

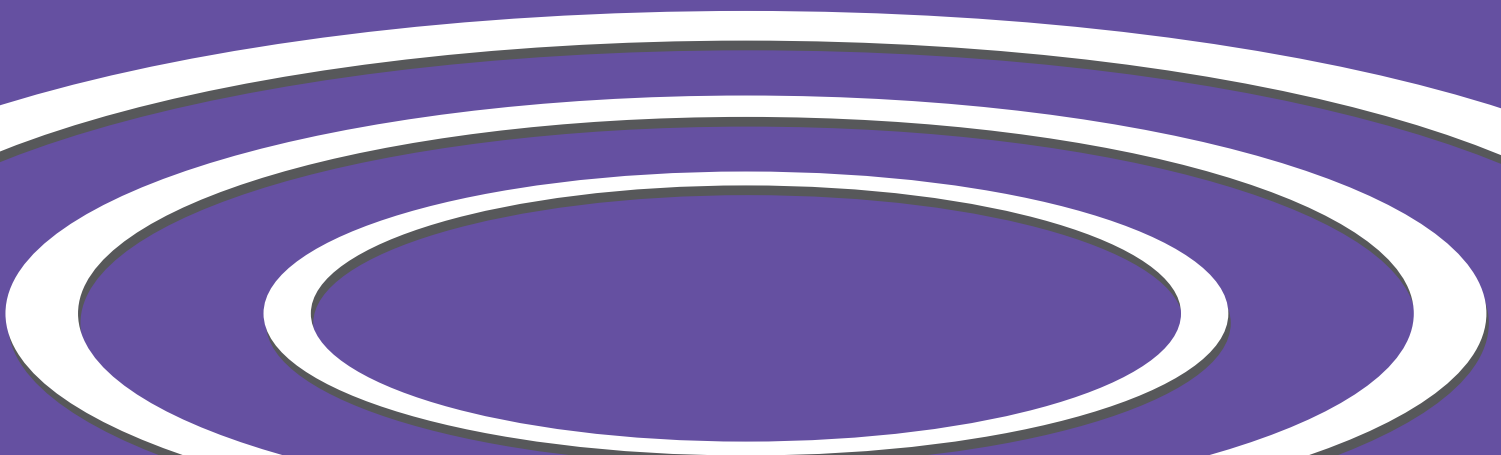


Executive Summary

The psychosocial consequences of drug misuse: a systematic review of longitudinal studies

Research Report submitted to the Department of Health in
September, 2002

Report prepared by:
Alexandre Copello, Ilana Crome, George Davey Smith, Matthias
Egger, Matthew Hickman, Ali Judd, John Macleod, Rachel Oakes,
Thomas Oppenkowski and Helen Stokes-Lampard



The psychosocial consequences of drug misuse: A Systematic Review of Longitudinal Studies

Research Report Submitted to the Department of Health in September, 2002

Executive Summary

Report prepared by:

Alexandre Copello, Ilana Crome, George Davey Smith, Matthias Egger, Matthew Hickman, Ali Judd, John Macleod, Rachel Oakes, Thomas Oppenkowski and Helen Stokes-Lampard

Please address correspondence to:

john.macleod@bristol.ac.uk

Disclaimer

This study was funded through the UK Department of Health, Drug Misuse Research Initiative (project grant 1217206). All views expressed are those of the authors and not necessarily of the Department of Health.

