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HEALTH AND SAFETY COMMISSION

DRUG RELATED ACCIDENTS AT WORK – OUTCOME OF RESEARCH

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Cleared by Jane Willis on 9 March 2004

Issue

1. Recently published research by Cardiff University on illegal drug use at work has found that:
 - there is no association between drug use and workplace accidents; however,
 - illegal drug use may reduce performance efficiency and safety at work because of its effect on cognitive functions such as reaction times, concentration and memory.

Timing

2. Routine.

Recommendation

3. That the Commission notes the outcome of the research. This confirms the interim findings that informed HSC's advice to Ministers on 20 November 2002:
 - there is insufficient evidence to link illegal drug use and workplace accidents, so that a baseline, and hence a target for reduction, cannot be set;
 - HSC's strategy is to help employers prevent and manage the problem of drug misuse at work, and to continue to support cross-Government strategies to tackle the problem of drug misuse more generally.
4. There is no need to change this advice and the Minister of State for Work has been informed in a separate submission. Home Office Ministers are also aware. The issue of drugs in the workplace is not a priority for HSE and work is being kept to a minimum.

Background

5. HSE commissioned Cardiff University to carry out a 3 year study to investigate the link between illegal drug use and accidents at work. The research began in January 2001 and an interim report was prepared in 2002. This formed part of HSE's contribution to the Government's 10 year National Plan for Drugs, launched in 1998.

6. Detailed advice on the interim findings from the research was submitted to the Commission in October 2002 (paper reference **HSC/02/109**). The Chair subsequently wrote to the then Minister for Health and Safety, Nick Brown (**Annex 2**) setting out HSC's argument that it was not feasible to set a baseline measure for drug-related accidents at work.

Argument

Research Findings

7. An Executive Summary is at **Annex 1**. The key finding of the research, based on a sample population of drug users in employment and drawn from the Cardiff area, is that there is no association between drug use and workplace accidents. However, the report also shows that illegal drug use may reduce performance efficiency and safety at work because of its effect on cognitive functions such as reaction times, concentration and memory. As a comparison, the research has found that the impact of illegal drug use on work performance may be greater than for heavy alcohol use, and that performance impact is greatest among those who use drugs and also drink heavily.

HSC's Recommendations

8. The outcomes of the final report are consistent with the findings at the interim stage of the research, so the advice and recommendations set out in the Chair's letter of 20 November 2002 are still relevant.
9. HSC/E strategy on drug misuse in the workplace remains focussed on promoting prevention and good management. The three strands of this strategy are:
 - a) providing advice and guidance to employers on how to tackle drugs and alcohol in the workplace;
 - b) targeting the key causes and consequences of occupational ill-health, such as stress, via the HSC Priority Programmes;
 - c) supporting cross-Government strategies to tackle drugs and alcohol abuse, such as the Home Office's National Drugs and Alcohol Initiative;
10. HSC/E's approach demonstrates that we are not complacent about the problem of illegal drugs in the workplace. The Cardiff research found that just over 1 in 10 workers used drugs in the last year, increasing to nearly 1 in 3 workers under the age of 30. This is clearly potentially serious, as employees who have a substance misuse problem may pose a risk to themselves or others and are unlikely to be fully effective or efficient at work.

Guidance for employers

11. HSE's guidance, produced in partnership with other Government Departments and external organisations, is available to help employers introduce policies on alcohol and drug misuse. Such policies are intended to provide support for employees with a substance misuse problem, but also to provide legally sound methods of disciplining or dismissing people whose behaviour may put others at risk.

Link to HSC's Strategic Programmes

12. The cross-Government Whitehall II study has confirmed that there is a link between alcohol misuse and work-related stress. Interventions being developed as part of HSC's Stress Priority Programme will aim to tackle not only the exposure to adverse pressure which causes stress, but also the outcomes of this exposure, such as drugs and alcohol misuse.

