APPRAISAL OF WORKPLACE DRUG TESTING BY UK CONSTRUCTION CONTRACTORS

Sam Wamuziri, Construction Management Group, School of Engineering and the Built Environment, Edinburgh Napier University, Scotland, UK.

Simona Simeone, Construction Management Group, School of Engineering and the Built Environment, Edinburgh Napier University, Scotland, UK.

ABSTRACT

Illegal drug use in the general population of society varies widely. Research evidence suggests that although the level of drug use is higher among the unemployed compared to those in employment, this gap may be narrowing. Substance misuse can damage health. It can also cost employers through increased absenteeism, reduced productivity and increased risk of accidents. Indeed, there is a well documented linkage between drug use and impairment of cognition and perception skills. Before someone starts performing safety-critical tasks, it is good practice for the employer to agree what health checks and/or medical examination will be required and record agreement. Some employers have indeed decided to adopt workplace drug testing as part of their overall drugs policy. Previous research undertaken into the influence of drug testing on occupational safety is reviewed in this paper. Results of a survey to evaluate the extent to which workplace drug testing programmes have been implemented by UK civil engineering construction contractors are evaluated. The reasons that have led UK construction firms to introduce or not to implement workplace drug testing programmes are discussed. Some countries, such as Ireland and Finland, have legislated for workplace drug testing. The future of workplace drug testing in UK construction is discussed, including an assessment of whether the UK government should intervene and legislate. This work is part of an ongoing research programme that aims to establish the prevalence of illegal drug use in UK construction. The work also aims to investigate the effects of illegal drug use on worker performance and to analyse whether there is an association between illegal drug use and workplace accidents and injuries in construction.

Keywords: Workplace drug testing, Accident prevention, Legislation

INTRODUCTION

Drug testing involves the analysis of biological material to detect the presence or absence of drugs and their metabolites. Metabolites are those substances into which drugs and alcohol are converted by the human body. The most common form of testing for drugs involves analysis of urine samples. Breath tests are more common for alcohol testing followed by blood testing for confirmatory tests. In addition, other materials such as hair, oral fluid, and sweat can be tested. Drug testing in the workplace has grown significantly over the last 25 years in the United States of America to become a multi-billion dollar business. The development of drug testing in the workplace in the United Kingdom has been at a relatively slower rate. Drug testing is a complex issue and involves scientific, legal ethical, social and economic dimensions. In a recent UK study (George, 2005), a significant number of workplace specimens (19 percent of those analysed) were positive for illicit drug use. The most common drug detected from workplace drug testing was cannabis, followed by opiates and benzodiazepines. Other samples were found positive for cocaine, amphetamines and heroin. In addition, morphine, codeine and dihydrocodeine were also confirmed in a few of the workplace samples analysed. It is suggested that the actual rate of illicit drug use may be much higher than the positive test rate and that random drug testing will only detect regular (near daily) users. More frequent testing of employees may therefore be required to develop a true picture of the extent of illegal drug use in the work place. In this paper, previous research undertaken into the influence of drug testing on occupational safety is evaluated. The

results of a survey to evaluate the extent to which workplace drug testing programmes have been implemented by UK civil engineering construction contractors are given. The effectiveness of these programmes is evaluated. The reasons that have led UK firms to adopt or not to implement workplace drug testing programmes are discussed. Some countries such as Ireland and Finland have legislated for workplace drug testing. The future of workplace drug testing in UK construction is assessed.

INFLUENCE OF DRUG TESTING ON OCCCUPATIONAL SAFETY

One of the justifications for introducing workplace drug testing is the view that drug intoxication increases the probability of an accident taking place at work. That would seem to be common sense. However, the relationship between drug use and workplace accidents is more complex and not as straight forward as is often assumed. In this section, a review of relevant published research on the connection between drug use and occupational accidents is provided.

