

# PREVENTION OF PSYCHOACTIVE SUBSTANCE USE

## A Selected Review of What Works in the Area of Prevention



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## FOREWORD

Globally, psychoactive substance use is a major public health and social concern. With changes in lifestyle, the erosion of powers of censure that have existed in traditional societies, and an increased acceptance of such substances it is clear that their use is growing. In recent decades, most countries, particularly those in the developing world, are facing unprecedented social and health problems among its populations. This places individuals, families and communities at a greater vulnerability to psychoactive substance use, in particular children, adolescents and the youth. In recognition of the problems psychoactive substance use poses on the user, tremendous efforts have been made by many institutions globally including the World Health Organization (WHO). In order to support these efforts WHO commissioned the present work so as to document the evidence for interventions in the area of psychoactive substance use prevention. The availability of the compiled information is a major step forward towards contributing to a growing body of evidence, which consequently should help in the development of programmes that are evidence based.

On behalf of the Department of Mental Health and Substance Dependence, I am pleased to present this publication based on a selected review of what works in the area of prevention of psychoactive substance use. The review was accomplished as a collaborative effort between the National Drug Research Institute (Perth, Australia) and the World Health Organization, Geneva. The review set out to determine what evidence exists for the efficacy of preventive interventions in five circumscribed areas; regulation of physical and economic availability of alcohol, regulation of physical and economic availability of illicit psychoactive substances, the use of the mass media, community-based initiatives and the use of school based education

The review is selective, rather than exhaustive, but still serves to highlight some broad findings around the selected areas. Overall what comes out clearly is that though evidence exist, for the effectiveness of many interventions, much more systematic research is necessary in a variety of settings. Through this review it has also been acknowledged that little information exists in developing countries in terms of evaluation and research. However, this work marks the foundation of evidence on what works on the part of WHO through the currently available and accessible sources and is a stepping stone for the development of culturally appropriate, practical and meaningful interventions.

It is my conviction that dissemination of research findings can motivate service providers in health and other social sectors to understand its meaningfulness and carry out local research that can ultimately prepare them for prevention programming and to select strategies that effectively address the needs and problems of young people.

I hope this review will serve its purpose and will be of use to policy makers, programme implementers, researchers, specifically in developing countries.

Lastly, I would like to thank the government of Japan for funding this project, the National Drug Research Institute, Australia, in particular, Dr David Hawks, Ms Katie Scott, Ms Nyanda McBride, Professor Tim Stockwell and Mr Paul Jones for carrying out this review on behalf of the World Health Organization. I also would like to thank my colleagues at the World Health Organization, Geneva, Mrs Mwansa Nkowane for providing technical inputs and editing of this summary report, Ms Mylene Schreiber and Ms Rosemary Westermeyer for their administrative assistance.

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## A Selected Review of What Works in the Area of Prevention

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World Health Organization



## PART I

A SELECTED REVIEW OF WHAT WORKS IN THE AREA OF  
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**David Hawks and Katie Scott**

## EXECUTIVE SUMMARY

This review sets out to determine what evidence exists for the efficacy of preventive interventions in five circumscribed areas; (i) regulation of physical and economic availability of alcohol (ii) regulation of physical and economic availability of illicit psychoactive substances (iii) the use of the mass media (iv) community-based initiatives and (v) the use of school based education.

Searches of the empirical literature were undertaken covering the period 1985-June 2001 employing a number of strategies and inclusion criteria with an attempt to cover all geographic regions, developing and developed countries. Key informants at the National Drug Research Institute were asked to identify relevant studies and review articles pertinent to the areas under investigation. These studies were then obtained where possible and additional relevant studies listed as references identified.

Searches of the National Drug Research Institutes Inform Library Data Base and, the National Drug Research Institute's Indigenous Australian Alcohol and other Drug Intervention Project Data Base were also conducted. Information posted on "Update" an electronic email resource for drug and alcohol workers and researchers, was also inspected daily. This process identified a total of 192 studies for review.

A second phase of the research strategy involved searching scholarly electronic data bases for relevant published and unpublished literature. Key words were used to identify relevant literature, the initial search having produced in excess of 9,000 articles. The databases searched and the number of relevant studies identified through these sources: PSYCINFO, Medline, EMBASE, Current Contents, Dissertation Abstracts, SIGLE, Social Work Abstracts, National Clearinghouse on Alcohol and Drug Information (IDA), DRUG database, Alcohol & Alcohol Problems Science database – ETOH, Cochrane Collaboration Reviews and Internet search

A third phase of the search strategy, intended to access relevant unpublished material from developing countries involved communicating with 51 key informants in 24 countries identified by National Drug Research Institute and WHO staff and by reference to the author of published works. This process yielded a small number of unpublished studies from Poland, South Africa, Brazil and Thailand.

