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CLIMATE/CRUfAD* Schools: cannabis prevention programs

*CLIMATE Schools has now been renamed CRUfAD Schools, but for the purpose of this Bulletin it will be known as CLIMATE Schools, the title used in the research project outlined.

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Introduction

In most developed countries, including Australia, cannabis is the most commonly used illicit drug.[1, 2] The use of cannabis is particularly high amongst adolescents and the burden of disease, social costs, and disability associated with this use is considerable.[3-5] Furthermore, the detrimental effects of cannabis use are robust and include strains on forming and maintaining healthy relationships, disruption to educational and vocational paths, and hindrance to overall social development.[6-8] To reduce the occurrence and cost of such problems, preventative interventions need to be initiated early before problems begin to cause disability, and vocational, educational and social harms.[9] While prevention strategies exist, research has not been able to consistently demonstrate that school-based drug prevention is effective in reducing cannabis use, and no single program appears to be universally feasible and scalable.[10-14] Poor program implementation has been well-recognised as a pervasive factor which has been shown to compromise the effectiveness of such programs.[15]

The CLIMATE Schools drug prevention programs, which are based on a harm-minimisation approach, have been designed to overcome such concerns by being specifically developed to enhance high fidelity program implementation. In terms of improving implementation, the CLIMATE Schools programs have also been developed in collaboration with teachers, students and relevant health and legal professionals to ensure they address different issues which have been identified to compromise implementation (e.g., program complexity, teacher workload, teacher training and program adaptation). Specifically, each of the CLIMATE schools drug prevention programs is a curriculum-based program consisting of six lessons, each with two components; a 15-20 minute computer-based component and an array of prepared classroom activities for teachers and pupils. The computer component involves students navigating their way through a cartoon-based teenage drama. Each lesson deliberately forms part of an ongoing teenage drama to encourage teachers to present all lessons and avoid the temptation to omit any one of them. The computer and internet delivery guarantees that the complete content is consistently delivered to each student overcoming the majority of the obstacles to effective program implementation. The classroom activities are included to allow students to interact with the content in relation to their own lives. They are provided in the manual to ensure that all the activities comply with the principles of evidence-based drug prevention, but also decrease the teacher's workload. These activities include role plays, small group discussions, decision making and problem solving activities and skill rehearsal, all of which have been identified as being central to program efficacy.[16-22]

Two of the most recent programs which have been developed by the CLIMATE team at NDARC have focused in part on cannabis use. These are the CLIMATE Schools: Alcohol and Cannabis Module and the CLIMATE Schools: Cannabis and Psychostimulant Module. Both programs were developed with extensive input from teachers, students and health professionals to ensure the programs were based on the most current evidence around effective school-based drug education, were age appropriate and fit within the school syllabus. Tables 1 and 2 contain the lesson content of each program.

Table 1

Lesson content of the CLIMATE Schools: Alcohol and Cannabis Module Lesson

Lesson	Content
1	Alcohol, the law and underage drinking Standard drinks Australian Guidelines for low-risk drinking limits Identifying the number of standard drinks in alcoholic beverages Prevalence and patterns of alcohol use among 14 to15 year olds Acute harms/consequences associated with alcohol use
2	Alcohol, the law and underage drinking Identifying reasons why teenagers choose to drink or not to Alcohol-free activities Acute and chronic harms/consequences of drinking alcohol Identifying the potential for risk and harm in common teenage drinking scenarios Exploring ways to prevent alcohol-related harm in common teenage drinking scenarios e.g. tips to keep people who were drinking too much alcohol safe, and ways to minimise alcohol consumption Drug refusal skills
3	Australian guidelines for low-risk drinking limits Acute and chronic harms/consequences of drinking alcohol What is cannabis? Prevalence and patterns of cannabis use among 14 to 16 year olds Identifying reasons why teens choose to or choose not to use cannabis Acute harms/consequences of using cannabis on health and well-being Varying effects of cannabis from person to person
4	Cannabis and the law Economic consequences of using cannabis Acute and chronic harms/consequences of using cannabis on health and well-being Varying effects of cannabis from person to person Recognising problems associated with cannabis use Teaching and responding to risk and harm in common teenage scenarios Tips to keep people who are using cannabis safe
5	Acute and chronic harms/consequences of cannabis on health and well-being Relationship between cannabis use and mental illness Identifying reasons why people choose to or choose not to use cannabis Recognising problems associated with cannabis use Seeking help
6	Dealing and coping with challenging situations Effects of other people's drug use Recognising and responding to risk and harms of cannabis Tips to help friends reduce or cease using cannabis Alternatives to using cannabis Identifying when to seek help Identifying where to seek help, e.g. resources and support agencies for teenagers using cannabis (both at school and in the community)

Table 2

Lesson content of the CLIMATE Schools: Psychostimulant and Cannabis Module Lesson

