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Substance abuse as a risk factor for violence in mental illness: some implications for forensic psychiatric practice and clinical ethics

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Abstract

Purpose of review—To review recent research on the relationship between substance abuse, crime, violence and mental illness, and suggest how this research could aid forensic psychiatrists, psychologists and other mental health professionals in assessing and managing risk, and balancing patient care and public protection.

Recent findings—Substance abuse in mentally ill forensic psychiatric patients should be considered an important risk factor for violence and re-offending.

Summary—Improved treatment for substance abuse in forensic psychiatric patients and other mentally disordered offenders together with the offer of monitored abstinence as a condition of leave or discharge could be usefully considered as a means of reducing and managing risk. This may improve patient care by addressing mental health needs and increasing opportunity and likelihood of successful re-integration into the community and better life prospects; protect the public by reducing risk of re-offending and offering real time monitoring and potential intervention when risk is heightened; and help forensic psychiatrists strike a balance between patient care and public protection, potentially alleviating some of the difficulty and anxiety that decisions to grant leave or discharge can create.

Keywords

clinical ethics; mental illness; risk assessment; substance abuse; violence

INTRODUCTION

Forensic psychiatrists specialize in the treatment within secure hospitals and in the community of patients with mental illness who have committed a criminal offence or are deemed at high risk of doing so, together with the assessment and management of the risk of re-offending posed by these patients. Forensic patients typically commit serious offences, with around three-quarters having convictions for violence against the person, burglary, criminal damage, robbery and sexual offences [1]. One of the most difficult clinical-ethical decisions faced by forensic psychiatrists and their teams is how to balance the duty of care to their patients with the need to protect the public from risk of re-offending. Forensic

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Conflicts of interest

There are no conflicts of interest.

patients typically have long hospital stays; in the UK, the average length of stay is more than 5 years [1], as compared with non-forensic psychiatric inpatients, whose average length of stay is less than 1 year [2]. But, if a forensic patient has responded to treatment in hospital for their mental illness sufficiently well for community treatment to be a viable option from the point of view of their mental health, it is important that the possibility of community leave and eventual discharge be considered. The wellbeing of patients requires that they have the opportunity to reintegrate into the community and rebuild their lives. But this opportunity brings with it the evident risk that, rather than community leave and eventual discharge promoting positive reintegration and better life prospects, it facilitates a return to past patterns and lifestyle choices. This is not only a poor outcome for the patient. It may also lead to re-offending and the perpetration of harm to others.

How do forensic psychiatrists strike this balance, offering those patients whose mental illness remits the opportunity for community leave and eventual discharge that good care requires, while nonetheless protecting the public from the risk this opportunity poses? The answer is that they must assess and do what they can to manage the reality of the risk. But risk assessment is not an exact science. Although there is some evidence for the reliability and validity of tools, future mental states and behaviour can never be predicted with certainty [3,4]. Equally, of course, risk management strategies, however well devised, can fail. This is why the task of weighing up the pros and cons and coming to a decision about whether or not to grant leave or discharge to a particular patient can be so difficult for forensic psychiatrists and their teams, a source of splitting and anxiety.

Substance abuse is a recognized risk factor in violence in the mentally ill population [5]. But the potential importance of this fact for forensic psychiatric practice and clinical ethics is often underappreciated. The purpose of this review is to present recent research on the relationship between substance abuse, violence, and crime in general, and within the mentally ill forensic population in particular, and suggest how this research could aid forensic psychiatrists and their teams in assessing and managing risk, and balancing patient care and public protection.

THE RELATIONSHIP BETWEEN SUBSTANCE ABUSE, CRIME, VIOLENCE AND MENTAL ILLNESS

We conducted a structured review of the literature on substance abuse and crime from 1 January 2010 until November 2012. Our search was based on text words of substance*, drug*, alcohol*, crim *, viol* in the title or abstract of three bibliographic indexes (Pubmed, Embase, Cinahl). We identified three major themes in recent research on substance abuse and crime.