Working with others

13. HSE is working in partnership with the Home Office to support the National Drugs and Alcohol in the Workplace Initiative, launched in 2001. The project provides Drug Action Teams across the country with a range of workplace services to employers and employees, including: advice and information; policy development and support; training; and access to employee assistance and treatment. HSE is supporting this initiative by disseminating its advice and guidance through this strategic network.

Consultation

14. Officials in HSE, Home Office, Department of Health, Department for Transport, Department of Trade and Industry, Scottish Executive, Welsh Assembly and HSE Northern Ireland have been informed of the outcome of the research and are content with HSE's approach.

Presentation

15. The full report and an Executive Summary were published on the HSE website on 20 February. The website is also being used to publicise the report. Hard copies of the full report are available as a priced publication.
16. This report will primarily be of interest to external organisations which have a role in promoting drug awareness or drug testing. Illegal drug use is also a topic of interest to the media, particularly given the Home Office's recent reclassification of cannabis.
17. In September 2003 HSE submitted evidence to the Independent Inquiry into Drug Testing at Work. This Inquiry is due to publish its report in the summer, which will again bring the issue of drug use at work to the attention of the media, and may generate new interest in the Cardiff University research.
18. Although the research does not establish a link between illegal drug use and accidents at work, it does demonstrate the negative impact of drug use on work performance. In safety-critical jobs this is clearly a serious concern.
19. HSC's strategy makes it clear that drug and alcohol misuse in the workplace is unacceptable and needs to be taken seriously by employers. HSE's messages continue to be:
 - a) employers need to have substance misuse policies that discourage drug and alcohol misuse and that support those addicted as they try to recover;

- b) employers should assess the risks from drugs and alcohol to accidents at work, and take appropriate precautions;
- c) in safety-critical jobs, employers may need to consider additional measures such as drug testing as part of a holistic occupational health and safety regime.

20. In view of the cross-Government interest and concern in this subject, and the possibility of further developments, especially in relation to drug testing, we are not intending to close this work down completely.

Costs and Benefits

21. An assessment of the costs of illegal drug use was not within the scope of this research, but some information is available from other sources. For example, the TUC has estimated that drug misuse costs employers around £800 million each year.

Financial/Resource Implications for HSE

22. Work on drugs in the workplace is not a priority for HSE. Resources required to continue HSE's limited work on this issue will remain unchanged and have been agreed within HSE's core work programme.

Environmental Implications

23. None

Other Implications

24. None

Action

25. For information.

Annex 1

The scale and impact of illegal drug use by workers

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The analyses and views presented are the authors' and do not necessarily represent the views of the Health and Safety Executive.

Executive Summary

Aims

1. To establish the prevalence of illegal drug use in a representative sample of the UK working population, and to provide a detailed profile of current and potential users.
2. To investigate the effects of illegal drugs taken out of working hours on the work performance of people who continue to work within a short time (the next day, or 2-3 days later) of taking the drugs.
3. To determine whether there is an association between illegal drug use and the prevalence of workplace accidents, injuries and human error.

Background

The prevalence of drug use in the general population varies temporally, demographically, and geographically. Recent evidence suggests that, although drug use is lower among workers than among the unemployed, this gap may be narrowing. Furthermore, among workers under 30 years 1 in 4 reported having used drugs in the previous year. However, there is little community based research designed to establish the prevalence of, and characteristics associated with, drug use among workers.

There are also well documented links between drug use and impairments in cognition, perception, and motor skills, both at the acute and chronic levels. Associations may therefore exist between drug use and work performance deficits or errors. Moreover, if human error results in injury or accident under particular contexts, then an association may also exist between drug use and workplace accident and injury.

Methods

A multi-method approach was used to address the aims. Aims 1 and 3 were addressed using a community based questionnaire survey. Aim 2 was addressed using a cohort study of workers carrying out cognitive performance tasks.

