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Key findings

- High risk drinkers (HRDs) comprise approximately 10% of IDU. Those who consume alcohol daily represent approximately three-quarters of HRDs. These figures have remained relatively stable since 2000.
- HRDs were found to have a higher level of polydrug use than non-HRD. Polydrug use was more likely include use of ecstasy, cocaine, cannabis and hallucinogens.
- Large proportions of HRDs reported the daily use of CNS depressants including cannabis, benzodiazepines and methadone.
- High risk drinkers were more likely to report driving under the influence of alcohol and to test over the limit in random breath testing (RBT) than non-HRD.
- HRD were more likely to report committing fraud and violent crimes in the last month than non-HRD.

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High Risk Alcohol Use Among a Group of People Who Regularly Inject Drugs in Australia

Introduction

Lately there has been much focus on the use of alcohol in the community, specifically among young people. This in part has been driven by current political and media attention. There has, however, been much less focus on alcohol use amongst people who regularly inject drugs (injecting drug users, IDUs). People who regularly inject drugs are particularly at risk for alcohol related harms due to a high prevalence of the hepatitis C virus (HCV). Sixty-two percent of IDU interviewed (n=1912) in the Australian NSP Survey were found to have HCV antibodies and the prevalence was higher for indigenous and recently incarcerated IDUs (National Centre in HIV Epidemiology and Clinical Research 2007) . Given that the consumption of alcohol has been found to exacerbate HCV infection and to increase the risk of both non-fatal and fatal opioid overdose and depressant overdose (Darke, Ross et al. 1996; Schiff and Ozden 2004; Coffin, Tracy et al. 2007; Darke, Duflou et al. 2007) it is timely to assess the impact of risky drinking among injecting drug users. The 2008 Illicit Drug Reporting System (IDRS) provided an opportunity to do this by examining alcohol use amongst a sentinel sample of regular IDU.

Aim

The principal aim of this study was to investigate the level of consumption of alcohol among IDU who participated in the 2008 IDRS. A secondary aim was to examine the differences between IDU who consumed alcohol at levels considered risky or harmful (i.e. consuming alcohol on more than five days a week) and those who did not. Groups would be compared on demographics, patterns of drug use, mental and physical health, risk behaviours and crime.

Method

The IDRS is a national monitoring system with the aim of detecting emerging trends in drug use and related issues. Over 900 regular IDU (i.e. injected at least monthly over a 6 month period preceding the interview) were recruited nationally using multiple methods, including advertisements in street press, newspapers, treatment agencies,

needle and syringe programs (NSPs) and peer referral (snowballing). Participants were interviewed in locations convenient to them, such as NSPs, treatment agencies, public areas. The recruitment remained consistent with the methodology used in previous years of the IDRS project.

The interview was administered by research staff in all eight jurisdictions nationwide. Interviews took approximately 30 to 50 minutes to complete. Participants were reimbursed for their time and expenses incurred. Informed consent to participate was obtained prior to interview. All participants were assured that all information they provided would remain confidential and anonymous.

Participants were asked whether they had ever consumed alcohol, whether they had consumed it within the six months prior to the interview and how many days they had consumed alcohol in the preceding six months. Information regarding demographics, drug use and trends, risk behaviours and related issues including mental and physical health were also collected. IDU were grouped according to the number of days they had consumed alcohol in the preceding six months. Those who consumed alcohol on more than five days a week were classed as 'high risk drinkers' (HRDs). Those participants within the HRD group, who consumed alcohol on a daily basis were also identified and referred to as 'daily drinkers' (DDs). Participants who reported having consumed alcohol on five days a week or less were referred to as 'non-high risk drinkers' (non-HRDs).