The relationship between illicit drug use and workplace accidents among young adults in the USA was examined in Kaestner and Grossman (1998). The study examined whether individuals who use drugs are more likely than their non-using counterparts to experience an accident on the job. The data used in the analysis came from a national longitudinal survey of labour market experiences of young adults between the ages of 14 and 21. The data contained detailed information on a respondent's labour market experience, family and personal background, involvement in workplace accidents and illicit drug use. The data was drawn from a large scale sample. The results of the investigation are mixed. For young adult males, there is some evidence that drug use is significantly and positively related to workplace accidents. More specifically among males, the study found that drug use raises the probability of having an accident by 25 percent. For young adult females, the evidence suggests that there is no systematic relationship between drug use and workplace accidents. These conclusions may not be surprising. Male occupations generally tend to be in higher risk sectors than female occupations and men generally have higher rates of drug use than women (Kaestner and Grossman, 1998).

The effects of introducing a post-accident drug testing programme in a large retail chain in the United States on occupational injury claims was examined in a study by Morantz and Mas (2008). The study found that accident related claims fell significantly within the first fifteen months of introducing the programme. The observed drop in claims was driven mainly by the behaviour of male, high tenure and full time employees. Conditional on being tested, it was found that full time, high tenure and female employees were least likely to test for illegal drugs. Overall, the results lend considerable credence to the view that post-accident drug testing programmes can reduce workers compensation claims even in workplaces that already utilise other forms of drug testing. There are two possible explanations for the decline. The first is that employees may forgo using drugs or take great care on the job. However, this may also be due to a fall in employees' willingness to report accidents. Thus, although post-accident drug testing may improve occupational safety, its raises special policy concerns as it may encourage some employees to hide their injuries, (Morantz and Mas, 2004). It should be clarified that this study only shows that post accident drug testing reduces claims. Reductions in claims do not necessarily equate to an improvement in safety for a whole lot of reasons.

In the UK, the Health and Safety Executive published a research report in 2004 that examined the relationship between drug use and occupational accidents. The research was conducted in Wales and involved a community based questionnaire sent to 30,000 individuals. Of these, 7,979 individuals completed the survey of which 4,620 (58 per cent were employed). Data was also collected from accident and emergency units in hospitals and a survey of college students. A group of 54 people participated in a study involving cognitive performance tasks and of these, 44 participants had used drugs in the week of the study and ten had not done so. The principal conclusions of the study are as follows (Smith, et al 2004):

- Thirteen percent of the working respondents reported drug used in the previous year. The rate varied considerably with age from 3 percent of those over 50 years old to 29 percent of those under 30.
- Drug use is associated with a number of behavioral factors including firstly smoking and then heavy drinking.
- Drug use has an impact on cognitive performance, which varies with the type of drug(s) used.

- There is an association between drug use and minor injuries among those who are also experiencing other minor injury risk factors.
- There was no association between drug use and workplace accidents, though associations did exist between (a) cannabis only use and work-related road traffic accidents among those also reporting higher levels of other associated risk factors, and (b) drug use and non-work accidents among those also experiencing higher levels of other risk factors.
- The lack of association with work accidents may be because: no association exists; the number of accidents was too small for a significant association to be detected; accidents were not restricted to those resulting from the individual's own error; at work, individuals are in familiar situations, doing familiar tasks from which as much risk as possible has been eliminated and are less likely to be experiencing the acute effects of drug use.
- The study concludes that overall, drug use may reduce performance efficiency and safety.

This study answers some questions but equally raises the need for further research. For example, further research is needed on the impact of drugs other than cannabis on workplace performance and safety. In addition, objective assays of drug use e.g. urine and hair samples are needed to confirm the pattern of usage, assess dose response and determine associations between different metabolites and measures of safety and performance. Furthermore, other approaches to safety and performance measurement could also be used. This could involve simulations of real-life activities and cover functions such as risk perception that are known to be influenced by drug use. The association between drug use and accidents clearly requires further research to provide specific guidance for the construction industry. This research could also identify the type of work most likely to be influenced by drug use, e.g. safety critical jobs. Performance testing could also be extended to determine whether the effects of drug use are compounded by other risk factors such as noise, working at night, a high workload, etc.