Findings and Conclusions

- Overall 13% of working respondents reported drug use in the previous year. The rate varied considerably with age, from 3% of those 50 to 29% of those under 30 (addressing Aim 1) (see p 34).
- Drug use is associated with a number of demographic factors, but is most strongly linked to smoking and heavy drinking in that order (addressing Aim 1).
- There is an impact of drug use on cognitive performance, which varies with the type of drug or drugs used (addressing Aim 2) (see p 38-43).
- This impact on cognitive performance is mirrored by an association with cognitive failures at work (addressing Aim 3).
- There is also an association between drug use and minor injuries among those who are also experiencing other minor injury risk factors (addressing Aim 3).
- 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 (addressing Aim 3).
- 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 individuals 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.
- Overall, the present project has shown that recreational drug use may reduce performance efficiency and safety at work. Given the scale of drug use, it is now important to extend our knowledge of the topic and possible avenues for future research are outlined below.

Further research

The results from the present project show that recreational drug use may have effects on safety at work. There is clearly a need to replicate and extend these findings. Some of the ways of extending the research are clearly suggested by the present results. For example, it is now important to assess performance efficiency mid-week as well as at the start and end of the week. Further information is also needed on the impact of drugs other than cannabis. In addition, objective assays of drug use (e.g. from urine and hair samples) are required in order to confirm the pattern of usage, assess dose response and determine associations between different metabolites and measures of performance and safety. The cognitive failures and injury data also show that it is essential to consider drug use in combination with other risk factors. This can now be extended to the performance testing to examine whether drug use not only has direct effects but also makes the person more sensitive to other factors (e.g. noise, working at night, a high workload). Other approaches to performance efficiency and safety also need to be used. This could involve simulations of real-life activities and also cover functions such as risk perception that are known to be influenced by drug use. The association between accidents and drug use also requires further investigation and it is important to consider only incidents attributable to human error to determine whether a clearer picture of drug effects is apparent. This further research will allow accurate guidance to be given and will identify the type of work most likely to be influenced by drug use (e.g. safety critical jobs). The research on drug effects also needs to consider a wider context than just the working day. This view has been supported by the results on accidents traveling to and from work. Accidents outside of the workplace also impact on work (because of increased absenteeism) and it is important not to view work and outside-work activities as separate worlds. Indeed, the issue of drug use and safety is a societal one and while information on one domain, such as work, is useful it may be more appropriate to approach future research in a more global way involving a consortium of government departments and agencies with different interests in the topic.

LETTER FROM HSC CHAIR

Nick Brown MP
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20 November 2002

Baseline measure for drug-related accidents at work

I am writing to let you have the Commission's advice about establishing a baseline measure for drug-related accidents at work. This is in response to a commitment in the first annual report and national plan published by the UK Anti-Drugs Co-ordinator in 1999. The report introduced a specific target to "establish a baseline measure for drug-related absenteeism/accidents at work". Following discussion between Departments, the then Department for the Environment, Transport and the Regions (DETR) and the Health and Safety Executive (HSE) agreed to take forward the target on drug-related accidents at work. The absenteeism target was later dropped from the strategy.

In formulating our advice, we have had the benefit of the results of two research projects. One, carried out by the Health and Safety Laboratory, was a review of the scientific literature about drugs and work. The second was a trio of epidemiological surveys, carried out by Cardiff University. Cardiff are continuing further research for us in this field, to refine our knowledge further. I am enclosing the executive summaries of these reports.

The review showed that the scientific literature on the effects of drugs on work is inconclusive. There is no definitive evidence to show that drug misuse is related to accidents at work. That conclusion was borne out by the results of Cardiff University's research. Their key finding was that there was no significant association between illegal drug use and accidents at work, once the raw data had been adjusted to allow for potentially confounding factors such as occupation, age, gender, and so on.

The Cardiff study also found that:

- a) drug use amongst workers mirrors that of the population in general;
- b) there was little difference in drug use by occupational class (e.g. professional occupations compared with clerical or craft occupations); and
- c) there was little difference in drug use by industry sector, although occupational factors such as working hours and patterns had some influence on drug use.

The study did find an association between drug misuse and road traffic accidents. Officials here have sent the interim report to the Department for Transport to keep them informed.