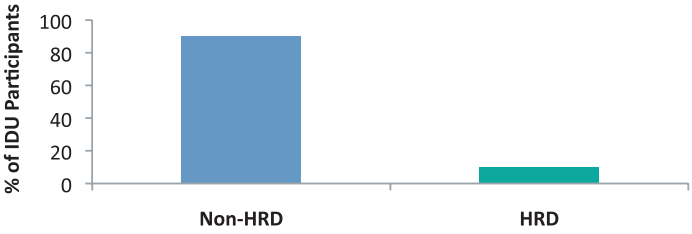
Current Australian guidelines by the National Health and Medical Research Council (NHMRC) indicate that higher frequencies of drinking (e.g. daily rather than weekly) and higher quantities consumed on each occasion lead to increased risk of alcohol related harm. The guidelines recommend the consumption of no more than four standard drinks on a single occasion to reduce the risk of alcohol related injury on that occasion and no more two standard drinks on any day to reduce the lifetime risk of related disease or injury. NHMRC however advises against specific guidelines for those using alcohol in conjunction with other drugs as dosages of illicit drugs, due to their variable purity levels, cannot be standardised like alcohol and therefore are unpredictable (National Health and Medical Research Council 2009).

Results

Alcohol Consumption among IDU

Among the 2008 sample of IDUs in Australia, the majority (95%) had consumed alcohol at least once in their lives. Of the participants who reported the number of days they had consumed alcohol in the preceding six months, 10% consumed alcohol on more than five days a week, every week, during the past six months, i.e. were high risk drinkers (Figure 1).

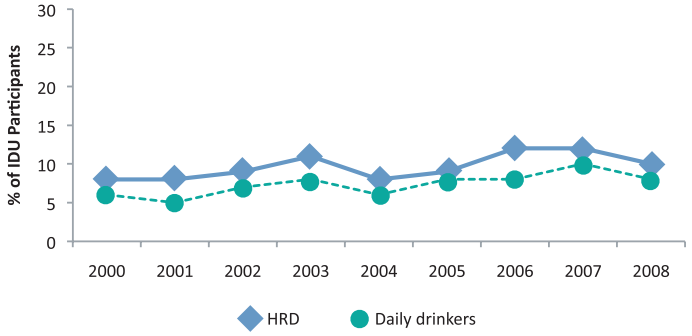
Figure 1: The proportion of the national sample of IDUs who are High Risk Drinkers*.



Source: Participant interviews IDRS 2008
** HRDs - consume alcohol on >5days/week*

Figure 2 shows the proportion of HRDs and DDs in the national sample of IDU from 2000 to 2008. Across time, the proportion of HRDs appears to have remained comparatively stable at approximately 10; similarly, the proportion of daily drinkers has also remained relatively stable at approximately 7%. Interestingly, across time, 'daily drinkers' have constituted the majority of HRDs. That is, among IDU who reported having consumed alcohol on more than 120 days over the preceding six months, three-quarters (76%, on average from 2000 to 2008) consumed alcohol on a daily basis (i.e. on 180 days over the preceding six months).

Figure 2: The proportion of the national sample of IDUs who are HRDs and daily drinkers, 2000-2008.



Demographics

Table 1 presents demographic data on the 2008 national sample of IDUs in Australia. While the two groups appeared quite similar across most demographics, they differed across two dimensions; gender and level of education. Male IDUs had four times the odds of being HRDs than female IDUs (OR=3.7; 95% CI: 2.0 to 6.9), and HRDs had completed significantly fewer years of schooling than non-HRDs (9.7 years vs. 10.1 years; $p<0.05$).

Table 1: Demographic characteristics of HRD and non-HRD IDUs, 2008.

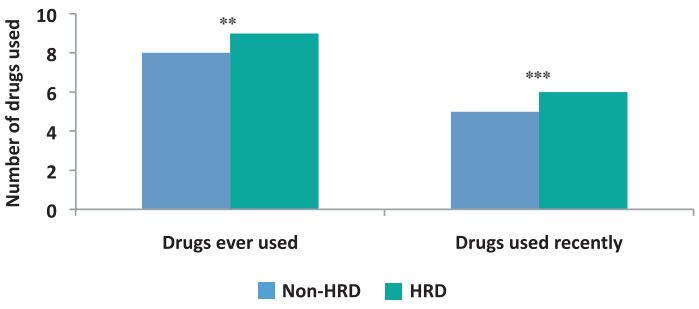
	Non-HRD (N=800)	HRD (N=91)
age (mean)	37	37
% male*	64	87
% ATSI	11	17
% finished year 12*	26	20
% unemployed	23	23
% in drug treatment	47	42
% prison history	51	60

Source: Participant interviews IDRS 2008
** p<0.05*

Drug Use

There were no differences detected in the age at which HRDs (18 years) and non-HRDs (19.5 years) first injected or in the drug type that was first injected. However, HRDs had used a higher number of drugs during their lifetimes (median 9 vs. 8; p<0.01) than non-HRDs. They had also used a higher number of drugs over the preceding six months than non-HRDs (median 6 vs. 5; p<0.001) (Figure 2).

