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Title

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Permalink

<https://escholarship.org/uc/item/1ht6j62m>

Journal

Addictive behaviors, 14(2)

ISSN

0306-4603

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Publication Date

1989

DOI

10.1016/0306-4603(89)90039-7

Peer reviewed

PREDICTING INTENTION TO USE COCAINE IN TEENAGERS IN SYDNEY, AUSTRALIA

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Abstract — Recently in Australia, the question has been raised of whether cocaine poses a threat to our community. We investigated this question in a random community sample of 1002 teenagers aged 14 to 19 years in Sydney, Australia. Subjects were asked whether they or members of their social network used drugs, and questioned on their beliefs about and attitudes to drugs. Intention to use cocaine was measured by the statement, "If a friend I trusted offered me cocaine, I might try it." The predictors of intention were: personal use of illicit drugs, tranquilizers, or inhalants; exposure to cocaine users; pro-drug beliefs; self-perceived consumption of too much alcohol; age; and parental use of drugs. The results suggest that a demand for cocaine — indicated by intention to use cocaine — already exists in the community. The association between intention to use cocaine, drug beliefs, personal use of drugs and exposure to drug users in the social network should be kept in mind when proposing strategies for preventing a cocaine problem in Australia.

INTRODUCTION

Cocaine use has been recognized as a major public health problem in the United States, particularly with the recent introduction and rapid diffusion of 'crack.' In Australia, it seems that cocaine has been available in limited quantities only. However, crime statistics and reports from treatment agencies indicate an increase in the availability and use of cocaine over the past few years (NSW Drug and Alcohol Authority, 1986).

Should Australians be worried about an imminent "epidemic" of cocaine use? Does a demand for cocaine already exist in the community? This paper sets out to investigate these questions, using a random sample of teenagers in Sydney, the capital of New South Wales. The approach was to look at the teenagers' intentions to use cocaine. Intentions have been shown to predict voluntary behaviour (Fishbein & Ajzen, 1975) and are even reasonable predictors of the cessation of an addictive behavior such as cigarette smoking (Pierce, Dwyer, Chamberlain, Aldrich, & Shelley, in press). The effect of drug users in the social network was also of particular interest.

Much previous research on adolescent drug behaviors has looked at secondary school student populations. As drug users are more likely to leave school at an earlier age than nonusers (Mills & Noyes, 1984), school studies may underestimate the prevalence of drug use in the community. For this reason we chose to study a community sample.

METHODS

In 1985, 1002 teenagers randomly selected from the Sydney population were interviewed in their homes. The sampling procedure, that of a commercial survey company, was as follows. Ten electoral subdivisions were selected at random. An

Table 1. Drug belief factor, survey of Sydney teenagers, 1985

	<i>N</i> = 898	Factor Loading
1. I don't like drugs and avoid taking them even for little things like headaches.		.47
2. Regular marijuana smokers eventually end up using cocaine, heroin and other hard drugs.		.45
3. I'd be terrified of taking heroin.		.40
4. If you try heroin once or twice you can easily become addicted.		.39
5. People shouldn't be scared to try unusual things like drugs that affect how you feel.		-.38
6. You shouldn't take drugs to make you feel better.		.37

Reliability — Cronbach's Alpha = .51.

address within each subdivision was then randomly selected from the electoral rolls, and served as a starting point from which the interviewer proceeded in a clockwise direction around the residential block. The interviewer was instructed to obtain ten interviews, and given an incentive to obtain interviews from the first 10 households. Up to four callbacks were made if the occupants were out. For each household contacted, the youngest person between the ages of 14 and 19 years was selected for entry into the study. Choice of sex was made randomly with balancing within clusters. This procedure has been shown previously to give a representative sample of the Sydney population (Dwyer, Pierce, Hannam, & Burke, 1986). The response rate was 66.7% of contacted eligibles.

