Construction apprentices' attitudes to workplace drug testing in Ireland

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Abstract
Ireland has become one of the first European countries to legislate for workplace drug testing. However, little is known about the attitudes of Irish workers towards various aspects of workplace drug testing programmes. This paper aims to address this matter by presenting the findings of a survey of construction apprentices and their attitudes to workplace drug testing. The results indicate that under some circumstances there is approval for tests; testing with advance warning is preferred to random testing. In addition, the practice of workplace drug testing in a company would not deter most respondents from applying for a position there. However, attitudes towards most aspects of drug testing – such as the need for random testing, the right of employers to test for drugs, and infringement of personal rights – are characterised by extreme variability. Higher self-reported frequency of alcohol and drug use, particularly of cannabis, was associated with more negative reactions towards workplace drug testing. The implications of implementing workplace drug testing programmes are discussed.

Key words
Apprentices, attitudes, construction sector, Ireland, legislation, workplace drug testing programmes.

Introduction
Ireland's health and safety legislation was significantly altered by the introduction of the Safety, Health and Welfare at Work Act 2005. This Act replaced the 1989 Safety, Health and Welfare at Work Act, which was the foundation stone of health and safety legislation in Ireland. The 2005 Act contained numerous new requirements and has closed many of the legal 'grey areas' that had existed since 1989.

One of the most controversial new additions to the 2005 Act was the introduction into Irish law of a provision for workplace drug testing programmes (WDTPs). The Act defines intoxicants as both drugs and alcohol, and stipulates that employees must not be under the influence of an intoxicant in the workplace to such an extent that it may endanger the health and safety of any other person. Employers may test employees for substance use, and in some safety-critical industries, this testing may become mandatory. Follow-on regulations and codes of practice (which will outline the exact requirements) are in the draft stage, and are expected to go to public consultation before being brought into law. Therefore, at this point, Ireland has become one of the first countries in the European Union (EU) to legislate for WDTPs.

In light of this new legislation and because little is known concerning the attitudes of Irish workers towards drug testing programmes, research was required to determine what

workers think about WDTPs. The only data available at the time of this study on the attitudes of Irish people to workplace drug testing (WDT) come from a European study conducted by Bjorklov *et al.*[1], which compares pre-employment samples in Ireland, Sweden and Portugal. This study, presented in 2000, reported that 98 per cent of the Irish workers sampled agreed that drug testing can be a good method to achieve a drug-free workplace and they generally agreed that employers should be entitled to test for drugs, especially when they suspected drug use was taking place.

Employees in the construction industry were targeted for the current study for two reasons. The construction industry in Ireland is a major employer, accounting for approximately 12 per cent of total employment nationally,[2] and it is also viewed as one of the most hazardous industries for Irish employees, with approximately 30 per cent of all work-related fatalities in Ireland between 2000 and 2005 occurring in this sector.[3]

Data on the levels of alcohol and drug consumption in the Irish construction sector are sparse; however, the US Department of Health and Human Services reports that the construction industry has a higher percentage of illicit drug and alcohol users than any other occupational category.[4] Given the potential for high levels of intoxicant use and the safety-critical nature of the industry, the implementation of the Safety, Health and Welfare at Work Act 2005 will no doubt have a significant effect on the attitudes of construction workers to WDT.

Alcohol and drug use in Ireland

Alcohol is the Irish nation's most used drug. With a 41 per cent increase in per capita consumption, albeit from a low base, Ireland had the highest increase in alcohol consumption among EU countries between 1989 and 1999. In 2000, Ireland's alcohol consumption continued to increase and by 2002 ranked second after Luxembourg.[5] The National Health and Lifestyles Survey[6] revealed that 30 per cent of males and 22 per cent of females consumed more than the recommended weekly limits for alcohol.

