

Young cannabis
users' attitudes
and beliefs

about

Cannabis

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education

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Report prepared for the NSW Department of Education and Training

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Dr Copeland and Dr Swift have contributed to a number of international publications investigating the nature of cannabis related harms and treatment of cannabis use disorders.

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1 Introduction

Cannabis is the most commonly used illicit drug in Australia and internationally (Hall, Johnston and Donnelly, 1999). Prevalence of cannabis use among Australian adolescents has increased over the past decade, with 36% of Australian secondary school students aged 12-17 years reporting use in 1996 (Hall et al, 1999; Lynskey et al, 1999). Recent media reports of cannabis-related school expulsions have highlighted community concern about the high rate of cannabis use by adolescents and the possible physical and psychosocial consequences of use. Research suggests that cannabis use may be associated with a variety of negative effects, such as impaired educational performance, initiation into other illicit drug use and adverse mental health (Hall, Solowij and Lemon, 1994; Kalant et al, 1999). It is during late adolescence and early adulthood that the patterns of heaviest cannabis use are likely to occur, increasing the risk of harmful acute effects and the potential for abuse and dependence (Chen and Kandel, 1995; DeWit et al, 2000). Adolescents have been found to be at greater risk of cannabis dependence than adults when using at the same level (Chen, Kandel and Davies, 1997). Finally, earlier onset of substance use could increase the risk of developing later substance-related problems (Anthony and Petronis, 1995; Fergusson, Lynskey and Horwood, 1996; Robins and Przybeck, 1985).

Studies on the prevalence of adolescent cannabis use have found marked age and gender differences. The prevalence of cannabis use has consistently been found to increase with age during adolescence (Makkai and McAllister, 1998) and higher rates of cannabis use have been found among males across all age groups (Hall et al, 1999). Heavy use patterns are also more common among males (Kandel and Davies, 1992).

A recent study describing the prevalence, context and recent trends in cannabis use among Australian adolescents from the 1998 National Drug Strategy Household Survey found that among 14-19 year olds, 47.8% have had the opportunity to use cannabis in the past year, and 45.2% have used cannabis at least once in their lifetime. Substantial increases have occurred since 1995 in the prevalence of lifetime use among young females. While most cannabis use was fairly infrequent, a minority of 14-19 year olds (9.4%) used cannabis at least weekly. Cannabis use was associated with regular tobacco and alcohol use, and other illicit drug use. Regular cannabis users also had lower levels of health on the general health and vitality dimensions of the SF-36 (Reid, Lynskey and Copeland, 2000).

These results show that cannabis availability and use is common among Australian adolescents and confirm that there has been an increase in use between 1995 and 1998, although only among young females. Future research is required to understand why this recent increase has occurred and trends in cannabis uptake and use patterns among this group should be carefully monitored. Interventions may need to be developed and made available to the group of young people who are using cannabis heavily.

This survey was commissioned by the New South Wales Department of Education and Training. It was designed to determine what young current cannabis users believed to be important issues regarding drug education in schools, their experience of drug education and their opinions of how it might be made more effective.

2 Methods

Participants

The sample comprised one hundred (100) cannabis-using adolescents recruited from a range of regions: eastern (28%), southern (24%), northern (16%), inner-west (13%) and west/south-west (19%) Sydney.

Eligibility criteria were:

- (i) aged between 15 and 19 years
- (ii) had consumed cannabis on at least one occasion in the previous year
- (iii) current or former secondary school students at NSW government schools
- (iv) residence in the Sydney metropolitan area
- (v) fluency in English.

The majority of participants (92%) were currently attending a secondary school and all had attended secondary schools in the preceding twelve months. While participants were recruited using convenience sampling, it was conducted to ensure recruitment of a range of cannabis users across the following criteria: gender, age, frequency of cannabis use and area of residence.

The interview

The interview comprised quantitative and qualitative questions on the adolescents' views and experiences of cannabis use and school drug (particularly cannabis) education. The interview was developed in consultation with the NSW Department of Education and Training.

The interview addressed the following: demographics; first experience of cannabis use; periods of abstinence and re-uptake; patterns and contexts of use, including use frequency; reasons for use; pros and cons of use; other drug use; drug use by family and friends; beliefs about risk and risks associated with cannabis use; level of knowledge about the effects of cannabis; perceived effects of cannabis use; sources of information on cannabis and their credibility; preferred help-seeking sources; and experiences and views on school drug education.

The questions on school drug (cannabis) education addressed issues such as: whether received or not; where, when and how frequently it was presented; who presented it; format of lessons; main messages; credibility of information; and likes and dislikes about their experiences. A series of questions also addressed the adolescents' ideas about future education. In addition, participants were asked who else should provide drug education; at what age such education should begin; and whether the approach for cannabis should differ to that for drugs such as alcohol and tobacco.

Participants were also asked what impact drug education had had on their cannabis use. The questions on cannabis use experiences were predominantly quantitative while those on drug education were predominantly qualitative.

The interview was pilot-tested on six adolescents and found to be well received. These interviews were subsequently incorporated in the final sample.

Procedure

Ethics approval was obtained from the Human Research Ethics Committee at the University of NSW. Parental consent was waived for adolescents aged 15 years (it was not required for those aged 16 years and older).

All interviews were conducted by two researchers with Honours degrees in Psychology, who had been involved in the development of the interview and were trained in its administration. Ninety four interviews were conducted from mid-November to mid-December, 2000. Six pilot interviews, which had been conducted in late August 2000, were also included in the final sample. All participants were recruited using the street intercept approach in a variety of locations in Sydney. This approach has previously been used successfully in Sydney in recruiting young illicit drug users. The majority of participants (80%) were recruited on the street or in shopping centres or malls (e.g. Westfield). The remainder were recruited from the beach (8%), youth centres (7%), Timezone (4%) and Homebake (a large music festival)(1%). The majority were interviewed at the time of approach. Interviews were conducted at varying times of the day, usually afternoons and early evening on week days with around 10% of interviews being conducted on a Saturday.

Potential participants were approached by an interviewer, who identified herself, and asked if they would like to be in a survey which aimed to assist the NSW Department of Education and Training develop their drug (particularly cannabis) education program. If interested, the interviewer ensured the adolescent was eligible, and then provided them with the Information Sheet and Consent Form to read. After ensuring the participant understood the study, the consent form was signed and the adolescent was provided with a copy to keep. All participants were assured of the anonymity and confidentiality of the information collected. Interviews were identified only by a number from 1 to 100, and were not linked in any way to identifying information on the consent forms.

Interviews took approximately 30 to 60 minutes to complete. Upon completion of the interview, the participant was thanked and provided with \$20 reimbursement. All interviews were conducted individually with privacy from other participants.

Data analyses

This report presents descriptive data from the interview. For the quantitative data, most information is presented for males and females in addition to the total sample. For categorical variables, percentages are presented. For normally distributed continuous variables, the mean (standard deviation and range) are presented, while for skewed variables, the median (range) is presented. No statistical tests were performed due to the large number of variables examined and the relatively small sample size.

The qualitative questions in the survey were content analysed into central themes. These themes were examined across age grouping, gender and recency of cannabis use, where appropriate. The quantitative and qualitative data are interspersed in the report when they address the same issues.

3 Results

Cannabis use

Demographics

The major demographic characteristics of the sample are presented in Tables 1 and 2 below.

Just over a half (57%) of the sample was male (Table 1). The adolescents' ages ranged from 15 to 18 years, with a mean age of 16.2 (SD=1) years (mean age of males and females=16.2). The majority of adolescents (84%) was born in Australia, although more than half (57%) reported at least one of their parents was born elsewhere. A broad range of ethnic backgrounds was represented, with almost one half (48%) coming from predominantly non-English speaking regions such as Asia, South America, Europe (not including the UK), Africa and the Middle East. Nevertheless, the majority (93%) cited English as their preferred language. 21% of males and 9.3% of females were born overseas and 5% identified themselves as Aboriginal or Torres Strait Islander.