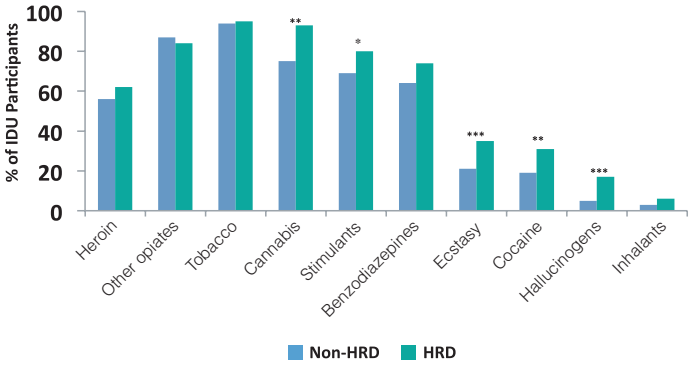
Figure 3: Median number of drugs ever used and recently used.



Source: Participant interviews IDRS 2008
*** p<0.01; *** p<0.001*

Figure 3 presents an overview of the various drugs used over the preceding six months by HRDs and non-HRDs. Overall, a significantly higher proportion of HRDs had used cannabis, stimulants, ecstasy, cocaine and hallucinogens than non-HRDs. Given that drugs such as ecstasy, cocaine and hallucinogens are frequently reported to be used in social contexts (Sindicich, Stafford J. et al. 2009); these data may imply that HRDs are more likely to use drugs in social situations than non-HRDs. It is interesting to note, that HRDs reported having snorted cocaine significantly more frequently than non-HRDs over the preceding six months (46% vs. 28%; X^2=3.94, p<0.05). These data may also indicate that further investigation regarding the routes of administration of drugs such as ecstasy, cocaine and stimulants may be pertinent given the added health risks of snorting or smoking these substances above those found in a primarily injecting group.

Figure 4: Drugs used by HRD and non-HRD over the preceding six months



Source: Participant interviews IDRS 2008
**p<0.05; ** p<0.01; *** p<0.001*

Table 2 presents an overview of recent drug use by high risk drinkers and also presents data for those within the HRD group who consumed alcohol daily, DDs. It is noteworthy that among participants identified as HRDs, large proportions report the daily use of tobacco (94%), cannabis (52%), benzodiazepines (22%) and methadone (18%). Furthermore, due to the fact that three-quarters of HRDs are in fact daily drinkers, this same pattern occurs among daily drinkers, with tobacco (94%), cannabis (59%), benzodiazepines (24%) and methadone (16%) being the drugs most commonly used on a daily basis among this group.

For all HRDs, and also for those who were DDs, heroin was the drug most commonly injected over the month preceding the interview (32% of HRDs and 31% of DDs) followed by morphine (20% of HRDs and 18% of DDs).

Participants were asked how often they had injected any drug over the month preceding the interview. Among all HRDs, over two-fifths (44%) reported injecting a drug at least once a day. This figure was closer to half (48%) among those HRD who were daily drinkers (Table 2).