Membership of the Study Group

Department of Primary Care and General Practice, University of Birmingham

John Macleod

Rachel Oakes

Thomas Oppenkowski

Helen Stokes-Lampard

Department of Psychology, University of Birmingham

Alex Copello

Department of Psychiatry, Keele University

Ilana Crome

Department of Social Medicine, University of Bristol

George Davey Smith

Matthias Egger

Centre for Research on Drugs and Health Behaviour, Imperial College of Science, Technology and Medicine, London

Matthew Hickman

Ali Judd

Project Aims

- *To identify evidence derived from longitudinal studies on the psychosocial consequences of illicit drug use by young people in the general population.*
- *To assess the strength of this evidence.*
- *To suggest how future longitudinal studies could fill any important gaps in the current evidence base identified.*

Policy Relevance

This review is intended to strengthen the evidence base informing policies to reduce drug-related harm as experienced by individuals and communities. There are many examples of drug-related harm. However, some health and social problems associated with drug use may not be caused by drug use. Rather they may reflect differences between people who do use illicit drugs and people who do not. Policies to prevent illicit drug use will not prevent harm that is not caused by drug use but is merely associated with it. Drug policy itself may have wider social consequences. These, along with other aspects of the socio-economic environment that drug use occurs within, should also be considered in assessments of the consequences of drug use and of the most effective means to reduce the most harm.

Background

More young people appear to be using illicit drugs and to be initiating that use at younger ages. The probable consequences of this are unclear. Popular wisdom and evidence from clinical populations suggest an almost inevitable association between illicit drug use and severe health and social impairment. Portrayals of drug use and drug users in popular media are often misleading and atypical individuals with multiple problems may be over-represented in treatment populations. However evidence from the general population also suggests that the use of illicit drugs by young people can be associated with several kinds of “psychosocial harm”. Longitudinal research that follows individuals over time can identify harms that are preceded by drug use and therefore may be causally related to use. It is important to establish the extent, consistency and strength of current longitudinal evidence.

Research Design and Methodology

A systematic review of longitudinal research on the psychosocial consequences of illicit drug use by young people was undertaken. Evidence was identified through searches of general biomedical and specialist addiction-related electronic and paper databases and through contact with relevant experts. Publications not in English were translated. Publications were included if they were general population based, prospective in design, measured illicit drug use in people aged 25 years or younger and related this to any psychosocial outcome measured subsequently. Two reviewers discussed the strengths and weaknesses of studies meeting all these criteria. All evidence identified is reported in this review to allow independent appraisal. Only that evidence considered to be of relatively high quality is discussed in detail.

Some notes on interpretation

A consistent association between drug use and harm could reflect a causal relation. Alternatively, it could indicate a consistent influence of one of the two types of methodological problem complicating interpretation of observational studies – bias or confounding. Bias is a consequence of systematic misinformation. For example if people who over-report their personal drug use also over-report their experience of psychosocial problems it will appear – spuriously - that drug use leads to harm. Since most studies use uncorroborated self-reported measures of drug use, and often relate these to similarly uncorroborated estimates of harm, their results may be biased.

Confounding arises when the association between two things (drug use and harm for example) is not causal; rather it is completely explained by the fact that both are related to a third thing. For example, people who drink more coffee tend to have a higher risk of lung cancer, not because drinking coffee causes lung cancer – but because both drinking coffee and risk of lung cancer are related to smoking. Preventing coffee drinking will not prevent lung cancer. Both drug use in adolescence and the experience of psychosocial problems in young adulthood are related to early psychological and social problems and early social disadvantage. Studies that do not take this into account may wrongly attribute causality to an association between drug use and harm arising purely because both share common antecedents. In observational studies, the issue of confounding can be addressed through measurement of potential confounding factors and statistical adjustment of effect estimates

for these measures. In experimental studies, random allocation of subject exposure category should ensure that confounding factors are evenly distributed amongst study subjects such that their influence on effect estimates is minimised.

