



# The scale and impact of illegal drug use by workers

**Andy Smith, Emma Wadsworth,  
Susanna Moss, Sharon Simpson**  
Centre for Occupational and Health Psychology  
Cardiff University  
63 Park Place  
Cardiff  
CF10 3AS

The aims of this report are:

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.

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.

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# 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.