Levels of illicit drug use in Ireland are also increasing. The European Monitoring Centre for Drugs and Drug Addiction estimates that one in five Irish adults has used an illicit drug.[7] Use of illicit substances is highest among young adults (15–34 years) and, in all age groups, men are more likely to have used drugs than women.[6]

Alcohol and drug use in the workplace

Alcohol-related problems are more common in the workplace than drug-related problems.[8] Irish employers are of the opinion that absenteeism is the chief manifestation of alcohol abuse in the workplace.[9] A number of studies have shown a relationship between substance abuse and workplace absenteeism, including Mangione *et al.*,[10] Bass *et al.*[11] and Normand *et al.*[12] Evidence is also available which suggests a negative relationship between concurrent drug and alcohol use and work performance,[12–14] and that substance misuse is associated with higher levels of workplace accidents and injuries.[15–17]

Workplace drug testing

Generally, not much is known about WDT in Europe; it is difficult to obtain reliable information and only minimal statistics are available.[18] The evidence that is available from the literature tells us that large organisations are more likely to test employees and/or job applicants than smaller organisations, and that testing appears to be more likely in jobs that involve high levels of perceived risk to the public than in positions where the hazards associated with drug-impaired performance are minimal.[19] Verstraete & Pierce[18] reported that

testing for drugs in Ireland is mainly performed on white-collar workers and that programmes that test for alcohol use are less prevalent than those that test for drug use.

Attitudes

For organisations, there are a number of potential benefits of understanding the attitudes of employees towards their work in general. For example, attitudes may influence action, so employers can use their knowledge to generate more positive job attitudes and actions. An understanding of the attitudes of employees to WDT is therefore important and can give a valuable insight into the organisation. Reid *et al*.[19] argue that WDT may lead to a more positive view of the organisation among employees, especially if it appears to improve safety and efficiency. On the other hand, Konovsky & Cropanzano[20] found that managers are particularly concerned that negative employee responses to WDT may have adverse affects on the functioning of the organisation. Attitudinal information can be used by employers to help the design of policies and programmes that gain respect and approval from all levels of the organisation. It can also be useful for organisations in designing and implementing effective prevention, intervention and rehabilitation services for employees.

A sizeable amount of research has focused on attitudes towards WDT. However, much of this research was conducted in the US from the mid-1980s to the early 1990s; some of the earlier research is therefore likely to be out of date, and it is not known to what extent any of it is representative of other countries. There are also other reasons to doubt whether the findings of this research can be generalised to a workforce as a whole. For example, the majority of these studies used student populations and hypothetical scenarios, and are thus of unknown validity. Research regarding attitudes towards WDT needs to assess the attitudes of those currently in employment. Much of the earlier research suggests a general negative attitude towards WDT.

Organisational variables such as type of work (safety sensitive versus non-safety sensitive), type of screening (job applicant versus current employee) and amount of warning given (advance warning versus no warning) may have an impact on an individual's responses to WDTPs.[21,22] Murphy *et al*.[23] reported that, among college students, tests that detect alcohol were viewed less favourably than tests for other combinations of drugs. The same study found that tests met higher levels of approval if the results were confidential.

Not surprisingly, research has indicated that random testing (ie without warning) was perceived among a small sample of blue-collar workers to be less fair than testing after advance notice.[22] Murphy *et al*. showed that in a sample of college students, attitudes were less favourable towards random testing than towards testing with due cause.[23] Testing with advance notice may be perceived as fairer than random testing because it allows individuals more control over the collection of personal information.

As might be expected, the data also suggest that company policy towards positive drugs tests (eg job termination versus rehabilitation) can have an impact on employees' attitudes.[20–22] Policies that provided rehabilitation were viewed as far more favourable than policies that involved immediate termination of employment.[22–24]

Crant & Bateman have reported that the perceived need for WDT also influences attitudes.[21] The perceived need is likely to depend on the safety sensitivity of the job – in other words, the extent to which the job presents a high degree of danger for workers or third parties. Indeed, Arthur & Doverspike list 'job safety sensitivity' as a factor in reactions to drug testing.[25] A study of college students found that the perceived danger of the work was the best predictor of

acceptance of drug testing.[23] The extant literature suggests that attitudes towards drug testing are more positive when safety is a major concern.[23,26]

In addition, drug testing in safety-sensitive jobs was seen to be less of a violation of privacy than in non-safety-sensitive jobs. In jobs where safety is a major concern, random testing without warning and immediate termination of employment after a positive test may be perceived as fairer than in jobs where safety is not an issue.[24] Tepper[27] found that safety sensitivity was positively related to the perceived fairness of the consequences for positive drug tests. In other words, more punitive procedures were viewed as fairer when impaired work performance was perceived to be dangerous to the employee and/or his/her co-workers.