Table 1: Demographic characteristics (n=100 unless specified)

	Total (%)	Male(%)	Female(%)
	100	57	43
<i>Age (yrs)</i>			
15	25	24.6	25.6
16	43	42.1	44.2
17	18	22.8	11.6
18	14	10.5	18.6
<i>Country of Birth</i>			
Australia	84	78.9	90.7
New Zealand/Pacific	4		
Europe	7		
Other	5		
<i>Parents' Country of Birth*</i>			
Australia	43	36.8	51.2
Europe	18		
Middle East/Africa	17		
New Zealand/Pacific	11		
UK	9		
Asia	8		
South America	5		
USA	1		
<i>Preferred language</i>			
English	93	89.5	97.7
<i>Aboriginal/Torres Strait Islander</i>	5	5.4	4.7
<i>Living Arrangements (n=99)</i>			
Parent(s)	91.9	92.9	90.7
Friend(s)	4	5.4	2.3
Other relative(s)	3	1.8	4.7
Partner	1	0	2.3
Independent	1	0	2.3

* Percentages do not necessarily sum to 100 because of multiple responses allowed

The majority of the sample was currently attending secondary school (92%) or completing secondary education through TAFE (2%) (Table 2). The level of education was fairly evenly spread between those at School Certificate level or lower (52.1%) and those continuing on to the Higher School Certificate (47.9%). Of the participants who had left school, two had obtained their School Certificate, one had left for family reasons and three had left because of problems at school.

Approximately one half (45%) of school/TAFE students was in part-time or casual employment. All but one of those who had left school were currently unemployed. The vast majority was currently living at home with their parent(s).

Table 2: Educational experiences (n =100 unless specified)

	Total (%)	Male(%)	Female(%)
<i>Education</i>			
Currently attending school	92	87.7	97.7
Completing school at TAFE	2	3.5	0
Not at school/TAFE	6	8.8	2.3
<i>School year (n=94)</i>			
Year 9	17.0	15.4	19.0
Year 10	35.1	44.2	23.8
Year 11	29.8	25.0	35.7
Year 12	18.1	15.4	21.4
<i>Employment</i>			
School/TAFE only	49	47.3	51.2
Part-time/casual employment	45	45.6	44.2
Full-time employment	1	1.8	0
Unemployed	5	5.3	4.7

First experience of cannabis use

The young people interviewed for this study had first tried cannabis at about 14 years of age (mean=13.9 yrs, SD=1.6; range=7-17; mean of 14 years for males and 13.8 years for females). This experience had predominantly been with friends (90%), although a small proportion (<10%) reported being with others, such as relatives and strangers; one person had been alone. The most common method of initiation was smoking in a waterpipe or 'bong' (66%), with about one third smoking a 'joint' (30%). The use of other methods was rare. Curiosity was the prime reason for first use (71%), followed by the observation that 'everyone else was doing it' (19%) and peer pressure (16%).

Periods of no use

Most participants (88%; 89.5% of males and 86% of females) had experienced a period when they had stopped using cannabis; the median longest time of abstinence was 18 weeks (range 2-208). Females had maintained abstinence for longer than males (median of 24 weeks compared to 16 weeks for males). A variety of reasons for abstinence was provided: one in five (20.7%) reported that they stopped because they did not like the effect or were not getting any effect; others reported they did not need to use it/feel like using it (13.8%), stopped using because of availability issues (12.6%), were sick of it or needed a break (11.5%), or had health or exercise issues (10.3%). A minority (<10%) reported stopping due to factors such as: cost, being too busy or having other priorities, not wanting to develop a problem, and relationship issues. Males were most likely to have stopped because they did not like it or felt it was not doing anything (24% of males who had stopped), while females most frequently reported not feeling the need for it and availability issues (19% of abstinent females).

In most cases, use recommenced (71/88 (80.7%); 78.4% of males and 83.8% of females). Reasons for re-uptake were predominantly that "everyone else was doing it" or they were hanging out with cannabis users (26.8% of those recommencing use), availability/cost (22.5%), social (18.3%), a desire to try it again (15.5%) and stress (11.3%).

Usual/recent use

The most common type of cannabis used (n=89 answered this question) was the heads of the plant (55.1%; 57.7% of males and 51.4% of females), smoked in a waterpipe/bong (79.8%; 83% of males and 75.6% of females). Leaf was smoked by approximately one quarter (28.1%; 25% of males and 32.4% of females); use of hash/hash oil (3.4%) was infrequent. Nearly one in five (18%) claimed to smoke "hydro" (grown hydroponically) or "skunk" (a variety of the cannabis plant with high THC content). One in five (21.3%) usually smoked joints.

Table 3 displays data on cannabis use frequency in the past week, month, year and lifetime. These data indicate the sample comprised a range of users. Just under a half (45%) had consumed cannabis in the past week. Forty percent of participants had used cannabis on week days. The recent users had consumed cannabis on an average of 3.2/7 (SD=2.2, range=1-7) days, smoking the equivalent of a median of 8 cones (range=1-280) in this period (1 joint calculated as equivalent to 3 cones) (Didcott et al, 1997). Males reported smoking on a mean of four days and females a mean of 2.4 days. Further, males reported smoking a median of 9.5 cones and females a median 6 cones during this period.

Table 3: Frequency of cannabis use

	Total (%)	Male(%)	Female(%)
<i>In past week</i>			
None	55	57.9	51.2
1-2 times	19	10.5	30.2
3-5 times	12	12.3	11.6
6-9 times	6	8.8	2.3
10-19 times	3	3.5	2.3
20-39 times	3	3.5	2.3
40+ times	2	3.5	0
<i>In past month</i>			
None	28	26.3	30.2
1-2 times	23	21.1	25.6
3-5 times	13	14.0	11.6
6-9 times	10	7.0	14.0
10-19 times	13	14.0	11.6
20-39 times	8	12.3	2.3
40+ times	5	5.3	4.7
<i>In past year</i>			
None	0	0	0
1-2 times	17	15.8	18.6
3-5 times	6	3.5	9.3
6-9 times	9	12.3	4.7
10-19 times	18	17.5	18.6
20-39 times	14	14.0	14.0
40+ times	36	36.8	34.9
<i>In lifetime</i>			
None	0	0	0
1-2 times	11	10.5	11.6
3-5 times	5	0	11.6
6-9 times	7	8.8	4.7
10-19 times	11	15.8	4.7
20-39 times	15	14.0	16.3
40+ times	51	50.9	51.2

Data on use in the past month indicate that approximately one half of the sample (49%) were smoking on about a weekly or more frequent basis (i.e. used 3-5 times); 13% had smoked on a daily/near daily (20+ times) basis. Males were more likely to have daily use patterns than females (17.6% smoked 20+ times compared to 7% of females). When asked to nominate their highest frequency of use in the last year (n=95), 20% reported at least daily use, 27.4% used on 1-6 days per week, 25.3% reported monthly or more but less than weekly use, and 27.4% had used less than monthly. There were few gender differences in patterns of most frequent use, although there was a slight tendency for males to be weekly or more frequent smokers than females (50.9% vs. 42.5%).

Context of use

Multiple responses were allowed for these questions and data are reported as percentages of respondents. Of the 82 participants responding to this question, they most commonly reported that they use when they felt stressed, needed to relax or felt some negative emotion (53.7%). Approximately one in five reported using when they felt happy (18.3%), bored (18.2%), or partying/having fun/socialising (12.2%). A similar proportion liked to use when they felt "normal" (i.e. their usual selves) (12.2%). A minority (<3%) reported other contexts, such as when wanting to sleep or being drunk.

When asked who they were most likely to smoke with, of the 78 young people who answered this question the majority reported being most likely to use with friends, with no distinction made whether or not they also smoked cannabis (76.9%). An additional 14.1% specified that they were most likely to smoke cannabis with friends who also smoked. Social situations were by far the most commonly nominated time for cannabis use, with few having reported being most likely to use alone (7.7%) or with partners (2.6%).

Cannabis was most commonly used (n=78 answered this question) at parties/social occasions (47.4%) and in houses, usually those of friends (46.2%). Approximately one in ten (12.8%) reported smoking anywhere, or nowhere in particular. A minority (<10%) smoked elsewhere, such as parks or at school.

Males and females provided similar information on context of use.

Reasons for use

Adolescents (n=99 answered this question) reported numerous reasons for their cannabis use: more than one third claimed to smoke because it helped them to relax, and relieved stress and negative emotions (38.4%) and because it was fun, enjoyable and made them happy (34.3%). Approximately one in five used because of curiosity (21.2%) or to relieve boredom (19.2%). More than one in ten also used for social reasons or because they were with others who were using it (17.2%), because of peer pressure or so they could feel they belonged to a group (12.1%) or because they liked the effect (10.1%). A minority (<10%) reported a variety of other reasons for use, including experiencing a new perspective when stoned, easy availability, wanting to get stoned, analgesia, insomnia, as a substitute for alcohol or to help them come down from other drugs, habit, or "to be naughty".