Although there is a growing body of knowledge on the effects of drug use and workplace performance and safety, very little comprehensive research has been conducted in the construction industry. A survey was conducted in the USA on contractors, designers, labour union officials and owners to gather data on the extent and cost of substance abuse in the engineering and construction industry, (Maloney, 1988). This was a large scale sample. For contractors a sample size of 2000 was employed but the number of contractor respondents totalled only 250. The study found alcohol to be the primary problem followed by marijuana and cocaine. Labour leaders reported similar increases as a result of substance abuse in the following areas: absenteeism, late starts at work, early quits, reduced productivity and labour turnover. However, in relation to safety incidents, accidents and injuries, labour leaders reported increases approximately one-half of those reported by contractors. This raised an interesting question. Were the labour leaders understating the effects of substance abuse on safety or were contractors overstating the effects? Labour leaders argued that contractors had inadequate safety programmes resulting in more accidents. The question then was whether the increase in safety incidents, accidents and injuries was due to substance abuse or inadequate safety programmes. This important question was never resolved in the study.

A study by Altayeb (1992) investigated the technical aspects of drug testing in the construction industry and whether it is effective in reducing injury incident rates. The term substance in the survey included alcohol, illicit drugs, and unauthorised prescription drugs. Tobacco was not included. The sample size was large and involved 1,144 companies which included a number of company sizes, specialities, organisational types and geographic locations. A total of 203 companies responded to the survey and of these, 61 had a drug testing policy at the time of the survey. Of these 61, only 31 companies had sufficient quantitative data to justify being included in the analysis. The results show that drug testing helped the overall sample (31 companies) to reduce the incident rate by 19.1 percent. Statistically, the null hypothesis that incident rates before and after implementation of drug testing were the same was rejected for the whole sample. Other key findings from the study were as follows:

- Size of the company did not have a significant difference on the magnitude of change in incidence rates;

- The type of company (union, non-union or both) was not a proven factor in affecting change in incidence rates;
- The higher the incidence rate before implementing the drug testing policy, the better the likelihood of accident reduction;
- The number of drug test types in the company's policy was not proven to be a factor affecting the change in incidence rates, although companies that had four or five types of tests got large change values in incidence rates than companies with three or fewer types;
- Finally, a significant size increase through for example a merger or a take-over tends to adversely affect the incident rates for some time after it occurs. Unlike companies that had such an increase, companies that did not have a recent increase in size reduced their incidence rates significantly after implementing a drug testing policy.

Thus, although this study makes a useful contribution towards our understanding of the effectiveness of drug testing programmes on construction safety, the results must also be interpreted with caution because of the small sample size.

The work by Gerber and Yacoubian Jr (2001) analysed the impact of a drug-free workplace programme on the reduction of injury incident rates and related workers' compensation ratings. Data was collected through a survey sent to a randomly selected national sample of officials at construction companies in the USA. The data examined included injury incident rates and workers' compensation experience-rating modification factors compiled over a five year period. The key findings of this study are as follows:

- Implementation of a drug free work-place programme directly influences a reduction in injury incident rates and workers' compensation experience-rating modification factors, reducing the amount of workers' compensation premiums.
- The average company that drug tests in the study sample experienced a 51 per cent reduction in its injury rate within two years of implementing a drug testing programme. The difference was proved to be statistically significant when compared to the 14 percent decline in the average construction firm during the same period.
- As a result of fewer job site accidents and injuries, the average company that drug tests in the study sample experienced an 11.41 percent reduction in its workers' compensation experience-rating modification factor. Firms that did not drug test experienced no decline. This means that companies that drug test could save substantially on their workers' compensation premiums.
- Drug testing was most effective in reducing workers' compensation experience-rating modification factors in the first three years immediately following implementation of a programme.

The above study suffers from two important limitations. Firstly, a total of 405 construction companies were solicited to participate in this study. A total of 69 companies (17 per cent) responded. Of these 69, 49 (71 percent) had a drug testing programme at the time of the survey. Therefore, since the only companies included the study were those that were willing to participate, the sample of included firms may exhibit selection bias. Secondly, the study did not distinguish among different types of drug testing programmes, simply treating all firms with at least one programme of any type as part of the treatment group.