Table 2: Recent drug use among HRDs and DDs, 2008

	HRDs (n=91)	HRDs who are daily drinkers: DDs (n=68)
Drugs used daily (%):		
Tobacco	93	94
Cannabis	52	59
Benzodiazepines*	22	24
Methadone	18	16
Morphine	8	7
Methamphetamines	7	9
Drug injected most often last month (5):		
Heroin	32	31
Morphine	20	18
Ice/Crystal	14	18
Speed	14	15
How often injected last month (%):		
None	2	2
Weekly or less	22	28
More than weekly but less than daily	32	24
1 x day	14	15
2-3 x day	24	27
More than 3 x day	6	6

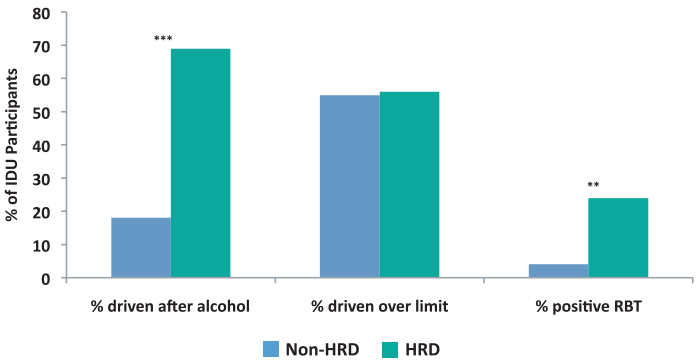
Source: Participant interviews IDRS 2008
** Includes licitly- and illicitly-obtained drugs.*

Risk Behaviours

There was no significant difference in the number of HRDs (13%) and non-HRDs (12%) who reported having overdosed within the six months preceding the interview. However, given the increased risk of overdose which occurs when combining any of the following: alcohol, heroin, methadone, benzodiazepines and/or health problems such as low weight and hepatitis C, this data should be viewed with caution. Furthermore, there was no significant difference in the proportion of HRDs who shared/borrowed needles or other injecting equipment (tourniquets, water, spoons etc).

Participants were asked about driving over the preceding six months. A significantly higher proportion of HRDs had driven while under the influence of alcohol than non-HRD (71% vs. 17%; X^2=82.5, p<0.001). Furthermore, while there was no significant difference in the reported number of times HRDs and non-HRDs drove over the legal limit, HRDs had over seven times the odds of testing over the legal limit in a random breath test (OR=7.4; 95% CI: 1.9 to 29.8) (See Figure 4).

Figure 5: Patterns of drink driving among HRD and non-HRD who drove a car in the preceding six months

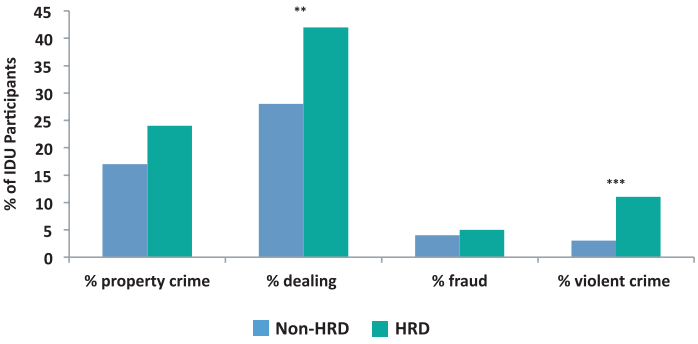


Source: Participant interviews IDRS 2008
*** p<0.01; *** p<0.001*

Criminal Activity

Participants were asked about criminal activity over the preceding six months. A significantly higher proportion of HRDs had been arrested in the six months preceding the interview than non-HRDs (X^2=11.7, p<0.001). While more than half of HRDs (52%) had been arrested in the preceding six months, only one-third (34%) of non-HRDs had been arrested over this period. The incidence of self-reported dealing and violent crimes was significantly higher among HRDs than non-HRDs (X^2 = 8.4, p<0.01 and X^2 =15.3, p<0.001 respectively).

Figure 6: Relative proportions of HRD and non-HRD who reported involvement in criminal activity over the preceding month.



Source: Participant interviews IDRS 2008
*** p<0.01; *** p<0.001*

Summary

These findings suggest that high risk drinkers are an at risk group of IDU which comprise approximately 10% of the national sample. Of those who were classed as HRDs, approximately three-quarters were in fact daily consumers of alcohol. These figures appear to have remained relatively stable since 2000.