The majority (84.8%, n=99 answered this question) believed that other young people may have different reasons to them for using cannabis. The most common reasons (n=82 answered this question) stated for others' use were peer pressure or a desire to fit in or "be cool" (59.8%) or to escape negative emotions or family problems (47.6%). The other commonly reported responses were because young people may be addicted (25.6%) or to

relax (20.7%). A minority of participants (<10%) believed other young people may use for reasons such as: curiosity, boredom, enjoyment, to be social, as a substitute for alcohol or other drugs and insomnia. Just under 60% of females and around 40% of males believed that others may use cannabis to escape from problems. Peer pressure was seen as a motive by two thirds of males and half of the females in the study.

Pros and cons of cannabis use

The major 'pros' of cannabis use largely reflected the participants' reasons for use. Cannabis was predominantly liked (n=98 answered this question) because it was fun, and made the respondent feel happy and relaxed (71.4%). Approximately one third liked the 'headspin' or feeling of being stoned (30.6%). Around one in ten (12.2%) liked the social aspects of using and sharing with friends in social situations or the new perspective created when stoned (14.3%). Numerous responses were cited by a minority (<10%) of participants, including: boredom relief, sense of belonging, its analgesic and sleep-inducing properties, as a preference to alcohol or other drugs, its relatively cheap cost, and its lack of harmful effects. A small proportion (4.1%) reported there was nothing they liked about using cannabis. Males and females reported similar likes, although males particularly reported liking the changed perspective, and females the effect on sleep.

When asked to report things they did not like so much about their use (n=98 answered this question), a greater variety of answers was provided. The most common concerns focussed on negative health effects. One third specified negative health effects in general (35.7%), while others reported more specific concerns such as respiratory effects and a sore throat (16.3%), effects on mental health such as paranoia (11.2%), tiredness and lack of motivation (16.3%), and being vague or having cognitive impairments (9.2%). Cost or lack of availability (25.5%) was also a prominent concern, particularly among males (32.7% vs. 16.3% of females). Other dislikes revolved around control issues, with participants reporting 'greening out' (similar to overdose, with some reporting periods of unconsciousness) from smoking too much or cannabis that was too strong (12.2%), loss of control of actions (7.1%) and addiction or withdrawal symptoms (9.2%). The taste and smell were also disliked by around one in eight (both 12.2%) and approximately one in ten (10.2%) reported more general negative effects, such as "it will wreck your life" or "it causes problems". Other problems reported by a minority (<10%) were: difficulty in preparing cannabis, the 'munchies' (feeling hungry), its inability to solve problems, being unsociable while stoned, its illegality/fear of being caught, and fear of non-users' opinions. Again, only a minority (4.1%) reported that there was nothing they disliked about using cannabis. Males and females generally reported similar dislikes, although males highly ranked negative throat and respiratory effects and females were concerned about 'greening out'.

Other drug use

Alcohol consumption was almost universal in this group: 97% had consumed alcohol in the last year (94.6% of males vs. 100% of females), 82.8% in the last month and 67% in the last week. Binge drinking was the norm: those who reported alcohol consumption in the last week consumed a median of 13 drinks (range=1-72; median of 13 for males and 12 for females) over a median of 2 days for males and females (usually a weekend) (range=1-7) in this period. The majority were also tobacco smokers: 85.9% had smoked tobacco cigarettes in the last year, 77.8% in the last month and 75.8% in the last week. Daily smoking was the norm, with a median of 43 tobacco cigarettes (range=1-280) smoked over a median 7 days (range=1-7) in the last week. While males and females were

both likely to be daily smokers, females consumed nearly twice as many cigarettes in this time (median of 60 vs. 37).

These adolescents had used a median of 1 (range=0-5; median of 0 for males vs. 1 for females) illicit drug other than cannabis in their lifetime (Table 4). Hallucinogens (predominantly ecstasy) and amphetamine (including 'shabu', a smokeable form) had been used by approximately one third of the sample (35% and 29% respectively), with between 4 and 11% reporting use of other illicit. Seven of the eight heroin users were male.

The frequency of other illicit drug use varied: at least two thirds had used amphetamine, cocaine, hallucinogens or inhalants no more than 5 times in their life. One half of the heroin users had used more frequently than this, with 3/8 reporting use on at least 40 occasions. Two of the four benzodiazepine users had consumed them on at least 20 occasions. Adolescents reporting use of heroin, amphetamine, cocaine, hallucinogens and inhalants reported concurrent use of these drugs with cannabis. This was predominantly infrequent (1-2 times in lifetime), although one or two participants reported very frequent concurrent use of cannabis and heroin, amphetamine and hallucinogens (20-39 times).

Table 4: Lifetime use of other illicit drugs

	Total (%)	Male (%)	Female (%)
Hallucinogens/ecstasy	35	33.3	37.2
Amphetamine/stimulants	29	31.6	25.6
Cocaine	11	8.8	14.0
Heroin	8	12.3	2.3
Inhalants	8	3.5	14.0
Benzodiazepines	4	3.5	4.7

Others' drug use

Cannabis use was common among participants' friends (Table 5): three quarters (75.8%) reported that at least half of their friends used cannabis. Use of other illicit was less common, although more than one third (37.4%) of the sample reported that at least half their friends used them. This seemed pronounced among the young females interviewed (41.8% vs. 33.9% of males). Consistent with the prevalence of friends' cannabis use, only 12% of adolescents reported their friends disapproved of their cannabis use. Nevertheless, less than half the adolescents interviewed (43.4%) believed their own views were affected by their friends' opinions on cannabis.

Approximately one quarter of this sample (26.3%), predominantly females (39.5% vs. 16.1% of males), claimed one or both of their parents used cannabis, and two thirds of these had seen them using it. Use was slightly more prevalent among siblings and extended family (53.5%).

Risk perception

In order to understand how young people receive messages about risk taking it is important to know what they think is a risk. The most common themes for the entire sample were that taking a risk involved physical danger or rule violation. The greatest difference was between older, recent cannabis using girls who made more comments concerning rule

Table 5: Cannabis use by others

	Total (%)	Male (%)	Female (%)
<i>Proportion of friends using cannabis (n=99)</i>			
None	2.0	3.6	0
<half	23.2	25	20.9
half	47.5	41.1	55.8
>half	19.2	23.2	14.0
all	8.1	7.1	9.3
<i>Friends approve of their cannabis use (n=98)</i>			
Yes	56.1	55.4	58.1
No	12.2	10.9	14.0
Some only/unsure	24.4	29.1	18.6
They don't care	7.1	5.5	9.3
<i>Proportion of friends using other illicit drugs (n=99)</i>			
None	27.3	33.9	18.6
<half	35.4	32.1	39.5
half	27.3	25.0	30.2
>half	9.1	7.1	11.6
all	1.0	1.8	0
<i>Parents' use of cannabis (n=99)</i>			
Mother	6.1	3.6	9.3
Father	11.1	7.1	16.3
Both	9.1	5.4	14.0
Neither	73.7	83.9	60.5
<i>Cannabis use by other family members (n=99)</i>			
Brother	23.2	19.6	27.9
Sister	11.1	12.5	9.3
Both	3.0	0	7.0
Extended (e.g. aunt, cousin)	16.2	19.6	11.6

violation "*doing something you're not supposed to do*" and younger members of the sample in general who made more comments concerning danger.

There was little difference between the less recent and recent cannabis users in the more positive estimations of risk taking. These comments included views such as "*living life the way it should be lived*", "*there a risk in everything*", "*it's how you learn new things everyday*", "*having the balls to do it*", "*taking the challenge*", and "*something everyone should do once in a while*". There was also little difference between these groups in their making comments on knowing they were doing wrong but doing it anyway.

The three most common responses for females were "*doing something dangerous*", "*doing something when you are unsure of the consequences*", and "*doing something you're not supposed to do*". Among males it was "*doing something dangerous*", "*taking a chance*", and "*doing something when you are unsure of the consequences*". The students under 17 years of age nominated "*doing something dangerous*", "*doing something when you are unsure of the consequences*", and "*taking a chance*", and students over 17 years comment it was "*doing something you're not supposed to*", "*doing something dangerous that might affect you*", or "*put yourself in danger but doing it anyway*". Those who used cannabis in the previous week (considered recent cannabis users) were more likely to say "*doing something you are not supposed to*", "*taking a chance*", or "*know you're doing wrong but don't care*". Less recent cannabis users (no use in the previous week) nominated "*doing something dangerous*", "*doing something when you are unsure of the consequences*", and "*put yourself in danger but do it anyway*".

Less common themes across the sample included:

- *trying new things*
- *not being in control – lacking control of your body*
- *being in a position where you might hurt others*
- *pushing limits – going to the limit – taking a step into the unknown*
- *have a go but not doing too much*
- *hoping for the best*
- *a 50/50 chance*
- *taking heroin – taking a drug you don't know – taking a drug the first time, and*
- *a thrill.*

Numerous questions addressed participants' perceptions of risk, and risks potentially associated with cannabis use (Tables 6 to 9).