First, although the general association between substance abuse, crime and violence has long been established, there were a number of high-quality longitudinal studies that investigated the relationship between particular substances and specific criminal or violent outcomes. A publication based on the Dunedin birth cohort, which was followed up to age 30, examined the role of alcohol in violent offending, violent victimization and intimate partner violence [6]. This study adjusted for a range of possible confounders, and found that having five or more alcohol abuse/dependence symptoms increased odds of violent outcomes by 2–3-fold, and estimated that alcohol use disorder accounted for 5–9% of these outcomes in the cohort. Another longitudinal study, based on 1353 Norwegians followed from age 13 to 27, found that cannabis was associated with drug-related offences [7] and alcohol with violent behaviour [8]. The National Longitudinal Study of Adolescent Health (Add Health) is an impressive cohort study based in the US, and a new report found strong relationships between alcohol consumption and both criminal behaviour and victimization for both sexes

[9]. The latter two studies find dose–response effects of alcohol on crime and violence – strengthening the evidence for a causative role for alcohol in such outcomes.

Additionally, some cross-sectional studies have reported on this theme. The large US National Epidemiologic Survey on Alcohol and Related Conditions, based on 2004–2005 data, reported that alcohol and cocaine use disorders were more strongly associated with perpetrating intimate partner violence than opioid or cannabis use disorders [10]. Associations between alcohol and cocaine and partner violence were also found in a small study from a treatment centre [11]. Crack cocaine appears to have stronger relationships with violence than powder cocaine [12], although this difference, in another study, was explained by underlying factors that determine choice of crack [13]. Evidence from rural America suggests that criminals who abuse methamphetamine have more extensive histories of acquisitive offending than individuals who report abusing other substances [14]. Finally, two studies examined homicide, a rare but important outcome. A review of homicides in Nigeria highlighted strong associations between alcohol and homicide, and discussed the extent of the contribution of alcohol to premature mortality [15]. An Australian study of homicide offenders is an important addition to the literature, as it carefully examined comorbidity of substance use disorders with mental illness. It found a strong relationship between schizophrenia and homicide, and one that cannot be entirely accounted for by comorbidity with substance use [16]. Nevertheless, 40% of the offenders with schizophrenia had concurrent substance abuse, higher than a comparison group of individuals with schizophrenia in the community, of whom 26% abused substances.

A second major theme reports associations between markers of substance abuse and various psychological measures and historical factors. Studies addressing this theme are difficult to interpret as a whole, as individual studies tend to focus on only one psychological measure or historical factor. It thus remains unclear both how important they are in relation to other measures or factors, and their relevance to clinical care. Violence in those with a history of childhood abuse [17], posttraumatic stress disorder [18], attention-deficit and disruptive behaviour disorders [19], and higher psychopathology scores [20] may be confounded by a range of familial factors, and not be causally related to substance abuse. A powerful approach to adjust for familial factors, that may be genetically or early environmentally mediated, is to use unaffected siblings as comparisons. Research using this kind of approach has, for example, discounted the causative role of smoking in pregnancy on offspring's antisocial outcomes [21] and subsequent educational problems of children [22], and, more relevant to this review, highlighted the role of substance abuse in violent crime in schizophrenia [23] and bipolar disorder [24]. In relation to individuals with substance abuse, this approach compares historical and psychological factors between them and their siblings who do not have substance abuse, and determines whether there were any associated differences in rates of substance abuse. Further research using this kind of approach is called for.

The third and final theme in the reviewed research relates to the role of substance abuse in repeat offending or recidivism, in particular, where there is a comorbid mental illness. A longitudinal study in 949 serious adolescent offenders found consistent associations between substance use disorders and re-arrest and self-reported antisocial activity, although their interaction with criminogenic factors was important [25]. A study in New York State found substance abuse was predictive of re-arrest, but not for violent crimes in particular [26]. A study of a high-risk prison sample found an increased risk of repeat offending in those with methamphetamine, heroin and polysubstance abuse [27]. A large study of offenders given community sentences found that substance abuse increased risk of repeat offending by around 50% [28]. Finally, a very interesting study found that a screening test for alcohol predicted violent or sexual repeat offending to a similar degree as a structured risk

assessment tool [29], which is consistent with a recent systematic review and meta-analysis of these tools that found that their predictive accuracy was limited [30].

With respect to links between substance abuse, repeat offending (or recidivism) and mental illness, a number of recent studies highlighted an association between substance abuse and violent crime in mentally ill offenders who have remained within the criminal justice system. In a study of parolees, heterogeneous patterns of offending were found in those with mental illness, some of which were linked to substance abuse [7]. However, many of these recidivism studies do not have sample sizes that are sufficiently large to investigate the relationship between mental illness, substance abuse and violent outcomes, and thus often report contrasting findings. In addition, the data are difficult to interpret, because samples differ between selected cohorts of released prisoners and individuals given community sentences.