Methodology

This study addresses the need for more information and a clearer understanding of the effects of WDTPs on the attitudes of Irish construction sector employees. The overall aims of the study were:

- to investigate levels of alcohol and drug consumption
- to ascertain attitudes to certain aspects of WDT, particularly towards:
  - random drug testing
  - the accuracy of drug tests
  - the rights of employers versus the privacy rights of employees
  - the perceived need for WDT
  - the effectiveness of WDT as a deterrent to drug use
  - the potential consequences of a positive drug test
- to investigate the extent to which attitudes vary among workers according to demographic profiles, illegal drug use, alcohol use and perceived safety-sensitivity of the person's job.

Sample

The survey population consisted of craft/construction trade apprentices based at a training centre for a 20-week period as part of their apprenticeship. All the apprentices at the training centre were surveyed in order to maximise the power of the study. At the time of data collection, 168 apprentices were enrolled at the training centre.

Measures

A cross-sectional questionnaire survey was used to explore employees' attitudes towards drug testing in the workplace. The design process followed the steps outlined by Frazer,[28] and included consideration of the psychometric properties of the individual items, structure and flow of questions, sensitivity and possible biases, as well as wording and length both of individual questions and the total questionnaire.

Each item was chosen for its ability to meet certain criteria, including its appropriateness for the target sample, its use of language, its documented reliability and validity, and its relevance to the study objectives. Therefore many items were drawn from previous relevant surveys. Twenty-eight of the 30 questions employed in this survey were adapted from questionnaires used in previous studies in the area.[6,21–24,29–34]

Following piloting, the final questionnaire contained 30 items. Each section consisted of questions using both close-ended and scaled response formats. The close-ended questions were either dichotomous or multichotomous. The scaled response questions used a five-point Likert scale (where 1 = 'strongly disagree' and 5 = 'strongly agree'). The questions were put into groups relating to the same topic, and the questionnaire was divided into three main sections:

- attitudinal questions relating to WDT (eg 'I would agree to be randomly tested for drugs by my employer', 'Drug testing is an infringement of personal rights', 'I would not apply for a job at an organisation that tests for drug use')
- behavioural questions relating to lifestyles, habits and intentions (eg 'On how many occasions (if any) have you used marijuana (grass, pot) or cannabis (hash, hash oil)?', 'How long ago did you last have an alcoholic drink?')
- demographic questions (eg 'What age are you?', 'What is your job title?').

Procedure

Participants were assembled in groups of approximately 14 in classrooms, where the nature and purpose of the study was explained. Confidentiality and anonymity were guaranteed and participation was voluntary. Participants were encouraged to sit as far from each other as the available space allowed. The questionnaires were given out, completed by participants during the group sessions, and then returned to the researcher. No conferring was permitted, and participants were encouraged to raise their hands if there were any difficulties with the questionnaire.

Analyses

All questionnaires were coded and the data analysed using SPSS (Version 12.0). As the primary outcome measures – attitudes to WDT – were assessed ordinally, with five-point Likert-type scales, all inferential analyses employed non-parametric tests of significance: Mann-Whitney U tests for exploring the differences between groups, and Spearman's Rho Correlation Co-efficients for investigating the associations between variables.