Summary of findings

From over 6,000 initial publications, 46 relevant studies were identified all with an observational design. Several were not published in English. 30 studies were assessed as providing relevant evidence that was nonetheless limited in its ability to clarify causal questions due to methodological limitations. 16 studies were assessed as providing the current best available evidence. None of these were from the UK, most reported possible consequences of cannabis use. Cannabis use showed consistent associations with lower educational attainment, increased risk of use of other drugs and increased reporting of psychological problems. The relative consistency of these associations does not confirm a causal relation. All measures of cannabis use in these studies were uncorroborated as were many of the psychosocial outcome measures use was related to. Most studies were limited in their ability to adjust for possible confounding factors in their analyses – particularly those relating to early life adversity. The association between cannabis use and the early transition to adult roles was also consistent though problems associated with this varied. Use (both of cannabis and of other illicit drugs) was occasionally associated with outcomes that could be construed as “positive”. These included higher wages in early adulthood. It is unlikely that such associations are causal – again they illustrate the influence of confounding. Consistently, cannabis use in early adolescence was associated with greater problems than use in late adolescence. Use was inconsistently associated with antisocial and criminal behaviour. Again, it seems likely that all these associations will have been influenced by biases resulting from measurement imprecision and by confounding resulting from an inability to fully consider the covariance of drug use with early childhood adversity. In general, the associations reported in studies reviewed were considerably attenuated when adjustment was made for potential confounding factors. Since most studies had only limited measures of these factors residual confounding is likely to have remained. Given these considerations it is possible that much of the reported association between cannabis use and psychosocial harm is non-causal.

A few studies reported consequences of cocaine use and a smaller number, consequences of opiate

use. These studies suggested a deleterious effect of relatively heavy use over relatively long periods on general health but few other adverse consequences. The contrast between the range and magnitude of effects of cocaine and opiate use in these general population studies with those seen amongst clinical populations is probably partly a consequence of the effective exclusion of the most marginalized and problematic individuals from general population studies.

There appears to be no, longitudinal, general population evidence regarding the possible effects of certain illicit drugs that are used by a significant (albeit smaller than that using cannabis) proportion of young people. The most important example of this latter group was MDMA (“ecstasy”). Given suggestions of possible long-term toxicity of MDMA this lack of evidence is concerning.

It is important to recognise that certain effects of illicit drug use may be mediated through social, rather than pharmacological, mechanisms and that such effects include those of drug policy. Drug prohibition creates entrepreneurial opportunities for criminals. It may also criminalize some young people who would not otherwise have broken the law, with consequences for their subsequent life trajectory that may be similar, or even greater, in magnitude than those of drug use. The relatively robust association between cannabis use and use of other drugs may reflect the current legal status of cannabis. It is possible that if cannabis were not only available through illegal drug markets, where other drugs are sold, that this association might be weakened. These issues deserve empirical examination.

Recommendations for future research

Given the extent of youthful drug use, the uncertainties regarding the public health consequences of this and the current lack of relevant UK data there is an urgent need for further, better UK based research. Longitudinal studies able to provide the evidence needed must examine general population samples of young people across their whole developmental life course, ideally from birth and certainly from before their initiation of drug use. They must collect such early life data as to enable the important issue of confounding to be addressed and they must consider consequences of drug use in the context of general psychosocial development. Studies meeting these criteria could be initiated now. However large UK studies of appropriate design focused on general child development already exist. Funding to enable these studies to also undertake objective assessment of

drug use (both licit and illicit) and possible psychosocial consequences of this would represent a timely and cost-effective approach to filling the current evidence gap. Measurement of drug use should extend to substances other than just cannabis and should utilise instruments other than those completely reliant on uncorroborated self-report.

In addition to the collection of new observational evidence in this way an experimental approach is possible. This is through randomised trials of interventions to prevent or reduce drug use. If reductions in drug use are accompanied by reductions in harm in such trials then this strongly suggests that the relation between drug use and harm is causal. Future investment in drug prevention should therefore be contingent on interventions being evaluated by appropriate research designs, in most cases randomised controlled trials. These trials should include evaluation both in terms of effects on drug use but also effects on harm. As well as confirming public value for money and ensuring that young people are not exposed to unintended ill effects, such an approach would also provide strong scientific evidence as to any true causal relations between drug use and harm.

Conclusions

Drug use by young people is associated with various forms of psychosocial harm. Current evidence does not clarify if this association is causal, neither does it demonstrate that drug use is harmless. Better evidence is needed to answer these important questions and allow the aspiration of an evidence-based drugs policy to be realised. ■