Male IDUs had almost four times the odds of qualifying as HRDs than females and those with fewer years of schooling were also significantly more likely to be HRDs. This group was found to have a higher level of polydrug use, especially drugs associated with social contexts e.g. ecstasy, cocaine and hallucinogens. Furthermore, more than two-fifths of HRDs reported injecting a drug at least once a day and among HRDs who were daily drinkers, approximately half reported injecting a drug at least once a day. The drugs injected most often over the preceding month were heroin, morphine, crystal and speed. Additionally, large proportions of HRDs reported the daily use of cannabis, benzodiazepines and methadone.

Taken together, this data is concerning because it implies that a sizeable proportion of IDU who consume alcohol on six or seven days a week, are also using other central nervous system depressants on the same day. Particularly harmful is the co-administration of alcohol with benzodiazepines and opioids (i.e. heroin, methadone and morphine). Despite this, these results did not indicate a higher level of non-fatal overdose among IDU who were HRDs. However, further work utilising a more sensitive measure of alcohol consumption and further questions pertaining to overdoses (e.g. pre-overdose symptoms) may shed greater light on this issue.

With regards to risky behaviour and criminal activity, these results show that HRDs were more likely to drive under the influence of alcohol and to test over the limit in an RBT. Further research will address perceived levels of impairment when driving and intoxication among IDU who are HRDs. It was also found that HRDs were more likely to commit fraud and violent crimes. Much work has been done addressing the relationship between violence and alcohol consumption which has generally indicated a positive link between the two. Given this, it may also be pertinent to further explore the relationship between alcohol consumption and aggression (particularly physical aggression and violent crime) among IDUs. Issues of drink driving and crime (particularly violent crime) among HRDs are a cause for concern considering the risk posed to the community as well as to the individual.

Implications

Heavy alcohol consumption can have serious health implications for people living with HCV. High risk drinking can result in increased severity of liver damage, promote the progression to cirrhosis and increase the risk of liver cancer (Schiff and Ozden 2004). It also appears to reduce the number of hepatitis C infected people who respond to treatment with interferon (Weathermon and Crabb 1999).

Although there was no significant difference found between HRD and non-HRD in regard to non-fatal overdose, alcohol has been independently associated with an increased risk of a recent non-fatal and fatal overdose in larger studies (Darke, Ross et al. 1996; Coffin, Tracy et al. 2007; Darke, Duflou et al. 2007).

Daily consumption of benzodiazepines has been identified as occurring in over 20% of HRDs (Figure 3). The effects of the concurrent consumption of benzodiazepines and alcohol, even in moderate amounts, exceeds the sum of the effects of the individual drugs, leading to substantial central nervous system impairment and risk of over-sedation (Weathermon and Crabb 1999). This is of particular concern to HRD IDUs who are more likely to engage in polydrug use than non-HRD IDUs.

The present study was limited in its conclusions due to several factors. First, the classification of IDU and frequency of consumption of alcohol was limited to measurement in days, rather than the quantity of standard drinks consumed. However, this information is somewhat useful in obtaining an understanding of the differences between those who consume alcohol frequently and those who do not among IDUs. This can be used to stimulate and to further guide, more specific work on the relationship between alcohol consumption and opiate use. Second, the inability to provide HCV status among participants limited the extent to which conclusions could be made regarding risky drinking among IDUs with HCV. Future work would benefit from exploring this additional variable. Third, as HRDs comprise only approximately 10% of IDU interviewed, it was difficult to gather a large enough sample size on which to base meaningful comparisons. This would be overcome by specific sampling of IDU who regularly consume alcohol in further research on this topic.

Taking into account the aforementioned limitations, these results would suggest further monitoring of alcohol consumption in this group is needed particularly given that the proportions of HRDs and (within this group) that of daily drinkers has remained comparatively stable for the past nine years. This would imply that effective intervention strategies are either not being made available to or are not being utilised by IDU who consume alcohol regularly. This report suggests that the regular consumption of alcohol by people who regularly inject drugs, poses the risk of harm both to the individual and to others through; a) their frequent co-administration of alcohol with other CNS depressants; b) their increased probability of drink and drug driving; and c) their increased probability of criminal involvement, specifically in dealing and violent crime. It would appear pertinent to further address the identification and effective management of IDUs who are regular consumers of alcohol.

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