The survey by Minchin Jr et al, (2005) involved only 34 construction companies in the State of Florida in the USA. Of these, 29 companies had drug testing programmes and 5 did not. Of the companies surveyed, a high percentage had realised benefits such as reduction in accident rates and reduction in insurance premiums; additional savings from increased productivity, increased work quality, and lower employee turnover. In addition to these tangible benefits, companies indicated their recognition that their image and public perception were almost as important as their quality of work. This public perception translates into "good will" regarding the companies' reputations. Most companies surveyed interpreted this as a significant marketing advantage resulting directly from their drug testing programme. The sample size in this study is also very

small in relation to the number of construction companies in the USA and is not representative of the entire industry as such. The results of this study must also therefore also be interpreted with caution.

RESEARCH AIMS AND METHODOLOGY

This paper reports preliminary results on a piece of ongoing research. The aims of the research project are to investigate the extent to which workplace drug testing has been adopted in UK construction. The work will also evaluate the extent to which the information generated by the testing systems is useful to organisations or to employees. The work also aims to investigate the effects of illegal drug use on worker performance and to analyse whether there is an association between illegal drug use and workplace accidents and injuries in construction. The first part of the research involved an extensive review of the literature. There is a growing body of knowledge on this subject. However, most of the publications relate to all workplaces in general. There has been very limited research into this area with specific reference to the UK construction industry. Primary data was collected through self-completion questionnaires sent to 119 civil engineering contractors. Details of these firms were obtained from the contractors file that is published annually in March by the New Civil Engineer. The questionnaires together with a covering letter were addressed to Health and Safety Directors in these firms and sent out in June 2009. A self-addressed postage paid return envelope was also enclosed in each case. A total of 32 completed questionnaires were returned giving a response rate of 27 percent. This was a reasonable response rate considering that no further action was taken to try to improve the response rate.

ANALYSIS OF RESULTS AND DISCUSSION

The 32 respondents in the sample were all senior level managers in UK civil engineering construction firms. Job titles of the respondents included designations such as Managing Director, Divisional Health Safety Quality and Environment Director/ Manager, General Manager, Health and Safety Officer/Manager/Director, Operations Manager, Company Safety Officer, Health Safety and Training Manager, Contracts Director, Head of Health and Safety Department, Senior Health and Safety Manager, General Manager Systems and Training, etc. It is clear that all the respondents in the sample had a clear understanding of the issues in the questionnaire and had relevant experience of construction health and safety. Indeed 94 percent of the respondents were over 40 years old and 84 percent had over 15 years experience in the construction industry.

Sixty-six percent of the firms in the sample were small and medium sized enterprises (i.e. have less than 250 employees) and the rest are classified as large firms. The smallest firm in the sample had an approximate annual turnover of £2.7 million and employs 10 full time staff. The largest firm in the sample has an approximate annual turnover of £5 billion and employs 20,000 full time staff. Thus our sample is a cross-section of UK civil engineering contractors although it must be accepted that the sample size is too small to be representative of the whole UK construction industry. Moreover, it should be noted that views of contractors involved in other sectors of the industry such as building or process plant construction have not been sought. Neither have other stakeholders in the industry such as client organisations or consultants been included.

Factors that Influence the Decision to Introduce Workplace Drug Testing

Approximately half (47 percent) of the firms in the sample have a workplace drug testing programme. Eighty percent of these firms introduced their drug testing programme between the period 2004 – 2009; i.e. in the last five years. Most of the firms in the sample use a combination of drug testing types. The four most commonly used drug testing types include: pre-employment testing, reasonable suspicion testing, post-accident testing, and random testing. The two least widely used testing types were routine fitness for duty testing and testing as a follow up to rehabilitation (after returning to work from drug/alcohol treatment). The respondents were asked to rate the relative importance of 13 factors that influenced their firms' decision to implement a workplace drug testing programme. Based on the following scale (Very Unimportant = 1; Unimportant = 2; Neutral = 3; Important = 4; Very Important = 5) the mean rating of each of these factors calculated from the survey results is shown in table 1:

FACTOR	MEAN RATING
1. To promote the safety of our employees.	4.64
2. Testing is seen as an effective deterrent	4.00
3. Because of concerns about the company's legal liability for drug related incidents	3.92
4. Contractual requirements	3.54
5. Because of the belief that drug testing contributes positively to the company's image	3.50
6. Mandated by law.	3.43
7. In response to initiatives by the Health and Safety Executive	3.14
8. In response to industry or trade association initiatives	3.00
9. Evidence of drug abuse in the community	2.84
10. Evidence of drug abuse in the workplace	2.77
11. Reported success of some other company with drug testing	2.69
12. Evidence of high cost of drug abuse to company	2.62
13. Required by the trade Union	2.31

Table 1: Factors that Influence Introduction of Workplace Drug Testing Programmes.