Results

One hundred and forty-eight apprentices (88 per cent) participated in the study, and 140 useable questionnaires were obtained, giving an overall response rate of 83 per cent. The entire survey sample was male, with the vast majority (87 per cent) in the 18–34 age group. The sample was largely made up of apprentice carpenters (n = 48), followed by electricians (n = 38) and plumbers (n = 20). Other craft trades included in the sample were blocklayers (n = 13), fitters (n = 11) and mechanics (n = 10). The majority of respondents (62 per cent) were employed by small organisations (1–10 employees), with 29 per cent employed by medium organisations (11–50 employees) and a small number employed in larger organisations (more than 50 employees). Given the socio-demographic homogeneity of the sample, it was not possible to investigate differences in responses by age or gender.

A minority of respondents reported that their employer had a policy on alcohol (20.1 per cent) and other drugs (17.1 per cent). Only 2 per cent of respondents reported having access to an employee assistance programme or counselling at work. No respondents reported the presence of a drug-testing programme in their current workplace; however, 18 per cent of respondents reported that they did not know whether there was one. Only two respondents (1.4 per cent) had ever been tested by an employer in the past. In total, 71 per cent of respondents felt that the extent of alcohol abuse among construction workers in general was a fairly serious or a very serious problem. In contrast, only 19.3 per cent agreed that alcohol abuse is a major problem in their own workplace.

Alcohol and drug consumption

Respondents were asked how recently they had last consumed alcohol; 92 per cent reported that they had drunk alcohol in the month before the survey, with 16 per cent drinking five or six times a week and on each of these occasions consuming more than six drinks. Current

cannabis use was reported by 40 per cent of apprentices, while approximately 44 per cent reported never having used cannabis. After cannabis, the most commonly used drugs were ecstasy (23 per cent) followed by amphetamines (17 per cent) and magic mushrooms (13 per cent).

Table 1 presents the reported work-related problems resulting from the respondents' own drinking and drug use in the last 12 months, for all respondents and thus represent percentages for the total survey population. The top three work-related problems resulting from a respondent's own drinking were:

- feeling hung over at work
- feeling tired at work
- arriving late at work or leaving early.

In contrast to the findings on alcohol use, the vast majority did not experience any work-related problems as a result of their own drug use.

Attitudes towards WDT

Table 2 shows the attitudes of the respondents towards certain aspects of WDTPs. A total of 45.7 per cent agree somewhat to strongly that WDT acts as an effective deterrent to employee drug use; however, 41.4 per cent disagree somewhat to strongly with this statement. Also, a slight majority of respondents – 52.9 per cent – agreed that WDT is an infringement of personal rights, with 14.3 per cent unsure and 32.8 per cent disagreeing. When asked whether companies should have the right to test employees for drugs, 41.7 per cent of respondents agreed to some extent, but 46 per cent disagreed to some extent.

Slightly more (19.3 per cent) respondents reported that they strongly disagreed with being randomly tested for alcohol compared to those reporting strong agreement (16.4 per cent). But in general, levels of agreement and disagreement in relation to random alcohol testing were very similar. The levels of approval (45.7 per cent) and disapproval (43.5 per cent) for random drug testing were also similar. However, a higher proportion agreed with random testing for drugs (45.7 per cent) than alcohol (40.7 per cent). A clear difference in attitudes towards WDT was noted when advance notice of the test was given – in this case 58.6 per cent approved of being tested, compared to 30.7 per cent who disapproved. The results presented in Table 2 indicate that workplace drug testing in an organisation would not have a negative effect on the majority of respondents' intentions to apply to work there.

A minority (15 per cent) of respondents were not concerned about the accuracy of drugs tests used by organisations, 25 per cent were concerned to some extent, while the majority (60 per cent) were not sure. When asked about the perceived need in their jobs for different types of drug testing, most respondents indicated a need for post-accident testing only (79 per cent), even though the majority of respondents did class their work as 'safety-critical' (64 per cent). Respondents were asked to indicate reasons why they think employers test employees for drugs and alcohol. The main reason given was workplace safety (85.7 per cent), followed by company image (38.6 per cent). Only 14.3 per cent of respondents felt that employers test their workers in order to control them and prevent them from taking alcohol and drugs.