Consideration of all this information has led us to the conclusion that it would not make sense to set a baseline for drug-related accidents at work. Although we cannot exclude the possibility that there is a link between drug use and accidents at work, if such a link exists, it is small. The baseline would be zero, or close to zero.

Instead, the Commission's advice is that we should remain focused on our existing strategy to tackle drugs and health and safety at work. This is that:

- a) Employers need to ensure they have substance misuse policies, agreed with their employees, that discourage drug misuse and that support those addicted as they try to recover.
- b) Employers should assess the risk from drugs to accidents at work and take appropriate precautions. Based on the available knowledge, the risk is likely to be small, but even a small risk may be intolerable where the consequences of the risk being realised are severe.
- c) In such safety-critical jobs, employers may need to consider additional measures, such as drug testing as a deterrent. However, the efficacy of drug testing has not yet been proven.

I can assure you that the Commission continues to support the cross-Government strategy to tackle the problem of drug abuse. The Cardiff University study is due to be completed by January 2004 and we shall review our advice once we have the full report. In the meantime HSE officials will continue to be actively involved in Home Office and other partnership initiatives, to ensure that workplace health and safety issues are fully addressed.

I hope this is helpful.

I am copying this letter to Bob Ainsworth, Parliamentary Under Secretary for Anti-Drugs Co-ordination and Organised Crime, and Hazel Blears, Parliamentary Under Secretary for Public Health.

Bill Callaghan
Chair

**Centre for Occupational and Health Psychology,
School of Psychology, Cardiff University**

**Interim Research Report :
The Scale and Impact of Illegal Drug Use by Workers**

Executive Summary

1.1 Background

Substantial numbers of people are current or potential users of illegal drugs such as cannabis or ecstasy (MDMA). These drugs are not usually used in the workplace but there is concern that regular usage may lead to impairments of mental functioning and that even occasional (e.g. weekend) use may have an impact on performance and safety at work because of the long half-life of many of these compounds. At the moment the prevalence of use of such drugs in the working population is unknown and an initial step in producing recommendations in this area is to provide evidence on the scale of illegal drug use in this group.

Laboratory studies suggest that regular use of illegal drugs may be associated with impaired mental performance. For example, a number of studies have shown that regular users of ecstasy have impaired memory. Similarly, research on regular users of cannabis has identified impaired functioning. Acute effects of these compounds have also been demonstrated and some studies have shown that the effects persist for a long time after the drug is taken. Only further information on the impact of regular and occasional usage of these drugs on performance and safety at work will advance policy and education in this area. A great deal of information is necessary before an appropriate policy can be developed. For example, illegal drugs have been shown to interact with legal recreational drugs such as alcohol. This suggests that it is not only important to focus on the illegal drugs but it is necessary to consider them in the context of recreational drugs in general. Similarly, even if one demonstrates that basic mental processes are impaired by illegal drugs it is then necessary to evaluate the impact of such impairments in actual work performance. This has been rarely done in the past and even when realistic tasks such as driving have been considered there has still been a tendency to evaluate only the acute effects of the drug rather than longer-term after-effects or chronic effects of usage. A variety of methods are now available that allow examination of work-place performance and safety and these can appropriately be applied to the present topic.

1.2 Aims and objectives

The main objectives of the present project are:

- a) To establish the prevalence of illegal drug use in a representative sample of the UK working population, and to provide a detailed profile of current and potential users.
- b) To determine whether there is an association between illegal drug use and the prevalence of work place accidents.

- c) To investigate the effects of illegal drugs taken out of working hours on the work performance of people who continue to work within a short time (the next day, or 2-3 days later) of taking the drugs.

The above aims require a multi-method approach, with integration of different methodologies to produce a global understanding of the whole area.

1.3 Phases of the project

The research consists of two phases. The first stage of phase one is a self-report based, community survey examining accidents at work. Data from this phase form the basis of this report. The second stage extends data collection into A & E Departments and colleges of further and higher education in South Wales. As this stage is not yet fully completed, only preliminary findings have been included in this report. Phase two will involve cohort studies of the impact of illegal drug use on safety at work. The detailed structure of the second phase of studies will depend to some extent on the findings of phase one.