No factors were rated by the respondents as being unimportant. However, it is evident from the above table that the top three reasons why UK civil engineering firms in the sample made the decision to introduce a workplace drug testing programme were found to be:

- To promote the safety of their employees;
- Workplace drug testing is seen as an effective deterrent;
- Because of concerns about the company's liability for drug related incidents.

Effectiveness of Workplace Drug Testing Programmes in Construction

Respondents were asked to rate their perception of the impact of implementing the drug testing programme on 10 key performance indicators for their organisation. Figure 2 shows the mean rating calculated from the responses based on the following scale: Adverse Impact = -1; No Impact = 0; Some Improvement = +1, Significant Improvement = +2. From figure 2, all the respondents report no adverse impact from implementation of their workplace drug testing programmes. They also generally report no impact in most areas. However, modest improvements are reported in two key business performance indicators these being a better overall safety of the work environment and better health for their employees. From table 2, it would appear that the jury is still out on the effectiveness of workplace drug testing in UK construction although caution must be exercised in that this conclusion is based on data from a limited sample.

FACTOR	MEAN RATING
1. Better overall safety of the work environment	0.85
2. Better health of employees	0.64
3. Better quality of job applicants	0.38
4. Increased business opportunities	0.31
5. Better employee morale	0.31
6. Reduction in employee absenteeism	0.31
7. Reduction in insurance premiums	0.21
8. Improved productivity	0.15
9. Reduction in workers' compensation costs	0.08
10. Reduction in thefts	0.08

Table 2: Effectiveness of Workplace Drug testing Programmes in UK Construction.

It should also be clarified that the results in the above table are based on responses from only those firms that have a drug testing programme in place. When all the respondents were asked for their opinion on whether drug testing programmes are highly effective in reducing construction site accidents, 45 percent agreed or strongly agreed and 34 percent were neutral. The effectiveness of drug testing programmes in reducing construction site accidents is not so clear cut and is a subject of debate. Indeed, when the respondents were asked whether construction firms that institute drug testing programmes realize significant tangible and intangible benefits from their programmes, almost half (47 percent) of the firms gave a neutral response. Only 19 percent agreed or strongly agreed and 15 percent disagreed or strongly disagreed.

There was overwhelming agreement (84 percent of the respondents) that a drug testing programme must not be perceived as a substitute for effective drug education and rehabilitation. For workplace drug testing programmes to be effective, they must be part of a comprehensive drug free workplace model. An effective drug free workplace model includes a company substance abuse policy, education and training for managers, supervisors and employees, drug testing, and employee assistance programmes including counseling and rehabilitation of those who test positive for illicit drugs.

Factors Influencing the Decision Not to Introduce Workplace Drug Testing Programmes
Firms that did not have a workplace drug testing programme were asked to rate eight factors that may have influenced their decision NOT to implement a drug testing programme. Based on the following scale (Very Unimportant = 1; Unimportant = 2; Neutral = 3; Important = 4; Very Important = 5) the mean rating of each of these factors calculated from the responses to the survey questions is shown in table 3:

The top three factors that influence the firms' decisions not to introduce workplace drug testing were found to be concerns for increased legal liability, the genuine perception that it is not needed and the costs of implementing such a programme. No factors were ruled out as being unimportant by the firms.

FACTOR	MEAN RATING
1. Concern for increased legal liability	3.44
2. It is not needed	3.19
3. It is too costly	2.88
4. It is believed to be ineffective	2.80
5. It is prohibited by legislation	2.75
6. Employee opposition to drug testing	2.69
7. Belief that drug testing is an invasion of privacy	2.67
8. Union opposition to drug testing	2.33

Table 3: Factors that Influence the decision NOT to Introduce of Workplace Drug Testing.