Table 3 shows the attitudes of respondents towards the consequences of failing a drug or alcohol test. In relation to testing positive for alcohol, a small minority of respondents (15 per

Table 1
Percentages of employees reporting substance-related problems at work

Have you experienced any of the following as a result of your own alcohol or drug use?	Alcohol (% yes)	Drugs (% yes)
Felt hung over at work	82.1	6.4
Felt tired at work	70.7	10.0
Arrived late for work or left early	62.9	9.3
Performed poorly at work	51.4	6.4
Missed days from work	45.7	2.9
Felt drunk or under the influence of drugs at work	40.0	2.9
Argued with co-workers	14.3	5.0
Been injured or had an accident at work	4.3	3.6

Table 2
Attitudes towards workplace drug testing

Statement	Agree strongly (%)	Agree somewhat (%)	Not sure (%)	Disagree somewhat (%)	Disagree strongly (%)
Drug testing is an effective deterrent to drug use by employees	10.0	35.7	12.9	29.3	12.1
Drug testing infringes employees' personal rights	23.6	29.3	14.3	20.7	12.1
I support a company's right to test employees for drugs	5.8	35.9	12.2	23.0	23.0
I support random testing for alcohol	16.4	24.3	15.7	24.3	19.3
I support random testing for drugs	19.3	26.4	10.7	16.4	27.1
I support workplace drug testing when advance notice is given	18.6	40.0	10.7	14.3	16.4
I do not intend to apply for jobs with organisations that test for drug use	11.4	13.6	19.3	22.1	33.6

cent) felt it would be fair for their workmate to be dismissed. In contrast, the level of approval for dismissal when a workmate tested positive for drugs was higher, at 41.4 per cent.

Inferential analyses

The vast majority of respondents fell into the 18–34 age category, the entire population was male, and there were small numbers in some occupational categories. Therefore, it was not possible to explore statistical differences in attitudes towards WDT by these socio-demographic attributes. The results presented here are of an investigation into how attitudes vary by substance use characteristics; differences among respondents according to frequency of alcohol and drug consumption were explored with Mann-Whitney U tests.

Table 3
Perceived fairness of consequences for failing a drug or alcohol test

If your workmate fails a drug or alcohol test at work, do you think it is fair for...	Positive test for alcohol (%)	Positive test for drugs (%)
him/her to be sacked?	15.0	41.4
him/her to be referred to a doctor?	21.4	33.6
him/her to be sent for counselling?	22.1	32.9
him/her to be disciplined?	37.1	30.7
your employer to put up a poster about substance abuse?	20.0	25.0

Table 4
Differences by frequency of cannabis use and perceived need for types of WDT

	Pre-employment testing			Post-accident testing			Random testing		
	Yes	No	P	Yes	No	P	Yes	No	P
Lifetime cannabis use – Mean (SD)	2.13 (1.6)	2.87 (1.8)	0.042	2.48 (1.7)	3.36 (1.9)	ns	1.74 (1.4)	2.95 (1.8)	0.001
Cannabis use in last 12 months – Mean (SD)	1.73 (1.3)	2.58 (1.7)	0.027	2.22 (1.6)	2.90 (1.8)	ns	1.25 (0.7)	2.73 (1.7)	0.000
Cannabis use in last 30 days – Mean (SD)	1.30 (0.9)	2.35 (1.7)	0.007	2.00 (1.5)	2.35 (1.9)	ns	1.00 (0.0)	2.44 (1.7)	0.000

1 = Never; 2 = 1–2 times; 3 = 3–5 times; 4 = 6–9 times; 5 = 10+ times

Table 4 shows that significant differences were found between those reporting frequent cannabis use and their perceived need for pre-employment and random testing. There were significant relationships between the perceived need for random testing and both recency of last alcoholic drink ($p = 0.001$) and frequency of binge drinking ($p = 0.036$). In both cases, participants reporting more recent substance use were less likely to agree that there was a need for random testing.