The evidence is more robust for community and hospitalized samples of forensic psychiatric patients, rather than mentally ill offenders who have remained within the criminal justice system. With regard to the former, a recent systematic review identified 11 studies that investigated risk of violence in severe mental illness with and without substance use disorders [31]. Specifically, this compared studies that reported violent outcomes in individuals with substance abuse (without severe mental illness) with studies that reported violent outcomes in individuals with schizophrenia and related psychoses in addition to substance abuse. The review found that the odds of violence in comparison with the general population increased by 8–10-fold in individuals with severe mental illness who abuse substances, whereas the odds of violence increased only around two-fold in non-substance abusing individuals with the same disorders. This study strongly suggests that substance abuse within mentally ill forensic patients should be considered an important risk factor in violence and re-offending.

IMPLICATIONS FOR FORENSIC PSYCHIATRIC PRACTICE AND CLINICAL ETHICS

There is general agreement that evidence-based universal measures aimed at improving drug policy, including controlling supply, controlling prescribing practices, criminal sanctions, increased prevention and improved treatment services, represent public health goods [32]. The implementation of such measures will of course impact on the whole of the population, including those with mental illness. And, given the general association between substance abuse, crime and violence, it is reasonable to assume that they will affect rates of crime and violence. However, our review suggests there is potential scope for forensic psychiatrists to address and monitor substance abuse in their patients, as a way of reducing and managing risk.

IMPROVED TREATMENT FOR SUBSTANCE ABUSE DISORDERS WITHIN FORENSIC PSYCHIATRIC HOSPITALS

Psychiatric services tend to separate mental illness and addiction services, despite evidence that more than half of the individuals with schizophrenia and bipolar disorder have diagnosable alcohol and drug use and dependence [23,24,31]. This is as true in forensic contexts as elsewhere. To date, pharmacological strategies to treat comorbidity between substance abuse disorders and mental illness have a weak evidence base [33], although psychological treatments are more promising [34]. The provision of treatment for drug and alcohol problems no doubt varies across secure hospitals, but in many settings, given that alcohol and illicit drugs are not readily available for consumption and thus many patients are forced to abstain, treatment for substance abuse may not be sufficiently prioritized given the

risk factor we now know it poses [35]. Secure hospital care is hugely expensive; in the UK, it is the single largest constituent of the mental health budget, costing over £1 billion annually [36]. The long-term hospital stays imposed upon forensic patients offer an opportunity to address substance abuse, which, given the cost of secure care, should be seized so as to maximize positive outcomes for patients, and reduce the likelihood of re-offending and hence the need for further secure hospital care and the cost this imposes in future. This should be considered a priority in particular for alcohol, cocaine, methamphetamine, heroin and polysubstance abusing patients, and could be facilitated either by joined-up working between existing forensic and addiction services, or by further broadening forensic mental health training to include specialism in substance abuse.

With all treatment for drug and alcohol problems, and especially those involving hospital confinement, risk of relapse is high when patients first leave treatment and re-encounter cues and contexts associated with past use. Similarly, recent research suggests that substance abuse treatment should be offered after release from prison, a time when relapse and other adverse outcomes, including risk of premature death, are substantially elevated [37]. In forensic settings, careful planning for maintaining abstinence when leave or discharge is initially granted, made in conjunction with patients themselves, may be essential. This is likely to involve increased staff support, therapy and monitoring during these periods, as discussed below. In addition, there is some evidence for the effectiveness of new, internet-based interventions which can be delivered as a timely and cost-effective method for treating substance abuse disorders [38-40] and which may help to maintain abstinence in such contexts. Finally, text or e-mail-based information-gathering may improve monitoring of the course of mental illness after discharge [41], as well as medication adherence [42]. Non-adherence with medication, especially in conjunction with substance abuse problems, is associated with increased risk of violence [43]. Promoting medication adherence and abstinence together during periods of prolonged leave from hospital or initial discharge may therefore significantly reduce risk of re-offending.