The Future of Workplace Drug Testing in UK Construction.
Opinion was divided as to whether the government should intervene and legislate to make drug testing a mandatory requirement for all employees on construction sites. Forty-one percent of the respondents were neutral on the role of government. Those who agree or strongly agree (thirty eight percent) that government should legislate to make drug testing mandatory on construction sites cite the following reasons:

- It would demonstrate seriousness to employees.
- It reduces perception of victimisation of some employees.
- Operations on construction sites are reliant on actions of others around any employee.

- Personnel need confidence that their colleagues are fit to undertake their duties safely.
- It takes away choice in the matter – it would have to be done
- It would ensure a level playing field for all construction companies to apply it to the same standards.
- Legislation would clearly define duties on the company and employees with government backing and commitment.
- If it is an option, its effectiveness will be sporadic and patchy.
- Recreational drugs are being taken by many more people today. Anything that can be done to reduce fatalities and major incidents on construction sites should be implemented. We should not be reactive, but pro-active.
- The situation is muddy at present particularly where client sites demand it as a condition of contract which can then lead to human relations issues.
- Construction sites are hazardous with heavy plant and machinery operating. There is no place for drugs or alcohol whatsoever.
- All employers would have the same costs to bear.

Those who were neutral or disagree (62 per cent) with government intervention to legislate for workplace drug testing offer the following reasons:

- Drug testing usually tests for metabolites which is not a measure of impairment but a record of drug use in the past.
- Construction alone should not be singled out for government action.
- Drug testing should be client driven. Some clients drive it very well but there are some others that talk the talk but do not walk it.
- Contract size, contractor size are factors that affect the workability of such a scheme.
- Consideration must also be given to persons who do not appear at work under drug or alcohol influence.
- If legislation is to be introduced, it should be for all industries, not just construction.
- Companies need to take responsibility for their employees and not hide behind legislation.
- The major contractors already have policies and procedures in place to monitor and control drug/alcohol abuse. The small contractors and sub-contractors will ignore the legislation anyway.
- It should be down to every company to implement its drug and alcohol policies.
- Testing of everyone would have a negative effect on the perception of the company. Testing on a reasoned or random basis is just as effective when comparing on our sites (some have contractual requirements to test all) with failure rates around 8 per cent.
- There is evidence of recreational drug use from our random samples. There is no evidence of addiction or abuse. Alcohol remains our real issue.
- There would be a huge cost of mandatory testing on sites.
- Legislation would create an administrative nightmare.
- There is not a drugs problem at the moment.
- Companies should be left to ensure that they implement satisfactory management processes in terms of health and safety.
- The requirement should be risk based i.e. is the job safety critical or is the work environment high risk?

Opinion was sought from the respondents on whether drug testing programmes on construction sites should only be applicable to employees who work on safety critical activities e.g. construction plant operators. This was opposed by the vast majority of respondents (75 percent). The vast majority of the respondents take the view that if testing is to be carried out, it should be applicable to all employees on construction sites for the following reasons:

- The responsibility of everyone working on site should be even. NO DRUGS. Simple.
- All construction sites are potentially dangerous with a great variety of tasks to perform. Each individual has a duty to himself and to others on site. Everybody on site must act in a proper manner. Drug intoxication will seriously impair judgement and performance.

- Drug testing must be applicable to everyone on site as safety is everyone's responsibility.
- All personnel on site can be a potential risk.
- Everybody is safety critical to some extent.
- Applying a drug testing regime to only part of the workforce would be divisive.
- Others can cause safety related problems not just plant operators.
- Drug testing must include all personnel to be a fair, reasonable and effective system.
- It should apply to all staff. Ninety-nine percent of jobs are safety critical.
- It should cover all employees including managers and operatives. Plant operators are normally highly trained anyway.
- Fairness and consistency are important.
- Everyone on site through direct and indirect actions is part of a high risk safety critical activity, i.e. a drunk Quantity Surveyor can walk in front of a dump truck.