Spearman's Rho was used to test for association between frequency of alcohol and other drug use and attitudes towards WDT, and a number of these associations were found to be statistically significant and of low to moderate strength. Table 5 shows that statistically significant correlations were found between more recent alcohol use and both attitudes towards drug testing as an infringement of privacy and concern about the accuracy of drug tests. Frequency of binge drinking was associated with agreement to be randomly tested for drugs; agreement to be tested for alcohol and drugs when advance notice is given; and support for a company's right to test employees. As frequency of binge drinking increased, it was found that agreement with testing decreased, as did positive attitudes towards testing. There was also an association between frequency of binge drinking and intention to apply for a job at an organisation that tests for drugs; this suggests that frequent alcohol use does not affect respondents' intentions to apply to an organisation that tests its employees for drugs. Frequent binge drinkers were less likely to perceive drug testing as an infringement of their personal rights.

Table 5
Correlations between attitudes towards drug testing and frequency of alcohol use

Statement	Recent alcoholic drink (r_s =)	Frequency 6+ drinks (r_s =)
I would object to being randomly tested for alcohol by my employer	0.021	0.068
I would agree to be randomly tested for drugs by my employer	0.078	**0.260**†
I would agree to be tested for both alcohol and drugs if my employer gave me notice	0.136	**0.211***
I would not apply for a job at an organisation that tests for drugs	–0.042	**–0.182***
Drug testing is an infringement of personal rights	**–0.200***	**–0.319**†
Companies should have the right to test their employees for alcohol and drugs	0.157	**0.293**†
I am concerned about the accuracy of drug tests used by employers	**0.286**†	0.108
Workplace drug testing is an effective deterrent to drug use	0.017	0.062

** Correlation is significant at the 0.05 level*
† Correlation is significant at the 0.01 level

Table 6 reveals significant correlations, in the low to moderate range, between self-reported illicit drug use and attitudes to WDT. Significant negative associations were identified between frequencies of cannabis use at all levels (lifetime, last 12 months and last 30 days) and agreement to be randomly tested for drugs. Frequent users of cannabis were also less likely to agree to being tested for both drugs and alcohol even if their employer gave them advance notice of the test. Agreement that drug testing is an infringement of personal rights was positively associated with frequency of cannabis use at all levels and frequent users were significantly less likely to agree with a company's right to test employees for drugs.

Frequency of use of amphetamines, ecstasy and solvents in the last 12 months were significantly negatively associated with agreement to be randomly tested and tested if advance notice was given. Frequent users of amphetamines and ecstasy were more likely to view drug testing as an invasion of privacy and were more likely to report negative intentions to apply for a job at an organisation that tests for drugs. Significant negative associations were found between frequency of amphetamine and ecstasy use and attitudes towards a company's right to test employees for drugs, and the effectiveness of WDT as a deterrent to employee drug use.

Discussion and conclusions

The levels of alcohol and illicit drug consumption reported in the present study are much higher than national figures for regular binge drinking and cannabis and ecstasy use. This high level of intoxicant use is consistent with previous research in the construction sector, which has been identified by Mandell *et al.*[35] as an industry with particular risk of substance abuse. A possible normalisation of substance use and misuse among workers in this industry is of particular

Table 6 Correlations between attitudes towards WDT and frequency of illicit drug use