Occasional use was largely perceived to be associated with little or no risk (Table 6), although 36% believed it posed at least a moderate risk. Perceived risk increased with use frequency, such that 62% believed that daily use posed a great risk of harm to the user. Nevertheless, most participants did not believe themselves or others faced much risk if they smoked at the participants' current level of cannabis use (about 30% citing moderate or great risk). There were few major differences in perceived risk associated with use frequency, although males were twice as likely to perceive at least moderate risk of harms to others associated with their current use frequency (42.1% vs. 21%).

Table 6: Perceived risk of physical or other harm associated with frequency of cannabis use

	No risk (%)	Slight risk (%)	Moderate risk (%)	Great risk %
<i>Risk of harm from occasional use (once per month)</i>	16	48	30	6
Male	19.3	42.1	29.8	8.8
Female	11.6	55.8	30.2	2.3
<i>Risk of harm from regular use (once per week/fortnight)</i>	10	31	39	20
Male	12.3	33.3	35.1	19.3
Female	7.0	27.9	44.2	20.9
<i>Risk of harm from daily use</i>	1	10	27	62
Male	0	12.3	26.3	61.4
Female	2.3	7.0	27.9	62.8
<i>Risk of harm for others from using at adolescent's current use frequency</i>	29	38	23	10
Male	22.8	35.1	29.8	12.3
Female	37.2	41.9	14.0	7.0
<i>Risk of adolescent harming themselves from their current use frequency</i>	31	35	26	8
Male	26.3	40.4	22.8	10.5
Female	37.2	27.9	30.2	4.7

For those who endorsed that using cannabis involved such risks, across the entire sample the principal concerns were the effects on the brain, the lungs, and cannabis dependence. The most strikingly different sub group was older, recent cannabis using girls who were most concerned about resulting psychological problems. In contrast older, recent cannabis using males named far fewer harms than did any other sub group.

The three most common risks nominated by females in the sample were that it affects the brain ("*kills your brain cells, memory, concentration*"), causes psychological problems ("*depression, paranoia, hallucinations*") and that it affects the lungs ("*cancer, asthma*"). Girls were also the only group to express concerns about the effect on physical appearance ("*look unhealthy*") and being at risk of assault and accidents.

The males were most likely to say it affects the brain ("*kills your brain cells, memory, concentration*"), it affects the lungs ("*cancer, asthma*") and "*you can get addicted/hooked*". The younger group was most concerned with effects on the brain, lungs and social relationships e.g. "*lose respect of friends*", "*lose reputation*". The older group most commonly noted psychological problems, effects on the lungs, and getting addicted.

Less recent cannabis users were most likely to list that it affects the brain, causes psychological problems, and has effects on the lungs. Recent cannabis users were more concerned with the affects on the lungs ("*your lungs and throat take a bashing*"), social and school problems ("*lose respect*", "*lose reputation*", "*problems with family*", "*lose friends*", "*problems at school*") and the effects it has on the brain. Less common themes across the sample included:

- *doing anything for money/money problems*
- *not being fit for sport*
- *contribution to suicide risk*
- *hurting other people*
- *driving under the influence*
- *bad if you have kids*
- *nausea*
- *reduced motivation*
- *legal problems.*

Some perceived risks reported by this group by different individuals that are not mentioned in the relevant scientific literature included: "*going blind, sore muscles*", "*hair falling out*", "*lump in your neck*", "*hypertension*", "*heart failure*" and "*slows your blood system*".

The majority of the sample nominated daily, heavy or frequent users as those most likely to experience problems. Young people and those with emotional or social problems were also common themes. Older, recent cannabis using males nominated far fewer categories than did the rest of the sample.

The three most common themes among females were daily users, those who are weak or emotionally unstable, and rich people; among males they were daily users, "junkies", and those who use other drugs. Younger respondents were more likely to nominate daily users, those with emotional, social or family histories of addiction, and first time users, and older respondents to say daily smokers, anyone, and those who are socially or emotionally unstable. Less recent cannabis users were most likely to nominate daily users, those with social or emotional problems e.g. "*use pot to solve problems*", "*parents split up*", "*don't go to school*", "*not well brought up*", and someone who is reckless or with a "*bad attitude*". Recent cannabis users most commonly noted it was daily smokers, no one, or young people.

Less common themes across the sample included:

- *asthmatics*
- *mentally ill, "schizos"*
- *overweight people*

- *low socio-economic status - unemployed*
- *those influenced by peer pressure*
- *those who don't care*
- *someone who likes to party*
- *family history/predisposition ("someone who has it in them – cannabis is the key that opens the door")*
- *the elderly.*

Table 7 displays reported perceived risks associated with use of cannabis and other drugs. The majority of adolescents (>80%) believed there was moderate to great risk associated with daily tobacco smoking, as well as the concurrent use of cannabis and alcohol, cannabis and heroin, and alcohol and heroin. While females were heavier smokers than males, they were more likely to rate daily tobacco use as a great risk than males (62.8% vs. 45.6%).

Table 7: Risk of experiencing physical or other harms from cannabis and other drug use (n=100 unless specified)

	No risk (%)	Slight risk (%)	Moderate risk (%)	Great risk %
<i>Risk of harm from daily tobacco smoking</i>	4	15	28	53
Male	5.3	17.5	31.6	45.6
Female	2.3	11.6	23.3	62.8
<i>Risk of harm from using cannabis and alcohol together (n=99)</i>	1	12.1	26.3	60.6
Male	1.8	10.7	21.4	66.1
Female	0	14.0	32.6	53.5
<i>Risk of harm from using heroin and alcohol together (n=98)</i>	0	0	9.2	90.8
Male	0	0	10.9	89.1
Female	0	0	7.0	93.0
<i>Risk of harm from using cannabis and heroin together (n=99)</i>	0	5.1	7.1	87.9
Male	0	5.4	7.1	87.5
Female	0	4.7	7.0	88.4

In general, more than half the sample never (23%) or rarely (36%) worried about risks associated with their cannabis use (compared to 26% and 15% who were often or always worried). Males appeared to be more worried than females (47.4% vs. 32.6% were often or always worried). However, more than 60% of participants also believed that using cannabis two to three times a week was associated with a moderate to great risk of experiencing a range of problems (Table 8). This risk was least pronounced for legal problems (60.6%) and most pronounced for financial/money problems (86.9%), finding it hard to stop (82.9%), physical addiction/dependence (82%) and emotional/mood problems (81.9%). Males seemed more likely than females to perceive a moderate to great risk of legal problems, while females more frequently associated this risk level with physical health problems, physical dependence, finding it hard to stop, relationship problems, impaired educational or vocational performance and progression to drugs such as heroin or cocaine.

Table 8: Perceived risk of other adolescents experiencing specific problems from cannabis use* (n=100 unless specified)

	No risk (%)	Slight risk (%)	Moderate risk (%)	Great risk %
<i>Legal problems/trouble with police (n=99)</i>	4	35.4	47.5	13.1
Male	5.4	21.4	51.8	21.4
Female	2.3	53.5	41.9	2.3
<i>Financial/money problems (n=99)</i>	1	12.1	51.5	35.4
Male	0	14.3	48.2	37.5
Female	2.3	9.3	55.8	32.6
<i>Physical health problems (n=99)</i>	2	23.2	48.5	26.3
Male	0	30.4	41.1	28.6
Female	4.7	14.0	58.1	23.3
<i>Emotional/mood problems (n=99)</i>	3	15.2	36.4	45.5
Male	1.8	17.9	41.1	39.3
Female	4.7	11.6	30.2	53.5
<i>Physical addiction or dependence</i>	6	12	39	43
Male	10.5	14.0	40.4	35.1
Female	0	9.3	37.2	53.5
<i>Finding it hard to stop (n=99)</i>	1	16.2	35.4	47.5
Male	1.8	23.2	35.7	39.3
Female	0	7.0	34.9	58.1
<i>Lack of motivation</i>	3	20	33	44
Male	5.3	21.1	31.6	42.1
Female	0	18.6	34.9	46.5
<i>Relationship problems</i>	4	24	34	38
Male	5.3	29.8	29.8	35.1
Female	2.3	16.3	39.5	41.9
<i>Performing worse than normal at school/work</i>	4	17	32	47
Male	7.0	21.1	26.3	45.6
Female	0	11.6	39.5	48.8
<i>Starting to use drugs like heroin/cocaine</i>	7	22	35	36
Male	7.0	26.3	29.8	36.8
Female	7.0	16.3	41.9	34.9
<i>Accidents when stoned</i>	2	23	40	35
Male	1.8	24.6	38.6	35.1
Female	2.3	20.9	41.9	34.9

*Question asked: "How much do you think people your age risk having problems if they use cannabis at least 2-3 times per week"

The risks (Table 9) considered most important in these adolescents' decisions about cannabis use were associated with the development of physical health problems (51%) and financial/money problems (50%). Approximately one third said that emotional/mood problems (33%) or lack of motivation (30%) were important in this decision, while 20-30% placed importance on risks such as legal, dependence, relationship and educational/vocational problems. Participants rated having accidents while stoned (10%) and progression to other drug use (16%) as having least influence on decisions to use. The most pronounced gender differences lay with the importance males placed on legal problems (36.6% vs. 11.6%) as an influence on their decision to use compared to the female emphasis on emotional/mood problems (44.2% vs. 24.6%).