Lesson	Content
1	What is cannabis? Acute/short-term effects: physical, psychological and social Reasons why people might choose to use or refrain from cannabis use Cannabis and the law Risk factors and preventative factors for drug use Prevalence of use of cannabis Mental health and cannabis
2	Critically analysing drug-related internet and media resources Classifying drugs as hallucinogens, stimulants and depressants Common names and properties of psychostimulant drugs Short-term effects of psychostimulants Prevalence of use of psychostimulants The multifaceted nature of the effects of drug use on people's lives
3	Definitions, examples, and effects of polydrug use Classifying drugs Examining the indirect effects of drug use on multiple aspects of people's lives, including the social, financial and health effects, as well as employment and housing Problem solving/decision making skills in relation to drug scenarios Identification of risks involved in drug use and ways of minimising harm
4	Communication skills (e.g., assertiveness) Avenues for seeking help and barriers to accessing services What to do in a drug-related emergency Calling 000, the emergency number Identifying communication styles, including assertiveness
5	Long-term effects of drugs Drug withdrawal Harm minimisation Learning about resilience Attitudes to drug use Prevalence of psychostimulant and cannabis use CPR and first aid
6	Drugs and driving Drugs and the law Problem solving skills Arguments for and against legalisation or decriminalisation of illicit drugs The short- and long-term effects of drug use on people's lives and life trajectory The effects of drug use on others

Both these programs have recently been evaluated utilising large cluster randomised controlled trials (RCT) and the results are presented below.

CLIMATE Schools: Alcohol and Cannabis Module

The CLIMATE Schools: Alcohol and Cannabis Module was evaluated using a cluster RCT in ten NSW schools with 764 students. Mean age at baseline was 13.08 years (SD = 0.58) and 60% were male. Five schools (n=397) were randomly allocated to the intervention condition, and five schools (n=367) were randomly allocated to the control condition. Self-report data was obtained on four separate occasions; at baseline, immediately after the course, and at six and twelve months following the intervention. The evaluation revealed that in comparison with usual drug education programs, students in the intervention group showed significantly greater improvements in alcohol and cannabis knowledge at the end of the course, as well as six and twelve months following

the intervention.[23, 24] In addition, the intervention group showed a reduction in average weekly alcohol consumption and frequency of cannabis use at the six month follow-up, and a reduction in frequency of binge drinking at the twelve month follow-up. No differences between groups were found on alcohol expectancies, cannabis attitudes, or alcohol and cannabis harms.

Evaluation of the course

A sample of teachers (n=12) and students (n=98) from each school who completed the course were randomly chosen to evaluate the program. Both teachers and students provided positive feedback about the program and found the course to be an acceptable means of school drug education. Of the students surveyed, 93% found the cartoon delivery appropriate and enjoyable and 85% said they would use the information in their own lives. Of the teachers surveyed, 91% reported the course met the outcomes of the syllabus, 92% indicated that students liked the program, 72% endorsed the program as better than other education programs, and 75% indicated they would use the course in the future and would recommend it to others. All teachers reported implementing the program in its entirety, including all the computerised cartoon components and at least one class-based interactive activity for each lesson.

CLIMATE Schools: Psychostimulant and Cannabis Module

The CLIMATE Schools: Psychostimulant and Cannabis Module was also evaluated using a RCT in 21 NSW and ACT schools with a total of 1734 students. The mean age of students at baseline was 15.44 years (SD=0.41) and 66.2% were male. Eleven schools were allocated to the control group and ten schools to the Intervention group. The evaluation revealed that the CLIMATE Schools: Psychostimulant and Cannabis Module was effective in increasing knowledge of cannabis and psychostimulants and decreasing pro-drug attitudes.[25] In the short-term the module was effective in subduing the uptake of ecstasy and decreasing the frequency of use. Females who received the CLIMATE Schools: Psychostimulant and Cannabis Module also used cannabis significantly less frequently than students who received drug education as usual. There were no changes in meth/amphetamine use or harms resulting from cannabis or psychostimulant use in general. The low prevalence of use is the most likely reason for why the CLIMATE intervention did not impact on drug-related harms. The intention to use such drugs in the future, however, was significantly subdued in the CLIMATE group. The mode of delivery was once again welcomed by both students and teachers, with the latter rating this program as superior to other drug prevention approaches and reporting that they would be likely to continue using this program in the future.

Conclusions

The innovative design of the CLIMATE Schools drug prevention program has been found to be effective in increasing cannabis-related knowledge, and decreasing the cannabis use up to twelve months following the interventions. In addition, the contemporary and novel design and delivery of the courses has been found to be acceptable to students and teachers as a means of delivering drug education. As such, the novel internet-based course, which adopts a specific harm-minimisation goal, provides a promising framework for the provision of school-based prevention programs in the future.

Further information on the CLIMATE Schools drug prevention programs can be found at www.climateschools.tv. Correspondence to: Dr. Nickie Newton (nickien@unsw.edu.au) or Dr. Laura Vogl (l.vogl@unsw.edu.au).

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