A detailed letter was given to all eligible contacts, and their parents where relevant, explaining the purpose of the interview, the confidentiality of the responses, and how the results would be used. Interviews lasted about 30 minutes. Both open-ended and multiple choice questions were asked. To ensure that sensitive questions and the participants' responses could not be overheard by other household members, the interviewer presented cards and respondents indicated their answers from a list of possible responses. Attitudinal items were answered by a three-point agreement scale. The respondent was asked about current and lifetime use of alcohol, tobacco, marijuana, illicit drugs, misused prescription drugs, and other substances (such as glue and solvents) by themselves, their friends, family, and other acquaintances. Other information included a measure of intention to use cocaine ("If a friend I trusted offered me cocaine, I might try it"), several items reflecting drug beliefs, perceptions of drug use by peers and perceptions of the drug problem in the community.

Factor analysis of nine statements about drug beliefs produced two factors, one a general drug-belief factor and the other on attitudes to alcohol. The items, factor loadings and reliability of the general drug belief factor are given in Table 1. The factor was divided into quintiles. Respondents in the upper two quintiles were labelled as having pro-drug beliefs.

Use of any drug is defined here as the use of one or more of the following drug groups: alcohol (perceived excessive intake); tobacco; marijuana; other illicit (amphetamines, hallucinogens, cocaine or heroin); tranquilizers (perceived excessive use); and inhalants (such as glue, petrol or solvents).

Table 2. Characteristics of the study sample, survey of Sydney teenagers, 1985

	Age group (years)			
	14-16		17-19	
	N	% of Age Group	N	% of Age Group
Sex				
Male	309	51.6	232	57.6
Female	290	48.4	171	42.4
Studying in 1985	567	94.7	245	60.8
Primary	1	0.2	0	0.0
Secondary	560	93.5	150	37.2
Technical	6	1.0	52	12.9
Tertiary	0	0.0	42	10.4
Not specified	0	0.0	1	0.2
Employment in 1985				
Full-time	25	4.2	148	36.7
Part-time	114	19.0	84	20.8
Not employed	460	76.8	171	42.4
Total	599	100.0	403	100.0

RESULTS

Characteristics of the sample

The sociodemographic characteristics of the study sample are given in Table 2. There were approximately equal numbers of males and females. In the 14 to 16 year age group, 94% of respondents were in high school during 1985. For 17 to 19 year olds, 37% were in high school, 13% were at technical schools and 10% at tertiary institutions. Only 4% of 14 to 16 year olds had full-time work compared with 37% of 17 to 19 year olds. About 20% had part-time work in both age groups. Only 5% of the total sample were neither working nor studying. Most (99%) respondents were single. A comparison with data from the Australian Bureau of Statistics showed that there were no major differences between the study sample and general population of Sydney for that age.

Drug use by age

Self-reported drug use increased with age as shown in Figure 1. The prevalence of tobacco smoking increased from less than 10% to over 20% between the ages of 14 and 16 years. Drinking too much alcohol (self-perceived) and use of marijuana rose most dramatically in the older age groups. By age 19 years, more than half of the respondents were drug users.

Just under one third of the sample used no drugs at all and a further one third used alcohol only. The proportion of respondents using a drug in addition to alcohol and tobacco was 13%. For about one third of this group, the additional drug was marijuana. The most common combinations included alcohol, tobacco, and marijuana. Marijuana was always used in combination with other drugs, usually alcohol.

Fig. 1. Drug use by age.

Impact of the social network on personal drug use

Even at the age of 14 years, two-thirds of respondents had friends who were drug users. This proportion increased steadily with age to 94% at age 19. The proportion who reported parental use did not change with age. The proportion with siblings who used drugs rose from 24% in 14 year olds to just under 50% in 19 year olds.

The association between personal use of any drug and use within the social network is shown in Table 3. If neither friends nor family members used drugs, only 9% of teenagers used drugs themselves. This proportion increased to 21% if parents and siblings, but not friends, used drugs. If friends but not family members used drugs, the proportion of teenagers using any drug was 20%. This increased to about 50% if siblings only or siblings and parents used drugs. Parental drug use appeared to have less effect on personal drug use than did drug use by siblings.