Table 9: Proportion endorsing each risk as important in making a decision about whether to use cannabis and frequency of cannabis use (n =100)

	Total (%)	Male (%)	Female (%)
Physical health problems	51	49.1	53.5
Financial/money problems	50	54.4	44.2
Emotional/mood problems	33	24.6	44.2
Lack of motivation	30	29.8	30.2
Impact on school/work performance	28	26.3	30.2
Legal/police problems	27	38.6	11.6
Physical addiction/dependence	21	17.5	25.6
Finding it hard to stop using	21	19.3	23.3
Relationship problems	20	22.8	16.3
Starting to use drugs such as heroin/cocaine regularly	16	17.5	14.0
Accidents when 'stoned'	10	10.5	9.3

While less than a half the sample (43%) believed cannabis use increased the likelihood of sexual contact among adolescents, 67% believed it increased the risk of unsafe sex.

Some (21%) believed that their level or pattern of cannabis use was affected by its illegality. When it was perceived to be a factor, the most common responses were that they used less because it was illegal (45.5%), avoided use in certain situations (27.3%), and were worried about getting caught (18.2%).

Cannabis effects

All of the adolescents interviewed believed they had some knowledge about the effects and risks of using cannabis: while 15% claimed only to have a little knowledge, most said they knew an average amount (58%). One in four (23%) said they knew a lot and 4% (all male) claimed to know everything.

Table 10 displays participants' beliefs about the impact of cannabis use on a variety of experiences commonly associated with its use. In most cases, the adolescents perceived a clear cut effect of cannabis regarding its ability to increase or decrease each effect. Cannabis use was believed to increase a persistent cough, mood, appetite, suspicion/paranoia, aggression, psychological problems such as schizophrenia, ability to sleep, anxiety levels and creativity. The following effects were believed to decrease: concentration, reaction time (i.e. slowed), short-term memory, physical coordination, motivation, and perceptions/sensory awareness. In most cases, these responses were consistent with existing literature on the effects of cannabis, although perceived increases in aggression and anxiety levels, and decreases in perception/sensory awareness, are not necessarily concordant with the common image of cannabis, or the participants' previously stated reasons for use (e.g. it relaxes me). The remainder of responses were fairly even-handed (i.e. neither strongly increase or decrease). A number of participants also recognised that cannabis could increase and decrease these effects. It is possible that this may reflect the ambiguity of the question and/or the participants recognising that effects may vary in different situations, and/or short-term or long-term effects.

Many adolescents perceived cannabis to have a negative impact on the majority of these effects, which is consistent in many cases with its perceived ability to increase or decrease each one (e.g. most believed an increase in cough, suspicion, paranoia and anxiety was a negative effect). Only ability to sleep and creativity were believed to be enhanced by cannabis use, which is consistent with the dominant belief that it increased these effects. However, some perceptions were surprising: an increase in mood was seen as predominantly negative. Some participants again claimed both outcomes were possible. As before, these answers may reflect some ambiguity in the time frame for these questions, as well as the meaning of increase/decrease and positive/negative : e.g. what is an increase in mood: more intense does not necessarily mean more pleasant.

Table 10: Participants' beliefs about the impact of cannabis use on each effect: (A) columns 2-4 display whether cannabis use increases or decreases this effect, or does both; (B) columns 5-7 display whether this effects is positive, negative or both

	Increase (%)	A Decrease (%)	Both (%)*	Positive (%)	B Negative (%)	Both (%)*
Persistent cough	85.7	11.2	1.0	4.1	93.9	1.0
Appetite	84.0	11.0	5.0	28.6	55.1	15.3
Suspicion/paranoia	79.2	14.6	2.1	16.5	78.4	1.0
Ability to sleep	70.7	17.2	8.1	58.2	26.5	12.2
Psychological problems (e.g. schizophrenia)	69.9	19.4	4.3	12.1	83.5	4.4
Anxiety levels	55.7	33.0	9.3	19.8	72.9	6.3
Mood	47.0	26.0	25.0	23.5	61.2	14.3
Creativity	46.9	31.3	15.6	54.3	41.3	2.2
Aggression	45.9	23.5	21.4	21.3	66.0	6.4
Ability to socialise	37.4	38.4	18.2	36.1	46.4	13.4
Sex drive	33.7	44.6	9.8	35.5	37.6	16.1
Stress levels	31.3	43.4	22.2	41.4	42.4	13.1
Perceptions/sensory awareness	16.3	68.4	8.2	15.6	75.0	6.3
Motivation	13.1	76.8	9.1	15.6	79.2	4.2
Concentration	12.0	83.0	3.0	12.1	84.8	2.0
Physical coordination	11.1	82.8	1.0	8.3	87.5	2.1
Short-term memory	10.1	80.8	4.0	9.4	86.5	2.1
Reaction time	7.0	86.0	6.0	4.0	90.9	4.0

*less than 10% claimed that cannabis use had no impact on each of these effects, with the exception of sex drive: 12.8% said it had no impact on whether sex drive increased or decreased, and 10.8% claimed no impact on whether it was positive or negative.

Females tended to give different and more variable responses to males, often responding that the outcomes were affected in both directions by cannabis use, or not at all.

In particular, males tended to believe there was an increase in persistent cough, sex drive, appetite, ability to socialise, ability to sleep, perceptions and creativity. Males tended to think stress levels decreased, while females perceived an increase. Males also tended to believe that the majority of effects were positive. There was a particular contrast for the

following, in which males believed the effect was positive, and females negative: stress levels, mood, sex drive, concentration, appetite, suspicion/paranoia, reaction time, memory, and ability to socialise.

More than half of the sample claimed to have experienced the majority of these effects (Table 11). The most commonly experienced effects were those on appetite (90%) and sleep (77%), followed by mood (65%), concentration (64%) and stress levels (61%). Very few adolescents reported experiencing psychological problems (14%). A greater proportion of males tended to report experiencing many more of these effects than females, particularly effects on sex drive (47.4% vs. 14%), reaction time (57.9% vs. 44.2%), physical coordination and ability to socialise (each 57.9% vs. 44.2%), aggression (54.4% vs. 34.9%), psychological problems (17.5% vs. 9.3%), and perceptions/sensory awareness (42.1% vs. 23.3%). Females were more likely to report experiencing effects on mood than were males (72.1% vs. 59.6%).

Table 11: Participants' experience of effects associated with cannabis use

	Total (%)	Male (%)	Female (%)
Appetite	90	87.7	93.0
Ability to sleep	77	80.7	72.1
Mood	65	59.6	72.1
Concentration	64	61.4	67.4
Stress levels	61	63.2	58.1
Motivation	57	59.6	53.5
Short-term memory	57	56.1	58.1
Ability to socialise	52	57.9	44.2
Persistent cough	50	56.1	41.9
Sex drive	33	47.4	14.0
Suspicion/paranoia	47	45.6	48.8
Reaction time	52	57.9	44.2
Physical coordination	52	57.9	44.2
Creativity	50	52.6	46.5
Aggression	46	54.4	34.9
Anxiety levels	43	47.4	37.2
Perceptions/sensory awareness	34	42.1	23.3
Psychological problems (e.g. schizophrenia)	14	17.5	9.3

Sources of information

Participants were provided with a list of potential sources where they could obtain information on the effects of cannabis (Table 12). When asked about their preferred information source friends were an almost universal choice (93%), and 57% rated them as their most common source of information. Schools/school teachers were also an information source for the majority (87%) and were rated as the second most common source (29.4%) of cannabis information. More than half of the sample also obtained information from television (61%), videos/movies (56%) and parents (56%), but information was rarely obtained from nurses, drug counselling telephone lines, church

groups or chemists (<10%). 'Other' sources of information were youth centres, Juvenile Justice, newspapers, pamphlets, counsellors (unspecified), police stations and 'watching people'. A greater proportion of males tended to report finding information from most sources, particularly doctors, nurses, chemists, drug counselling telephone lines, activity groups, libraries and the internet. Females were more likely to obtain information from friends.