1.4 Literature review: Illegal drugs and accidents at work

Literature examining the prevalence of work place accidents and associated illegal drug use is limited. There is evidence of substance use in the working population, but any impact on accidents and injuries at work is still unclear. This project represents an important step in informing in this area.

1.5 The community survey

A questionnaire was developed based on previous studies of accidents and injuries at work and surveys of drug use. Thirty thousand questionnaires were sent to individuals selected at random from the electoral registers of Cardiff and Merthyr Tydfil. These two areas were selected as being representative of major cities and less affluent smaller communities respectively. A total of 27% of all questionnaires were returned completed. As this was a relatively low response rate, the demographic data of the study population were compared with census data (1991) for the same areas and for the UK as a whole, to establish whether the study population was representative of the general population.

On the whole, the study population could be considered a broadly representative sample differing only on a few characteristics. There were smaller proportions of males, and higher proportions of single people in the study sample. In addition, there were higher proportions of non-manual workers, professionals, associate professionals and managers in the study sample, although, for managers, the differences are very small when study data are compared to the UK as a whole. There were also fewer craft and related and plant and machine operatives in the study sample.

1.5.1 Drug use

The data collected on the use of illegal drugs was compared with the British Crime Survey data (2000). The percentages of "drugs ever used" were similar for both studies (40 and 34%) with rates increasing in the 20-29 years age band. Both studies show that fewer people reported using drugs in the last year (16 and 11%) and last month (9 and 6%) and greater proportions of males than females reported using drugs in both studies. Cannabis was the most popular drug, with 6% of the community sample having used it in the last month. The number of respondents using other drugs was small. These rates are similar to those reported in the UK (British Crime Survey) and the US (SAMHSA).

1.5.2 Incidence of accidents, injuries and cognitive failures

The questionnaire provided information on accidents, injuries and cognitive failures (errors of memory, attention and action). Over 4,000 of the respondents were currently working. The rate of accidents at work in the last year was 5%. Numbers of work-related traffic accident rates were lower (1%). Minor injuries were more frequent both in the last year (10% quite/very frequent), and in the last month (28% quite/very frequent), as were cognitive failures (11% quite/very frequent). Comparisons with the Bristol Stress and Health Study demonstrated very similar rates of accidents, minor injuries and cognitive failures.

1.5.3 Initial analyses examining the association between drug use and accidents, injuries and cognitive failures

Initial analyses were conducted to assess associations between accidents, injuries, cognitive failures and illegal drug use. There was no significant association between accidents at work and illegal drug taking. However, there were significant associations between work-related road traffic accidents and illegal drug use. In addition, minor injuries at work in the last year and month, and cognitive failures at work, were associated with illegal drug use.

1.5.4 Profile of drug users and Confounding factors

Drug usage was associated with a number of demographic characteristics: being younger, male, single, on lower incomes and higher levels of education. Drug users were more likely to work in a poor physical environment, have demanding jobs, work long or irregular hours and generally have jobs with more negative characteristics. They were also more likely to take risks (both at work and outside the workplace). Drug usage was also associated with alcohol intake, use of prescribed medication, sleeping problems, health status and with personality type.

There were also significant associations between the outcome variables (i.e. accidents, minor injuries and cognitive failures) and psychotropic medication, risk taking, mental health, stress, health, alcohol intake and some of the demographic and occupational factors. The factors associated with the outcomes variables must be taken into consideration when examining the associations between illegal drug use and safety.

1.5.5 Multivariable analyses

Logistic regression models were used to explore the relationship between illegal drug use and accidents, minor injuries and cognitive failures. The possible confounders identified in the initial analyses were included in the models; this allowed the effect of drug use to be assessed independent of the confounding variables. The only significant association with illegal drug use, independent of the other associated variables, was between drug use and work-related traffic accidents.