Statement	Frequency of lifetime cannabis use (r_s =)	Frequency of cannabis use in last 12 months (r_s =)	Frequency of cannabis use in last 30 days (r_s =)	Frequency of amphetamine use in last 12 months (r_s =)	Frequency of ecstasy use in last 12 months (r_s =)	Frequency of solvent use in last 12 months (r_s =)
I would object to being randomly tested for alcohol by my employer	0.074	0.074	0.095	0.091	0.135	0.044
I would agree to be randomly tested for drugs by my employer	**–0.301**†	**–0.415**†	**–0.484**†	**–0.294**†	**–0.342**†	**–0.253**†
I would agree to be tested for both alcohol and drugs if my employer gave me notice	**–0.275**†	**–0.360**†	**–0.364**†	**–0.417**†	**–0.386**†	**–0.270**†
I would not apply for a job at an organisation that tests for drugs	0.130	0.182	**0.198***	**0.172***	**0.201***	0.041
Drug testing is an infringement of personal rights	**0.201***	**0.297**†	**0.406**†	**0.280**†	**0.352**†	**0.185***
Companies should have the right to test their employees for alcohol and drugs	**–0.189***	**–0.280**†	**–0.313**†	**–0.223***	**–0.273**†	**–0.203***
I am concerned about the accuracy of drug tests used by employers	0.064	–0.023	–0.094	**–0.230**†	–0.116	–0.125
Workplace drug testing is an effective deterrent to drug use	**–0.212***	–0.169	–0.148	**–0.196***	**–0.190***	–0.130

* *Correlation is significant at the 0.05 level*
† *Correlation is significant at the 0.01 level*

interest when developing appropriate responses, in that there may be a greater need for industry-specific recommendations when such differences in behaviour have been documented.

Consistent with the high rates of substance misuse reported, the data show that the majority of respondents experienced several substance use-related problems in the 12 months before the survey. Of particular concern is that 40 per cent of respondents reported feeling drunk at work in the last year and 82 per cent reported feeling hung over from the previous night's drinking. Almost 46 per cent missed days from work as a result of their drinking. This is likely to represent a considerable loss to industry through underperformance, and underlines the necessity of addressing these issues. Although only 4.6 per cent (n = 6) and 3.6 per cent (n = 5) reported having an accident at work due to their own alcohol and drug use respectively, if these percentages were applicable to the total number of apprentices in the country, the results would be of major importance. For example, in 2002, there were approximately 24,000 registered apprentices in Ireland.[36] If 4 per cent (n = 960) of all apprentices reported an alcohol or drug-related accident at work, there would be huge health and safety implications for the industry. Overall, fewer respondents reported drug-related problems at work, which supports international findings that suggest that drug-related problems are less common in the workplace than alcohol-related ones.[37]

The very low levels of reported drug testing and the lack of knowledge about employers' policies may be explained by the fact that this is a new generation of workers with little workplace experience. The low levels may also be attributed to the high proportion of small employers – a common feature in the construction industry and indeed in Ireland as a whole.

Construction apprentices' attitudes towards most aspects of WDT programmes were characterised by extreme variability. Virtually all statements on drug testing were accepted by a large number of respondents and were rejected by a comparable number of respondents, and this is supportive of similarly diverse data reported by Murphy *et al*.[23] It may be relevant that these views are held in the absence of direct experience of drug testing, as Hurley reported that employees who had undergone drug testing reported significantly more negative attitudes than those who had not.[29] Thus attitudes may become more negative over time as these apprentices gain experience and as workplace drug testing becomes more commonplace within the sector.

Frequent and high-volume users of alcohol and drugs did report more negative attitudes towards certain aspects of workplace drug testing. However, the documented relationships are at best moderate in strength. It may be that substance users have a lower tolerance for social control in general terms, which is expressed in this case as a more negative attitude to WDT. Nevertheless, other factors are contributing significantly to the attitudes being expressed, and in the absence of significant workplace history, direct experience of being tested or even working in an environment where testing is conducted, it is unclear what these factors might be. Thus, there remains a gap in our knowledge about the precursors of these attitudes, which deserves further attention.

The considerably greater tolerance towards alcohol consumption and associated problems, as well as lower support for punitive measures against workers found to be misusing alcohol, are both internally consistent and in contrast with the views expressed in relation to illicit drug use. The expressed differences in attitude towards alcohol and drugs may reflect the legality of alcohol in comparison to the illegality of drugs, or indeed may mirror broader societal views

about the acceptability of consuming these substances. Both of these suggest that the challenges for employers in relation to alcohol use and alcohol-related problems in the workplace will be substantial, and may well require considerably more liaison with employees and community leaders than might otherwise be anticipated.