It is difficult to postulate the future of workplace drug testing in UK construction as there are strong arguments for and against it. What is evident from the survey is that several construction companies have introduced it in recent years. In the study sample, 12 out of 15 construction companies that have workplace drug testing programmes implemented it after 2004, i.e. in the last five years. What is also clear is that it is a divisive issue in the industry. Opponents of workplace drug testing argue that drug testing does not measure impairment. They argue that whilst drug taking is illegal and should not be condoned; workplace drug testing is a gross infringement of civil liberties and serves no useful purpose on a construction site. Furthermore, although workplace drug testing is widely used in some industries such as maintenance of railway infrastructure, power stations and oil refineries, the ability to instigate 'for cause' testing can lead to many malicious/confidential reports of drug use which nevertheless have to be followed up. They also assert that the level of drug testing that would be required to make random testing effective would be prohibitively expensive for the industry.

Supporters of workplace drug testing in construction argue that on balance, it is a good thing and essential for the health, safety and well being of all employees. They go further to advocate for a national register of persons dismissed or refused employment for failing a drug test to be maintained by an organisation such the Construction Industry Training Board. They go on to assert that Employers must however accept responsibility through employee assistance programmes to help and rehabilitate workers who disclose drug abuse problems and need support.

CONCLUSIONS

There are strong arguments for and against workplace drug testing. There is research evidence that impairment through drug use may have an effect on occupational safety. Workplace drug testing is on the increase in UK construction. The main reasons why UK constructions firms have implemented workplace drug testing programmes are to promote safety of their employees. Drug testing is seen as an effective deterrent and companies are also concerned about their legal liabilities for drug related incidents. No adverse impacts have been reported by construction firms that have introduced workplace drug testing programmes. On the contrary, they report benefits of a safer work environment and improvements in the health of their employees. Construction firms that have decided not to implement workplace drug testing programmes have done so because of concerns about increased legal liability, costs and also doubts about its need or usefulness. Some countries such as Ireland (Hogan et al, 2006) and Finland (Lamberg et al, 2008) have legislated for workplace drug testing. If the UK government is to legislate for workplace drug testing, it should be applicable to all workplaces and not just construction. If it is implemented by a construction company, workplace drug testing should be applicable to all employees in the interests of fairness, consistency and effectiveness as all workers on construction sites can be safety critical. Drug testing in the workplace has been criticised on the grounds that drug tests only detect earlier drug use and do not measure impairment at the time of testing. The presence of metabolites in the body from past drug use may not adversely affect job performance and safety now. It is suggested that impairment testing could provide an alternative to drug testing.

REFERENCES

Altayeb, S (1992), Efficacy of Drug Testing Programs Implemented by Contractors, *Journal of Construction Engineering and Management*, Volume 118, Number 4, pp 780-790.

George, S (2005) A snapshot of Workplace drug testing in the UK, *Occupational Medicine*, Volume 55, Number 1, pp 69-71.

Gerber, J K and Yacoubian Jr, G S (2001); Evaluation of Drug Testing in the Workplace: Study of the Construction Industry, *Journal of Construction Engineering and Management*, Volume 127, Number 6, pp 438-444.

Hogan V, Cannon R and Gabhainn, S N (2006), Construction apprentices' attitudes to workplace drug testing in Ireland, *Policy and Practice in Health and Safety*, Volume 4 Issue 2 pp 43-57.

Kaestner, R and Grossman M (1998); The effect of drug use on workplace accidents, *Labour Economics*, Volume 5, 267-294.

Lamberg, M E; Kangasperko, R; Partinen, R; Lillsunde, P; Mukala, K; Haavanlammi, K (2008); The Finnish Legislation on workplace drug testing, *Forensic science International* (174) 95-98

Maloney, W F (1988) Substance abuse in construction, *Journal of Construction Engineering and Management*, Volume 114, Number 4, pp 614-630.

Minchin Jr, R E, Glagola, C R, Guo K, and Languell J L (2005) Case for Drug testing of Construction Workers, *Journal of Management in Engineering*, Volume 22, Number 1, pp 43-50.

Morantz, A D and Mas A (2008), Does post-Accident drug testing reduce injuries? Evidence from a large retail chain, *American Law and Economics Review*, Volume 10, Number 2, pp246-302.

Smith A, Wadsworth E, Moss, S and Simpson, S (2004), *The scale and impact of illegal drug use by workers*, Research report 193, Health and Safety Executive, HSE Books, Norwich, UK.