1.5.6 Conclusions from the Community Survey

When possible confounding factors were controlled for there were no significant associations between illegal drug use and workplace accidents, minor injuries or cognitive failures evident from the data. However there was a significant association between use of illegal drugs and road traffic accidents, which is consistent with other findings and which may reflect acute effects of the drugs. The next stages of the project provide information about whether the conclusions drawn from the present survey are robust. It should be

noted that there are a number of problems with the present data-set which need to be rectified in future research. First, both drug usage and accidents/injuries at work are based on self-report and it is clearly desirable to examine their association using objective indicators. Second, the accident rate was low and it is important to consider whether the findings hold when a larger number of accidents are investigated. Third, use of certain types of drug was low and further information is required to assess the impact of using drugs other than cannabis. Finally, the present data provide little information about the temporal effects of the drugs or the importance of the amount rather than frequency of drug use. The other phases of the project aim to provide information on these issues.

1.6 College sample

Results from this small sample showed a similar pattern to the main community survey. This sample had a slightly higher level of drug use but this was not as high as had been expected on the basis of previous research with full-time students. These data will, therefore, be combined with the community sample to allow further analyses of effects of specific drugs and specific outcomes (e.g. slips, trips and falls).

1.7 Accident and Emergency Study

The preliminary results from the Accident and Emergency Study suggest that the methodology has been successful in its aim of recruiting larger numbers of young people, particularly males, and those who have had accidents. The rate of drug use was similar to that found in the Community study. The data, midway through collection, also suggest no evidence for any detrimental association between drug use and accidents at work.

1.8 Overall conclusions

1.8.1 The prevalence of drug use in a representative sample of the working population

Although response rates were low, as is to be expected with anonymous postal surveys, the samples were found to be generally representative of the populations surveyed and the UK as a whole. Under representation in certain samples (e.g. younger workers in the community survey) was countered by the selection process used in the other samples (e.g. the A&E and college samples were selected in such a way that more younger workers were surveyed).

All surveys showed a similar pattern of drug use and the results were comparable to other recent studies of the topic (e.g. the British Crime Survey). Overall, 16% of the sample reported using illegal drugs in the last year. Cannabis was the most popular drug (6% had used it in the last month) and over half the drugs listed were used by less than 2% of the respondents. There were only small numbers who used only drugs other than cannabis and most of the findings reported at this stage reflect cannabis rather than other drugs. Further analyses of individual drugs will be carried out when the complete database is assembled. It should also be noted that the present results, based on self-report, may not be the same as those based on other methods of evaluating drug use (e.g. objective testing).

1.8.2 Characteristics of illegal drug users

Use of illegal drugs was associated with a number of demographic, occupational and psychosocial characteristics. Those who used drugs tended to be younger, males, single,

on lower incomes and with higher levels of educational attainment. In addition, drug users were more likely to work unpredictable, long, unsociable hours, nights and shifts. Drug users also worked in less favourable physical environments and had more demanding jobs. Drug use was also associated with greater use of alcohol and psychotropic medication. Untreated mental health problems were also more prevalent in drug users. Those who had used drugs in the last year also had higher neuroticism scores and were more likely to take risks. This shows that it is essential to consider the effects of these correlated attributes of drug use when investigating associations between illegal drug use and safety at work.

1.8.3 Associations between illegal drug use and accidents and injuries

Initial analyses suggested that drug use was associated with work-related traffic accidents, minor injuries at work and cognitive failures at work. These trends were apparent in all data sets although differences in sample size meant that effects were not significant in all analyses. There appeared to be no significant association between drug use and accidents at work. Indeed, in the A&E sample drug users were significantly less likely to have had an accident requiring treatment at A&E. When accidents treated at places other than A&E were examined they showed a similar trend to minor injuries (i.e. more frequent in the drug users).