A total 1265 studies were identified in employing these three strategies. This list of 1265 studies was further reduced by applying Cochrane's guidelines for assessing study quality [Clarke and Oxman, 2000] to those studies emanating from industrial countries. In view of the very limited number of studies deriving from developing countries and the project's particular interest in such studies all of these studies were included regardless of their quality although all such material was then rigorously evaluated. As a result of these several processes the number of studies were reviewed in each of the 5 study areas; The Regulation of the Physical and Economic availability of Alcohol, The Regulation of the Physical and Economic availability of Illicit psychoactive substances, Mass Media, Community Based Programmes and School Based Programmes. Some broad conclusions are drawn from each of the 5 areas with a view to recommending what has been shown to work.

- **Regulation of the Physical and Economic Availability of Alcohol**

The regulated availability of alcohol in most countries has meant that it has been the most intensely studied of the psychoactive substances reviewed in this document. Changes in its availability whether effected by lowering the age of its legal availability decreasing its cost in real terms or increasing the number of outlets from which it can be legally sold have all been found to increase its consumption. Such increases in developing countries previously characterized by lower levels of consumption is of particular concern especially in view of the lack of infrastructure to treat the problems associated with such consumption. A variety of measures including the introduction of random breath testing, the strict enforcement of liquor licensing laws and the adoption of responsible serving practices had been found to reduce alcohol related problems in countries having the means to impose such sanctions. Increasing the real cost of alcohol or at least not allowing its erosion by means of taxation has been found to be

one of the most effective though least popular means of reducing problems associated with alcohol. The availability of localized data in some countries has allowed a particularly detailed study of the effects of certain policies and of the characteristics of premises associated with high levels of alcohol related problems.

- **Regulation of the Physical and Economic Availability of Illicit Psychoactive Substances**

The covert nature of both illicit psychoactive substance use and supply poses particular problems for the evaluation in measures intended to address these variables. Measures adopted across entire countries rarely lend themselves to evaluation or comparison. Of greater interest from a scientific point of view are initiatives taken by particular states or jurisdictions where the possibility exists of before and after comparisons or time series analysis. The legislative regulation of cannabis and its attendant police operations have been the most intensely studied at least in North America and Australia, the findings of which have led to various policy proposals. Other attempts to regulate the availability of illicit psychoactive substances employing a variety of policing policies have been found to effect the shape of the market, the purity of the substances available and their price though without in any permanent way eradicating it.

- **Mass Media**

The use of the mass media on its own, particularly in the presence of other countervailing influences, has not been found to be an effective way of reducing different types of psychoactive substance use. It has however been found to raise information levels and to lend support to policy initiatives. Combined with reciprocal and complimentary community action, particularly environmental changes, media campaigns have proved more successful in influencing attitudes towards psychoactive substance use and use itself. Health warnings associated with licit psychoactive substance use have been an effective way of communicating the hazards of such use particularly to heavy users if combined with other economic and environmental initiatives.

- **Community-based interventions**

The complexity of evaluating the many initiatives which make up any community based intervention has meant that very few such interventions have been rigorously evaluated. Those that have been tend to focus on a small number of discrete outcome variables such as drink driving convictions and to have employed matched communities or time series analysis. Changes have been more often observed in such areas as acceptance of health orientated policies and increased knowledge. For such changes to be sustained requires that they be institutionalized which itself provides that the initiatives be supported by the relevant community agencies.

- **School-based interventions**

School based educational programmes have been among the most popular preventive measures much of which occurs, however without any formal assessment of its impact on behaviour. To be effective they need to be provided at a developmentally appropriate time and particularly when interventions are most likely to have an impact on behaviour. Programmes need to be relevant to young people's life experience by providing material during the period most students are experiencing initial exposure to psychoactive substances, using local prevalence data. Complementary general health/life skills programmes appear to produce greater change than skill-based education programmes alone, suggesting that psychoactive substance use education is best integrated within a well-founded health curriculum. Pre-testing of a programme with students and teachers to ensure its relevance is important in establishing its behavioural effectiveness. While the majority of studies reviewed, deriving mainly from the United States, have abstinence as their goal, there is evidence that programmes having this goal consistently fail to produce behavioural effects suggesting that there is a need to develop programmes with outcomes other than abstinence as their goal.

- **Database of selected studies**

Additionally a database comprising the primary and review articles abstracted in accordance with a data extraction form was constructed and its operation detailed in a separate document (Scott, Hawks & Jones, 2001). The data extraction form was developed to ensure all important review criteria were covered, to enable an evaluation of interactive reliability and provide the basis for coding studies into the electronic database.

While not exhaustive, even in the areas selected for examination, the review is considered to be exemplary of the studies in these areas. The database, which is intended to become interactive, is capable of expansion in the future.