While many respondents are concerned about intrusions into their personal lives, a significant number support companies' right to test for drugs. This, in turn, suggests awareness among some respondents of the needs and reasons for implementing drug testing. However, even if an employer were to design a testing programme based on elements that are viewed more favourably, a substantial proportion of employees would still be likely to hold a strong negative view towards some aspects of the programme. Although negative attitudes are more likely among frequent than infrequent users of alcohol and drugs, organisations cannot ignore individuals whose attitudes towards WDT are negative. Organisations choosing to adopt drug-testing procedures are faced with several difficult issues. These include deciding who should be tested, how and when they should be tested, and the consequences of a positive drug test.

Attitudes towards testing under a variety of circumstances suggest that certainty about when a test will be conducted is related to more favourable reactions. For example, the majority of respondents indicated agreement to be tested for both alcohol and drugs if their employer gave them advance warning of the tests. Asked about the perceived need for different types of drug testing in their own workplaces, respondents indicated a need for post-accident testing only. Levels of disapproval for pre-employment and random testing were high. Attitudes were more negative when there was no obvious justification for testing, which suggests that testing everyone (ie random testing) may be viewed in a more negative light. It may be that substance-using employees believe that, given advance notice, they would be able to ensure that they would not fail a planned drug test, and this is supported by stronger relationships on this point for binge drinkers in comparison to illicit substance users. Given the media coverage of the slow rate of metabolism of cannabis in comparison, for example, to alcohol, illicit substance users probably know that they are likely to test positive in a random test, and that they are less likely to be able to prepare successfully for a notified test.

Previous research has reported that rehabilitation is perceived as a fairer consequence of failing a drug test than stricter penalties such as termination of employment, and the data presented here support this in relation to alcohol. However, in the case of a positive test for drugs, termination was the possible consequence that was most frequently agreed with. In addition, respondents were more likely to agree that referral to a doctor or a counsellor was fair following a failed drug test than after a failed alcohol test; this suggests that drug abuse is viewed more as a 'problem' warranting professional help than alcohol abuse.

In relation to the attraction and retention of employees, the stance taken towards testing may depend on the safety-critical nature of the work itself. These data suggest that current cannabis users and frequent binge drinkers are significantly less attracted to an organisation that tests for drug use and are more likely to view testing as an infringement of their rights. Thus a well-publicised WDTP may result in fewer substance-using job applicants and employees. On the other hand, given the apparent acceptance of substance use, especially alcohol misuse among young working-class men, a comprehensive WDTP may create more difficulties in terms of recruitment than it solves in relation to safety.

The findings of the present study are likely to become relevant for an increasing number of Irish workers who will be tested for drug and alcohol use, and highlight the importance of

conducting more extensive research into the effects of drug testing programmes. Further research is required to assess to what extent the results presented here can be generalised, and there are unanswered questions in relation particularly to the predictors of negative attitudes to WDT. However, the results may provide some initial guidance in designing drug-testing programmes and in anticipating and dealing with the reactions and attitudes of employees.

Organisations that intend to implement WDT should adopt a holistic approach to the issue of drugs and alcohol usage by their workforce. An integrated drug/alcohol policy can provide the necessary framework through which to address the issue. Given the high levels of alcohol and drug use among the construction apprentices in this study, such an integrated policy should aim to increase awareness of and foster positive attitudes towards health and safety risks, and to establish effective prevention, problem management and rehabilitation programmes specific to the needs of the industry and the characteristics of its employees. As part of policy development and roll-out, WDT must have other programmes to support it, such as communications that heighten employees' awareness of substance abuse and the testing programme, and some form of counselling or rehabilitation service for those employees with substance abuse problems. It is recommended that such a policy be developed in conjunction with experienced health service providers (such as occupational health services, addiction services, primary care) and representative employee groups. This is likely to maximise the acceptability of the policy and help to integrate it into public and private services – an important factor for smaller employers, such as those in construction, with lower levels of access to employee assistance programmes.

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