Multi-variable analyses showed that most of the effects attributed to drug use could be accounted for by other factors. However, in the community sample there was still a significant association between drug use, especially cannabis use, and work related road traffic accidents. Minor injuries at work were also associated with drug use in the A&E study. While one cannot be certain that there are no effects of drug use on the other outcomes it is clear that the relative effect is small compared to demographic and occupational factors.

1.8.4 Issues for further consideration

The studies reported here have a number of limitations. These largely reflect the fact that the report is based on the results from the first year of the project. Small numbers of users of certain drugs and small numbers of different types of accidents have meant that the initial analyses are based on aggregate variables. This will be rectified once data collection has finished and the final database will allow examination of specific associations. A second limitation is that we have no information about the amount of drug used or the temporal relationships between drug use and error. This information will be collected in cohort studies in the second phase of the project.

1.8.5 Summary statement

At the moment, one can conclude that use of illegal drugs may be a factor that has some impact on aspects of safety at work. However, many of the effects that initially appear to reflect drug use may be due to other associated characteristics of the drug user. If one uses alcohol as a benchmark one finds fewer effects of illegal drug use than heavy alcohol consumption. Furthermore, it is quite clear that even where drug or alcohol use are implicated as risk factors that their relative effects are small compared to demographic and occupational influences.

Health and Safety Laboratory

Review of the Literature on Illegal Drugs in the Workplace

Summary

This report critically evaluates the literature on the impact of illegal drugs at work.

Objectives

1. Describe the scope of the literature
2. Highlight the main research issues that have been addressed
3. Describe the strengths and weaknesses of the research

Main Findings

1. There is a paucity of research on the impact of illegal drugs at work on the UK population.
2. Some of the research on illegal drugs and accidents at work and on workplace drug testing suffers from methodological problems.
3. In general, the evidence is inconclusive with regard to the efficacy of workplace drug testing and the influence of illegal drugs on workplace safety.
4. Alcohol appears to be a larger problem in the workplace than illegal drugs.

Recommendations

In order to increase our knowledge of the impact of illegal drugs on workplace safety, the following areas would benefit from further methodologically robust research:

Prevalence of drug use at work

1. Large scale, good quality and generalisable prevalence estimates of illegal drug use whilst at work in the UK.
2. Large scale, good quality and generalisable prevalence estimates of illegal drug use at times outside working hours e.g., evening use, lunch time use, weekend use, but which might impact on work behaviour in a UK sample.

The effects of drugs on the individual

1. The short-term, hangover and chronic effects of illegal drugs on cognitive functioning, behavioural functioning, mood and work performance.
2. The potential impact of illegal drug use on more subtle psychological factors such as risk taking behaviour, risk perception and impulsive behaviour.
3. The influence of mediating factors such as dose level, frequency of usage, addiction levels, expectations and tolerance of users on illegal drug effects.
4. The effects of combining illegal drugs and using illegal drugs and alcohol on the individual.
5. The potential impact of variables such as stress, fatigue, work culture and social norms on illegal drug effects.

6. The context of illegal drug effect studies should be considered, including ensuring effects are measured in relevant settings.
7. The relationship between illegal drug uptake and time course of acute and chronic effects and neuropsychological functioning. Physiologically Based Pharmacokinetic (PBPK) modelling could be applied to address this issue.
8. The interaction between psychosocial factors such as stress and the use of illegal drugs for pain relief, and drug use.

Workplace outcomes of drug use

1. Any investigations of the association of illegal drug use and workplace safety should be methodologically robust, for example, controlling for other factors which may impact on safety, including large sample sizes, measuring impact of drug use in terms of level of impairment, accurately measuring what drugs are taken and when, and trying to determine causality.
2. The use of different outcome measures to assess workplace safety should be considered, for example, near miss data, quality measures.
3. Further investigation of the effects of illegal drug use on non-safety workplace outcomes.

Mitigating factors

1. Evaluation of the impact of workplace drug policies on workplace illegal drug use, health and safety, and other business risks.
2. Further investigation of the effects of other mitigating factors such as drug testing and EAPs on workplace illegal drug use, health and safety and other business risks, using methodologically robust studies.