A cross-validation trial of a universal prevention program for alcohol and cannabis: 6-month outcomes

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Prevention for alcohol and other drugs

- Adolescent substance use in Australia:
  - 28% of 12-17 year olds have drunk alcohol in the past 12 mths (NDSHS 2013)
  - 15% have tried cannabis in their lifetime (2011 ASSAD Report)

- Numerous harms associated with alcohol and cannabis use e.g. mental health problems, social issues, poor academic performance, school dropout

- Important to prevent alcohol and cannabis use and these related harms among adolescents

- School is an ideal environment for prevention to occur, however existing school-based programs have shown limited effects
1. **Implementation Obstacles:**

   - Lack of training and support
   - Lack of resources: time, teachers, money
   - Adaptation: teachers make changes to content & delivery

   Intervention effects are easily diminished when a program is not well implemented

2. **Lack of student engagement:**

   Students find traditional drug education boring!
How can we deliver school-based prevention of alcohol and other drugs that can be implemented well and engage students?

Cartoon Storylines & The Internet
Advantages of online school-based interventions

**Can overcome implementation issues:**
- Delivery not dependent on teacher, content pre-programmed
- Portable & widely accessible

**Are appealing to students:**
- Internet is central to the lives of many young people today
- Use of cartoons and interactive components

Less risk of adaptation, Higher fidelity
Greater flexibility
Higher student engagement

More feasible, implementable and attractive to schools
The Climate Schools: Alcohol & Cannabis Course

www.climateschools.com.au

- Based on a harm minimisation and social influence approach
- Delivered via the Internet
- Uses a cartoon storyline about a group of teenagers to engage students and maintain interest
The Climate Schools: Alcohol & Cannabis Course

- Delivered to Year 8 students (13-14yrs)
- Designed to address PDHPE syllabus outcomes

- Two modules, 12 lessons in total:
  1. Alcohol module (6 lessons)
  2. Alcohol & Cannabis module (6 lessons)

- Each lesson consists of:
  a) 20-minute online cartoon
  b) Optional teacher-delivered activities
Part 1: Online student component

Who’s car is Michael getting into?

That’s Greg’s car. He’s mates with my older brother.

I would prefer to live thanks.

Hey Clare, jump in!
Lesson summaries

Teacher Summary

Alcohol and the law

- The legal drinking age in Australia is 18 years of age.
- It is generally illegal to sell or supply alcohol to a person under the age of 18 years.
  
  However, in most Australian states and territories, it is permitted for parents or guardians to supply alcohol to their own minor child (in their own home), or a responsible adult authorised by a parent or guardian can supply alcohol to their own minor child.

- In most Australian states and territories, it is illegal for a person under the age of 18 to possess or consume alcohol in a public place, unless they are under the supervision of a responsible adult.

- If a minor is in possession of alcohol in a public place and not under the supervision of a responsible adult, the police can seize the alcohol.

- A responsible adult is defined as:
  - A parent, step-parent, or guardian of the minor.
  - The minor's spouse or any person who, although not legally married to the minor, ordinarily lives with the minor as the minor's spouse on a permanent and domestic basis.
  - A person who is, for the time being, in loco parentis to the minor.

NHMRC 2009 Guidelines

- The Australian Alcohol Guidelines are based on the "Australian standard drink".
- A "standard drink" is a measure of the quantity of alcohol contained in an alcoholic beverage in Australia, one standard drink contains 10 grams of alcohol.

Adults

For healthy male and female adults, to minimise the risk of alcohol-related harm over a lifetime, the Australian Alcohol Guidelines recommend to drink:

1. No more than 2 standard drinks a day
2. No more than 4 standard drinks on a single occasion

To minimise the risk of injury on a single occasion of drinking, the Australian Alcohol Guidelines recommend to drink:

1. No more than 2 standard drinks a day
2. No more than 4 standard drinks on a single occasion

Climate Schools - Alcohol Lesson 1

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Student Summary

How much alcohol do 13-14 year olds drink?

Many teenagers believe that lots of their peers are drinking large quantities of alcohol and going out to get drunk. This isn't true. The truth is that most 13-14 year olds do not spend their leisure time drinking alcohol.

In 2010, a huge survey was done to find out how much alcohol and other drugs people were actually taking. In Australia, they found that although many 13-14 year olds had tried alcohol (66%), only 1 in 4 had actually had a full drink in their lifetime. The most important finding was that the majority of 13-14 year olds did not drink too much alcohol.

When it came to drinking to excess only 1 in 50 had done this in the past 12 months. That means, that 49 out of 50 had not drunk excessively in the past 12 months.

What is really interesting is that if teenagers are interviewed while one of their friends is there, they report drinking a lot more alcohol than if they are interviewed without their friends being present. This shows that it is not surprising that most teenagers overestimate the number of their friends who really go out and get drunk. The truth is that most 13-14 year olds do not drink too much alcohol, but many feel the pressure to pretend they do.

