%) in prison (Coulton *et al.*, 2012), but only 15 (6%) of our participants failed to complete it, confirming its acceptability with early remand prisoners. Perhaps they are more similar to community groups, having so recently been there. As many are also imminently likely to return to the community, we would argue that remand prisoners are a priority group for AUDIT screening, to inform and focus brief interventions. According to our study, the simple expedient of shifting CARAT worker attention from those with no *risk-need-responsivity* criteria, or only one, to those with all three would have completely covered the most important target group.

Unanswered questions and future research

Having identified subgroups of men in prison who would seem likely to benefit from interventions to change their alcohol use, and sustain any positive change, the next task is to test whether they are able to make use of motivational, educational and relapse prevention work at this stage, and whether subgroups defined by risk/needs/responsivity measures do, indeed, show differential responses. Useful early gains would include improved sense of being able to control drinking, appropriate use of community or other services to support such change, with later gains likely to follow including improving health, reduced use of emergency health services and reduced antisocial or criminal behaviour. Our study was confined to men, but attention is also needed to the rather smaller group of women who get into the criminal justice system who misuse alcohol.

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