While friends were by far the most common information source, they were not seen as the most believable (median= 6/10), with this rating conferred on doctors, drug counselling telephone lines (median of 10 each), nurses, the library and chemists (9) and the various 'other' categories listed above. Both school/school teachers (median=8) and parents (median=7) were also seen as more credible information sources than friends. Males and females provided very similar median ratings of credibility.

Table 12: Sources of information on the effects of cannabis and the "believability" of each source*

Source of information	Percent	Median believability (0-10)*
Friends	93	6
School/teachers	87	8
Television	61	5
Parents	56	5
Video/movies	56	5
Internet	38	7
Siblings	37	5
Other relative	28	6
Doctor	26	10
Activity group	18	6
Local library/books	12	9
Church group	9	6
Drug counselling telephone line	9	10
Chemist	9	9
Nurse	4	9
Other	10	9.3#

*1= not at all believable, 10=completely believable
 # Median = 9.3 because one respondent produced a rating of 9.5

Sources of help

In addition to being the most common source of information, friends were also the most common source of assistance these adolescents would turn to (77%) (Table 13). Females seemed to be more likely to say they would seek assistance from their friends and other more 'confidential' or anonymous sources, such as drug counselling telephone lines and the internet, while males said they would utilise a wider variety of potential resources.

To complement the quantitative data the young people were asked to give reasons why they would go to various people/places. Friends and siblings were commonly endorsed as a source as they were seen as trustworthy and able to keep a confidence. Parents were also frequently nominated as they cared for the young person and were seen as always being

there for the young person and concerned for their welfare or occasionally for their specific knowledge e.g. "my mum is a doctor and she's cool – she'd know what to do". Professionals such as doctors, nurses and chemists were also valued for their knowledge and experience, not being judgemental and that they also had to keep a confidence. Drug workers and telephone drug counsellors were seen as experts with the telephone counsellors having the additional benefit of anonymity. The internet was also frequently mentioned because of its richness of information and the ability to chat with people about your concerns anonymously "able to get adult opinion without getting into trouble". Teachers and school counsellors also were frequently endorsed as experts who "know what's best" or "to talk it through". Once again older, recent cannabis using males nominated far fewer categories of people they would talk to than the rest of the sample – only friends/siblings and parents.

Table 13: Places/people participants would seek help from if they had a cannabis problem

Sources of help	Total (%)	Male (%)	Female (%)
Friends	77	66.7	90.7
Parents	41	45.6	34.9
Drug worker/youth worker	41	42.1	39.5
Drug counselling telephone line	39	36.8	41.9
Siblings	28	28.1	27.9
Doctor	36	42.1	27.9
School counsellor	25	33.3	14.0
Other relative	18	24.6	9.3
Nurse	17	19.3	14.0
School teacher	17	21.1	11.6
Activity group	13	15.8	9.3
Internet	11	8.8	14.0
Church group	10	14.0	4.7
Local library	10	10.9	9.3
Chemist	9	12.3	4.7
Television	3	1.8	4.7
Police	1	0	2.3
Video/movies	1	0	2.3

Additional themes across the sample included:

- activity groups (sports related - rap group) as they "knew about it" or "they are healthy guys"
- library as it is an anonymous source for information gathering
- church groups "they are good people", "they listen to everyone", "they'd stop me"
- TV – "tell me where to go for help".

School drug education

Virtually all participants claimed to have received drug education during secondary school (96%; 94.7% of males and 97.7% of females). All but two of these (97.9%) said this included information on cannabis.

The remainder of these results comprise qualitative analyses of the participants' responses to questions about their experiences and views of school drug education.

Who presented your school drug education?

For the entire sample a teacher was the most common nomination at around 75%. Guest speakers were also very common (around 55%) and fell into three main categories: police, drug agencies, and ex-users or their parents.

When and how often were classes held?

There was great variation in how the students recalled the number and type of class they attended. Two people reported no drug education, many reported one-off or once yearly education with the majority reporting between three and eight lessons per year. Older, recent cannabis using males reported much less drug education than the other groups with one-off being the most common and a half day twice a year the most frequent noted by any in that category. The most frequent (30%) drug education noted was regular once a week lessons throughout the year.

In what subject or course was it taught?

The most common course (80%) was Personal Development, Health and Physical Education (PDHPE) with Science and special events (some lasting half a day) also being noted.

How were the lessons conducted?

The most commonly nominated (65%) format was lectures. This was followed by discussion groups, pamphlets, videos, assignments based on textbooks, plays, role plays, stories, slide shows and interactive quizzes and games. Recent cannabis using males nominated far fewer formats for the lessons than any other sub-group.

Less common formats included watching television, confidential discussions with the teacher, making their own pamphlets, visits by Mrs Wood to talk about her daughter (Anna, who died after taking ecstasy), and skills based programs on how to say no and manage high risk situations.

What do you think was the main message?

By far the most common message received by the participants was that they should not use drugs. There were a number of variants on the theme such as "*it's bad*", "*it's illegal*", "*it makes you crazy*", and "*it's bad for your health*". The next most common theme was a harm reduction message such as "*don't do it but if you do be careful*", "*experiment but know the risks*", "*be aware of the consequences of your actions*" and "*it might be fun but there are also risks*".

Less common themes included:

- *her daughter died so she understands the risks*
- *how bad it is and what it does*

- *ruins your life*
- *make the right choices for you and don't be influenced by others*
- *don't start it's hard to stop*
- *make kids aware*
- *make up your own mind*
- *it's socially unacceptable.*

How believable was the information? Why did you give this believability rating for the information?

The information presented in school drug education was perceived to be very credible (mean 7.9/10, SD 1.8, range 3-10; 1=not at all believable, 10=completely believable).

There was a very wide range of responses to this question. Once again, recent cannabis using males gave a poorer variety of comments but there was a balance in the nature of comments between ages, gender and levels of use. The positive responses included the following:

- General: *trained and credible, gave lots of examples, quoted lots of statistics and research, they know what they're talking about, and it was the same as my experience*
- Teachers: *teachers don't lie, teachers know about it, reliable source, it's their job and they are older and experienced in these things, and approved by the Board of Education so must be accurate,*
- *Cops got the message through.*

The perception of bias was also a common theme:

- *believable but one sided*
- *really biased – only the bad parts, aimed at younger kids*
- *parts believable but extremes highlighted, only aimed at not using*
- *people say different things – not like my experience.*

A further theme included a desire to do it anyway:

- *it was believable but I still want to do it*
- *listen but in the end you still do what you want to do*
- *the expert knew what he was talking about but it doesn't mean I won't do it.*

More negative comments included:

- *teachers have no idea – no discussion of why people use, teachers don't know what they're talking about*
- *police are pigs and you can't believe them*
- *cheesy video – cartoons not believable.*

What did you like about the sessions?

In general the comments were positive with no marked differences between the various subgroups of participants. The lecture format seemed the least popular and role-plays the most popular. They valued being spoken to as adults, talking freely, and hearing stories of real people. A number commented on the guest speakers – particularly those telling their own stories. While many thought it interesting and that it conveyed new information with nice teachers there were a number of negative comments. These included "*it was a free lesson*", "*a bludge*", "*it was stupid*", and "*I didn't like anything about it*".

What did you find useful/beneficial?

The most common response was that they found learning about the effects of drugs the most useful. Recent cannabis users gave markedly fewer responses than did less recent cannabis users to this question. There was a theme of the lessons acting as a brief intervention with comments such as *"it gave me confidence to use less"*, *"helped me to decide when and how much to use"*, *"it stops me smoking sometimes"* and *"what to do if you get into trouble"*.

The next most common theme was that they found nothing useful, it was too scientific, or that they knew it anyway. Additional themes included:

- *useful to know the risks before you take them*
- *opened my eyes*
- *taught how to use properly*
- *learn technical names*
- *dispel myths*
- *good to know potency, e.g. hash has more THC, how bad coffee is compared to heroin*
- *that your friends won't stand by you.*

What did you dislike about it?

The most common theme by far was that the teachers were boring and said the same thing year after year. Of note was a perception of some participants that the lessons were conducted to gather personal information about the students and that the teachers held stereotyped views of young people and used or held the information gained against the student *"teachers were biased against kids who disclosed"*, *"I wondered why they asked some of the questions"* or *"it's not safe to talk about my experiences at school"*.