MONITORED ABSTINENCE AS A CONDITION OF LEAVE OR DISCHARGE

In the past, forensic psychiatrists may have insisted on abstinence as a condition of leave or discharge, but the enforcement of this condition was necessarily retrospective, in the form of blood or urine tests conducted upon return to hospital or during an outpatient appointment, together with the capacity to revoke leave or discharge if the condition was breached. They could not know about the breach at the time of substance use itself, and, correspondingly, when risk of re-offending was highest. Technological advances in the form of location-tracking and transdermal alcohol-measuring devices offer a novel opportunity to monitor breach of abstinence in real time: we can now in effect screen concurrently with use. Tracking devices in the form of secure ankle bands that monitor location and speed of movement are already being trialled for forensic psychiatric patients at the Bethlem Royal Hospital in London so that patients can immediately be remanded if they breach location conditions of leave or discharge [44]. The '24/7 Sobriety' scheme developed in South Dakota is also suggestive and has been demonstrated to be successful at reducing rates of Driving Under the Influence re-offending [45,46,47]. Convicted offenders are offered the choice between a custodial sentence or wearing a transdermal alcohol-measuring device with automated reporting protocols allowing remote monitoring of alcohol intake, with immediate incarceration as the consequence of breach of mandated abstinence. In South Dakota, rate of compliance was 78% [47]. No technology is perfectly reliable; and, as with any risk management strategy, there will undoubtedly be occasions when it fails or participants do not comply. Nonetheless, this new technology offers an opportunity to grant patients the freedom and potential benefits of unescorted leave and ultimately discharge,

while keeping a watchful eye of the sort usually possible only when leave is denied or escorted.

Forensic patients suffer much restriction of their liberty. Forced monitoring for substance use and location as a condition of leave or discharge is not a psychiatric treatment but rather an imposition, and one which carries the risk of coercion and violation of patient liberty and autonomy if it is employed as a threat: '*Wear this, or we won't let you out*'. However, these risks can be addressed if it is employed not as a threat, but as an offer.

Threats and offers are typically distinguished in relation to a pre-proposal baseline of what a person, either as a matter of fact or as a matter of right, can expect [48]. A threat is a proposal that, if not accepted, leaves a person worse off compared with the pre-proposal baseline. An offer is a proposal that, if not accepted, does not leave a person worse off, and, if accepted, may make them better off, compared with the pre-proposal baseline. In this way, threats reduce options, whereas offers increase them. Monitoring for substance use and location as a condition of leave or discharge should not be used as a threat, denying patients the opportunity of leave or discharge which, given their situation, they would otherwise as a matter of fact or right receive, unless they accede to monitoring. However, following an important framework for clinical ethics recently developed in the literature [49], it could be used as an offer, providing patients with an option they would otherwise not have.

This would require sustained dialogue between staff and those patients in the process of working towards leave or discharge, about how, if patients agree to monitoring and so indicate a willingness to be responsible for their conduct and work collaboratively with staff to manage their own risk, leave or discharge could be an option when otherwise it would not yet be considered. Such an intervention not only circumvents the risk of coercion while reducing risk of substance use and hence re-offending. It may also be therapeutic for patients, in that it respects their autonomy and works with them to invite and develop personal responsibility and reflective understanding on risk and conduct, promoting the capacity for better life choices.

CONCLUSION

In addition to the established relationship between substance abuse, violence and crime, recent research suggests that substance abuse within mentally disordered forensic patients should be considered an important risk factor for violence and re-offending. Improved treatment for substance abuse in forensic psychiatric patients together with the offer of monitored abstinence as a condition of leave or discharge could therefore be usefully considered as a means of reducing and managing risk. This may improve patient care by addressing mental health needs and increasing the opportunity and likelihood of successful re-integration into the community and better life prospects; protect the public by reducing risk of re-offending and offering real-time monitoring and potential intervention when risk is heightened; and help forensic psychiatrists strike a balance between patient care and public protection, potentially alleviating some of the difficulty and anxiety that decisions to grant leave or discharge can create.

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KEY POINTS

- Recent research indicates that substance abuse within forensic psychiatric patients should be considered an important risk factor for violence and re-offending.
- Treatment for substance abuse disorders should become a clinical priority within forensic psychiatry.
- If used ethically, location-tracking and transdermal alcohol-measuring ankle bands offer an unprecedented opportunity to monitor abstinence in real time and thereby potentially reduce risk while involving patients in dialogue about responsibility and wellbeing.
- Treatment for substance abuse and monitored abstinence may help forensic psychiatrists and their teams strike a balance between patient care and public protection.