Even by the age of 15, this picture doesn't change a great deal. Most 15 year olds have tried alcohol (91%) and about half (67%) had drunk a full serve of alcohol in their lives. Once again, when it came to drinking to excess, only 1 in 10 had done this in the past 12 months. This shows that the majority of 15 year olds did not drink too much alcohol or drink alcohol to get drunk.
Part 2: Optional activities

**Optional Class Activities**

<table>
<thead>
<tr>
<th>Name of Activity</th>
<th>Task</th>
<th>Format</th>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Helping friends</td>
<td>Students learn what to do if they support one of their friends if they are having problems with cannabis.</td>
<td>Group activity</td>
<td>Photocopy or print group worksheet</td>
</tr>
<tr>
<td>2 Helpful and not so helpful things</td>
<td>Students learn about helpful and not so helpful things to do if they are concerned about a friend.</td>
<td>Group activity</td>
<td>Photocopy or print group worksheet</td>
</tr>
<tr>
<td>3 Finding support</td>
<td>Students learn about places and resources they can get help from if they or someone they know is having problems with drugs or alcohol.</td>
<td>Individual activity</td>
<td>Photocopy or print individual worksheet</td>
</tr>
<tr>
<td>4 Homework Lesson 6</td>
<td>Students are asked to research places and resources they can get help from if they or someone they know is having problems with drugs or alcohol.</td>
<td>Homework</td>
<td>Photocopy or print homework worksheet</td>
</tr>
</tbody>
</table>

**Worksheet**

**Effects of cannabis**

- **Social Effects**
  - e.g., how it affects relationships with friends/family:
  - [Blank]

- **Physical Effects**
  - e.g., how it affects your body:
  - [Blank]

- **Psychological Effects**
  - e.g., how it makes you feel:
  - [Blank]
Efficacy of the Climate Schools Course

- Evaluated in 2007-09 among 764 Year 8 students from 10 Sydney schools (Newton et al; 2009, Newton et al, 2010)

- The course was found to:
  - Binge drinking & average consumption of alcohol
  - Frequency of cannabis use
  - Alcohol related harms
  - Alcohol & cannabis knowledge

- Next step = cross-validation
Importance of replication

- Replication is a critical step in evidence-based research
- Important to test the generalisability of a program
- Preventive interventions often not replicated:
  - Only 13% of studies replicated in BPV Project (Mihalic et al., 2001; Aos, 2011)
  - No replications of Internet-based prevention programs for alcohol and other drugs (Champion et al., 2013)
Aim of the Present Study:

To cross-validate the Climate Schools: Alcohol & Cannabis course in a new cohort of Australian students.
Methods

- Sample drawn from the larger CAP Study trial:
  - $n=2268$ students
  - 27 schools, allocated to one of four conditions:

For the present cross-validation trial only **Climate intervention & Control**
**Study Design & Sample**

- Cluster RCT among 1,103 students from 13 schools (4 public, 9 private)
- 7 Control schools (n=527 students), 6 Intervention schools (n=576 students)
- Sample at baseline: Mean age = 13.3 years and 65% female

<table>
<thead>
<tr>
<th>Time</th>
<th>Baseline Survey</th>
<th>Alcohol module</th>
<th>Alcohol &amp; Cannabis module</th>
<th>Post-Intervention Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTROL</td>
<td>✔</td>
<td>×</td>
<td>×</td>
<td>✔</td>
</tr>
<tr>
<td>CLIMATE</td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>

80% follow-up rate
What did we find?
Climate increases knowledge about alcohol

Higher score = greater knowledge

Sig, p < .001; Climate > Control

All analyses were conducted using mixed-effect regression models in Stata, taking into account clustering of data at the school level, gender and academic performance.
...and increases knowledge about cannabis

Intervention students were significantly less likely to have drunk alcohol (even a sip or taste) in the past 6 months (Odds Ratio = 0.69)

...and were significantly less likely to intend on using alcohol in the future compared to controls (Odds Ratio = 0.62)
But no differences between groups for:

- Frequency of binge drinking
- Cannabis use in the past 6 months
- Intentions to use cannabis in the future
Students enjoy it!

I plan to use the information I learnt in this program in my own life

- Agree: 89.9%
- Undecided: 6.7%
- Disagree: 2.4%

Teachers like it too!

How likely are you to recommend Climate Schools to others?

- Very Likely: 38%
- Likely: 62%
- Undecided: 0%
- Unlikely: 0%
- Very Unlikely: 0%
Summary

✓ This study successfully cross-validated the Climate Schools: Alcohol and Cannabis course

✓ Found some significant program effects, even 5 years after the original trial

✓ Contributes to the field’s understanding of prevention programs

✓ Lends support to the feasibility of using the Internet to deliver prevention for alcohol and other drugs
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