Some commented that they would prefer a more interactive approach, less emphasis on alcohol, more detailed information, longer time allocated, less written material and less emphasis on not using and more balance in the message. Some felt that the teachers were condescending or were talking at the students. One person commented that they thought it was too unbiased.

A participant noted they found it very confronting as they were using at the time. Among the recent cannabis users there was a theme that there was too much emphasis on prevention and younger students rather than those who are already using.

What role do you think schools should have in education about cannabis?

By far the most common response theme was that schools should have a larger role in education about cannabis, particularly about the positive and negative effects and consequences of use. A further theme was to *"make it less a crime and more just a really sad thing to do – take less of a policing role and more of an educating role"*. One person wanted a positive message not to use and another wanted them to do drug testing twice a year.

Among females there was a theme of help seeking with requests for the involvement of the school counsellor *"they should keep people informed and give good advice to kids in trouble"*, *"help for those needing it"*, *"anonymous counselling by someone with whom you can have confidential relationship"*, and *"more actively involved in counselling kids who need a bit of guidance"*.

A less common theme was that they should have no role, "*no one listens*", and "*it's someone else's job as marijuana is not life threatening*".

What input should students have (e.g. programming, focus, format etc)?

The students strongly asserted that they should have a big role in the development of their cannabis education, with input into the format, frequency, content and presenters. There was a strong theme of wanting to talk about their own experiences in groups and to help do presenting when they have their own stories to tell. They felt young people would be able to advise on which drugs were most prevalent and of greatest currency at the time.

Only a very small number commented that they should have no involvement and "*should stick to expert opinion*".

Who are the most appropriate people to present cannabis education?

Guest speakers were the most commonly mentioned people to present cannabis education. The categories or organisations named most commonly were health professionals such as doctors and drug specialists, who were seen as having more credibility. The Ted Noffs Foundation was named and the police received a small amount of support. One of the most commonly supported category of guest speaker was one with personal or family experience with drugs – especially young people. The notion that they should be someone who would not tell the teacher what was said was also endorsed.

The next most common group was teachers, particularly those with appropriate personal development, science or health training. Two other groups mentioned were school counsellors and parents.

When and how often should it be taught?

The most commonly endorsed frequency of cannabis drug education was once a term for an hour or a half day. This was thought to be most usefully held before a weekend or a holiday for maximum impact. The range of frequencies was great with all those mentioned listed below:

- *twice a week with sex education*
- *once a week for two hours*
- *once a week but not compulsory*
- *once a fortnight for 40 mins, for first two terms*
- *once a month for a half day*
- *twice a term for one hour each*
- *twice a year*
- *once a year*
- *after school*
- *every year for a whole week*
- *whatever students want and a counsellor be available.*

In what course should it be taught?

The most commonly endorsed course was Personal Development, Health and Physical Education. Other suggestions included as a separate subject, Science, free periods, Legal Studies and special forums after Year 10.

How should the lessons be conducted?

The most popular format was discussion groups, particularly those that were informal where questions can be asked. While role-plays were supported by a number of students a smaller number specifically did not want role-plays. There was even stronger division on the use of booklets with many students saying they preferred them, particularly as they could be taken home and used to initiate discussion with their parents. A similar number however, particularly males, did not like booklets and did not want to do any writing.

There was less support for videos, skills training and drama. Additional comments included games, textbooks and more current material.

What should young people be taught about cannabis?

Once again the strongest theme was around learning the effects and consequences of cannabis use, including legal issues. Most thought both good and bad effects should be discussed but a few felt only the bad effects should be emphasised. A related theme was learning facts and fallacies, including what it is, what types of cannabis there are and what it does.

A further theme was that harm reduction tips should be taught such as "*use bongs instead of joints*". This is actually incorrect as 'bongs' may cause more harm to the respiratory system than 'joints' (Gowing, Ali and White, 2000). There were also calls for the message to include why people use, work on self-esteem and where to get help if you have a problem.

More novel themes included:

- *rehearse role plays each day*
- *give students marijuana to try and then talk about it.*

What do you think the main cannabis education message should be?

The strongest theme in the message suggestions was "*don't do it at all – life's better without it*". Variants of this included "*it causes lung cancer – don't do it*", "*don't use it – it's illegal*" and "*it is a simple pleasure that will not fulfil you in the long term*".

A theme almost as strong was a range of harm reduction messages. These included:

- *don't use marijuana – shouldn't because of the effects but if you have to, know the dangers and where to get help*
- *be careful how you use it*
- *try not to let it get out of control*
- *it's up to you but when you do it be careful*
- *you'll probably end up trying it, as everyone does, but it has effects and problems so just be careful or know what you're using*
- *if you're going to use it know the effects, moderation and don't use it to solve problems*
- *it's a cultural thing for some people*
- *use it for yourself not just because of others – to be cool*
- *it's OK to use it but don't mix it with alcohol*
- *don't use bongs or mix with tobacco.*

There was a theme concerning its addictive properties specifically such as:

- *it's very addictive*
- *it seems harmless but becomes addictive over time*
- *don't get addicted.*

The remaining suggestions on messages included:

- *if you're going to use it and buy it then make sure you have the money*
- *it's sometimes mixed with other chemicals*
- *there's a first time for everything but don't do it again.*

At what age do you think cannabis education should begin?

The beginning of high school was the most strongly endorsed age at which cannabis education should begin. There was also a small number of participants who supported kindergarten, late primary school and mid-teens.

Should it vary according to the age of the adolescent? How?

There was an even split between those who thought the education on cannabis should be the same all through the school years and those who thought the message should become more complex as they got older.

Should the approach to cannabis education be different to that for alcohol and tobacco?

The most common belief was that it should be the same approach as used for alcohol and tobacco with comments such as "*just 'cos it's illegal doesn't mean it's worse*". Similar comments, however, were used to endorse the opposite view. Of those who believed it should be taught differently, they made comments such as "*they've all got different effects*" and "*alcohol and tobacco can kill you but cannabis is OK*".

Did the cannabis education you received in school have any influence on your use of cannabis? How?

The most common theme was that school cannabis education had had an impact on their level of use. The range of comments is set out below:

- *yes, made me want to quit – program was good, made me want to quit partly because of it*
- *made me aware of the dangers*
- *yes it was more interesting and I listened more*
- *made me think twice but not stop completely*
- *yes, it made me more worried about my use and have breaks for a while*
- *yes, don't smoke it heaps and heaps because I know the effects and I'm careful*
- *yes, it helped me to use it within my own limits and sensibly*
- *I don't use it as often as I could because I'm aware of the effects – when I learnt some stuff I didn't know I cut down*
- *a little – made me think about it*
- *made me more cautious about using it*
- *yes, it helped but I don't know how*
- *yes, made me stop*
- *some, tells me not to use it a lot*
- *yes, made me more cautious – and only use rarely because of the effects*
- *yes, teachers don't realise it but it sinks in*
- *yes, taught me how to say no*
- *provided me with knowledge and discouraged me*
- *a little, made me worry about the effects*
- *a bit, made me not use as much and turn it down more often*

- *a little, know what it's doing to me but enjoy it so it's hard to care. Maybe I control it better knowing the effects*
- *yes, it made me think a lot before I jumped straight in.*

The far less common negative themes included the following comments:

- *no effect but if it had been more realistic and interesting then maybe*
- *it couldn't have*
- *yes, it increased my use because I want to do what they are telling you not to try and want to try the effects*
- *no, didn't receive any*
- *no, it was too late*
- *no, I smoke about the same but feel more guilty about it and knowledgeable about the risk.*

How could your school drug education experience have prevented or limited your use of cannabis?

The strongest theme was the need for cannabis education at a younger age that is factual and credible, including the health and psychological consequences, particularly dependence. A sample of the comments are listed below:

- *if it had taught me younger about the effects, no-one really talked to me about it*
- *if it had given me truthful information when I was younger*
- *might have slowed me down if I got some when I was younger*
- *if it had sounded more believable, interesting and persuasive*
- *show a video of what happens when you use pot*
- *if done more frequently and heard about other people's problems*
- *spend more time on the subject*
- *if they made it sound worse*
- *if I learnt bad things maybe I wouldn't have tried it or maybe use it less*
- *if there was more education, specific and down to earth I may have reduced my use*
- *if made aware of the addictive nature*
- *more on negative effects, if it scared me more*
- *if it was discussed instead of just booklets*
- *teach me younger 'about' the effects and how to refuse*
- *if it had been more factual and unbiased*
- *a graphic video of someone badly affected by drugs.*

A particularly thoughtful comment from an older male who was a less recent user of cannabis was "If I was presented risk information that forced me to decide what kind of social life I want, what kind of health I want, what kind of person I want to be it would have had a greater impact than just telling me dope is bad".

Additional comments included:

- *it couldn't have an impact as I'm going to make up my own mind no matter what people tell me*
- *it's what's outside school that gets you on it.*

There were no comments to the effect that it should not be taught or that it had a strongly negative impact.

Any other comments?

- *Glad that these people are doing it – getting ideas to help the next generation.*
- *Doing surveys like this one where they randomly ask kids what they think.*
- *Should be improved and talked about more.*
- *Want more on ecstasy.*
- *More stuff about alcohol.*
- *Involve sports people in teaching.*
- *Stricter confidentiality as I don't trust teachers.*
- *How to help a friend who is in trouble with it.*
- *This interview rehashed what I learnt at school and made me think about it again.*
- *Not going to get rid of pot so need to find a way of coping.*
- *Drugs can be bad but they can also be enjoyable if you use them moderately.*

4 Discussion

This study interviewed 100 people who were current or former students of New South Wales government secondary schools, between the ages of 15 and 19 years, about their beliefs and experiences relating to cannabis use and school drug education programs. A convenience sample was recruited using a street intercept methodology, with sampling ensuring a range of respondents by age, gender and area of residence.

On average, participants were 16 years old and the majority was born in Australia. Generally they first smoked cannabis in a waterpipe (bong) at an average 14 years of age with their friends, because they were curious about the effect. Just under half of the participants had smoked cannabis in the previous week, and one in five reported using cannabis at least daily at some time during the last year. The most common reason for smoking cannabis was that they felt stressed, needed to relax or to deal with a negative emotion with only slightly fewer reporting they used because it was fun. Cannabis was most commonly used at parties or social occasions. The most common beliefs about why other people used cannabis, however, were peer pressure and to manage negative emotions and family problems. The perceived positive aspects of cannabis use were that it was fun and they enjoyed the stoned feeling with the negative aspects being harm to physical and psychological health. Cannabis use was common among their friends and siblings and around a quarter of the sample reported that their parents were also cannabis users.

In assessing the risks associated with cannabis use, occasional use was seen to be associated with little or no risk, with perceived risk increasing with level of use such that daily or recent users were seen as having the most risk of harm. More than sixty percent of the participants believed that using cannabis two or three times a week was associated with a moderate to great risk of experiencing a range of problems. Nearly half the males were often or always worried about the risks associated with their cannabis use, compared with nearly a third of females. The most common concerns were the effects on the brain and lungs and the risk of dependence. The risks considered most important in their decisions about cannabis use were physical health problems and financial cost. Males were more concerned with legal consequences and females with the effects on emotional or mood problems.

All of the young people in the study believed that they had some knowledge of the effects of cannabis with only fifteen per cent reporting that they had little knowledge. The most commonly experienced effects included those on appetite, sleep, mood, concentration and stress. Males were more likely to have experienced effects on sex drive, reaction time, physical co-ordination, the ability to socialise, aggression, psychological problems and perceptions. Females were more likely to report the effects on mood than were males.

Implications

The average age of initiation of cannabis use among these young people was approximately 14 years, which is the same as that reported in the National Drug Household Survey (Reid et al, 2000). Nevertheless, 42 of the 100 young people in this sample had initiated their use at or before age 13 years. These figures suggest that educational approaches need

to accommodate this shift in young peoples' experiences and, while continuing to focus on prevention, incorporate content and strategies to address experimental and sometimes regular use. As the prevalence of use increases across adolescence, appropriate messages for different ages ought to be considered. Approximately half of this sample suggested that messages should become more complex with age. In addition, the likelihood of using other drugs will also change. In this sample, alcohol and tobacco use was very common, and more than one quarter had tried hallucinogens/ecstasy and amphetamines.

Data on the perceived effects of cannabis indicate that these young people were quite knowledgeable about the short-term and long-term physical, social and legal consequences of use. Focussing on the effects they are most likely to have experienced or be concerned about and tailoring the discussion to address these issues may have more impact than didactic discussion of potential harms.

These young people did not believe cannabis was entirely benign in its effects, particularly at heavier levels, and they were concerned about its use. However, they did not necessarily link their current use levels with harm. Again, tailoring and linking discussions of the consequences of use with the concept of risk, who they believe to be at risk and how they perceive risk varies with levels of cannabis use, may further encourage young people to consider its (potential) impact on their life rather than attributing cannabis problems as a risk only for other young people.

In addition, the ongoing provision of objective information on the consequences of use would be a useful supplementary tool in correcting any misinformation they may have and providing them with facts that will assist them in making lifestyle choices. While harm reduction is often a controversial issue, particularly in a school context, the extent of young peoples' knowledge suggests that messages such as 'don't use' will not be effective without acknowledging and addressing young peoples' beliefs, attitudes and experiences. Indeed, while 'just don't do it' was the most commonly suggested message for education, the harm reduction theme was also strong, particularly around dependence.

Consistent with the tailoring of the message, gender differences in experiences, attitudes and concerns should also be incorporated in the education. Young women in the study smoked less frequently than the males. They were also more likely to believe that others used to escape from problems, were more concerned about overdose ('greening out'), and were more concerned about the psychological effects of use than were males. Males were more concerned about the legal consequences of their cannabis use and more concerned about the risks associated with their current level of cannabis use than were females.

Experience with other drugs may also modify the potential consequences of cannabis use (e.g. alcohol and cannabis on driving behaviour), as well as young peoples' perceived risk of experiencing adverse effects. Males were much more likely to have used opiates than were females in this sample. There were not sufficient numbers or focus in this study for cultural differences to be ascertained but this may be a useful area for further research.

On the whole, these young people rated school drug education to be very credible. While information was gathered from a wide variety of sources, 'professional' sources such as school, medical services and drug and alcohol counselling lines were perceived as most credible. However, schools were less likely to be perceived as a source of help. Friends, parents, drug and alcohol/youth workers and doctors were the main sources when help was needed. This data reinforces the importance of peer networks among young people and suggest the need to continue exploring their role in drug education and support. The participants' ranking of parents as their second most common resource for

help-seeking also indicates the potential role of families in reinforcing the messages of school drug education. Young people appeared to value knowledge and experience, a non-judgmental attitude and confidentiality. Access to a variety of information sources and resources for assistance should therefore be encouraged and facilitated through schools, particularly if the school environment is not perceived to confer sufficient privacy.

Virtually all of these young people had received school drug education (which included education about cannabis) and they made numerous recommendations for its content and format although there was no universal agreement. In general, these young people were positive about their drug education experiences: in particular, being spoken to as adults, talking freely, having guest speakers and learning about the effects of drugs. Many believed schools should play a larger role than they do currently, with females in particular suggesting a greater role in help-seeking via the school counsellor. However, some students found drug education boring and repetitive and feared that it was used to gather personal information, which reinforces the concerns students expressed about confidentiality.

Respondents' comments suggest the need for a flexible and interactive approach to education, incorporating credible guest speakers such as health professionals or people with personal or family experiences of drug use, as well as teachers. A range of frequencies and contexts was suggested, this most commonly being up to half a day once a term, predominantly during Personal Development, Health and Physical Education (PDHPE), or as its own subject. There was a sense that this subject presented scope for a different style of teaching to the standard curriculum, with less emphasis on didactic lectures and more on formats such as discussion groups, role plays and guest speakers. There was a strong theme of learning about the effects and consequences of cannabis and other drug use, including harm reduction tips from many, although the strongest requested message was one encouraging abstinence. Most participants believed education should commence at the beginning of high school. Comments on whether the approach to cannabis should differ from that of alcohol and tobacco indicated a division between those who endorsed the same approach (the most common view) and those who believed the differences should be highlighted. A middle ground approach would be to use similar techniques and format for all drugs but to highlight the specific issues for each one.

This study reinforces the potential of school drug education to influence students' cannabis use. Many participants commented that the cannabis education they received made them aware of the effects and risks of use, and in some cases influenced them to stop or modify their use, at least for a while. There was a strong belief that commencing factual and credible education at a younger age could have been more effective in preventing or limiting their use, which reinforces their comments that cannabis education should commence earlier.

While there is no guarantee that the young people recruited for this report were representative of young cannabis users who attend, or have attended, secondary school across NSW, many of their characteristics and experiences are consistent with other data on cannabis use among adolescents (demographics, patterns, context and experiences of use, and other drug use). The young people interviewed were enthusiastic and happy about being consulted about drug education in this way, believing they had a big role to play in curriculum planning and relating of experiences. They generally provided thoughtful answers to the questions asked. This data should be complemented by further research using a variety of methodologies to investigate how to maximise the opportunities to educate young people about cannabis and other drugs and encourage healthy lifestyle choices.

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