Drug beliefs and drug use in the social network

There was a clear association between drug beliefs and drug use. Only 16% of teenagers with anti-drug beliefs (first quintile) used drugs compared with 60% of those in the fifth quintile. The proportions of teenagers with pro-drug beliefs at different levels of exposure to drug use in their social network are shown in Table 4.

Table 3. Exposure to drug use in the social network and personal use of any drug in Sydney teenagers, 1985

	No Friends Use Drugs		Friends Use Drugs	
	N	% Who Use Any Drug	N	% Who Use Any Drug
No family drug use	87	9	290	20
Parents only use drugs	51	4	240	31
Siblings only use drugs	16	6	129	50
Parents and siblings use drugs	19	21	170	51

Table 4. Pro-drug beliefs and exposure to drug use in the social network in Sydney teenagers, 1985

	No Friends Use Drugs		Friends Use Drugs	
	<i>N</i>	% With Pro-Drug Beliefs	<i>N</i>	% With Pro-Drug Beliefs
No family drug use	61	15	261	34
Parents only use drugs	48	17	221	43
Siblings only use drugs	12	25	119	50
Parents and siblings use drugs	16	25	160	57

If no friends or family members used drugs, only 15% of teenagers had pro-drug beliefs. This proportion was increased to 25% if there were multiple users in the family. There was a marked peer effect, with the proportion of respondents with pro-drug beliefs at least doubling at each level of family use. If all three elements of the social network — friends, parents, and siblings — used drugs, 57% of teenagers had pro-drug beliefs.

Predictors of intention to use cocaine

The measure of intention to use cocaine was the statement, "If a friend I trusted offered me cocaine, I might try it." A logistic regression gave the following predictors of cocaine intention: personal use of illicit drugs, tranquilizers, or inhalants; exposure to cocaine users; pro-drug beliefs; self-perceived consumption of too much alcohol; age; and parental use of drugs.

Age, drug beliefs, and intention to use cocaine

The proportion of respondents with pro-drug beliefs and intention to use cocaine increased with age as shown in Table 5. In 14 year olds, 26% had pro-drug beliefs, compared with 57% of 19 year olds. Intention to use cocaine was negligible in the youngest age group, increased to around 7% of 15 to 17 year olds, rose again in 18 year olds, then increased markedly to 21% of 19 year olds.

Exposure to cocaine users and intention to use cocaine

Table 6 shows the association between exposure to cocaine users and intention to use cocaine. There were 104 teenagers who knew someone currently using cocaine.

Table 5. Drug beliefs and intention to use cocaine by age in Sydney teenagers, 1985

Age (Years)	<i>N</i>	Pro-Drug Beliefs %	Intention to Use Cocaine %
14	222	26.3	0.5
15	202	34.3	6.9
16	175	35.7	5.7
17	143	49.6	7.7
18	137	46.8	11.6
19	123	57.1	21.1

Table 6. Exposure to cocaine users and intention to use cocaine in Sydney teenagers, 1985

		N	Intention to Use Cocaine %
Does anyone you know <i>now</i> use cocaine?	Yes	104	38.5
	No	898	4.2
Friends use cocaine		80	42.5
Brothers/sisters use cocaine		2	50.0
Parents use cocaine		1	100.0
Other relatives use cocaine		6	50.0
Brothers'/sisters' friends use cocaine		16	25.0

Most of these cocaine users were their own friends or friends of their siblings. Of those exposed to cocaine users, 39% expressed intention to use cocaine.

Effect of student status

Drug use, drug beliefs and intention to use cocaine were compared in 18 and 19 year olds who were currently studying full-time and those who were not studying. Non-student respondents were more likely than full-time students to be drug users. The proportion of non-students who had pro-drug beliefs was 63% compared with 40% of full-time students. Intention to use cocaine was twice as common in non-students (20%) as in full-time students (9%).

DISCUSSION

This study is unable to predict whether Australia will experience the rise in cocaine use reported by other countries, but our results suggest that a demand for cocaine — indicated by intention to use cocaine — already exists in the community. Demand may be even higher in young adults, the group in which cocaine use has been most common in the United States (Abelson & Miller, 1985). A part of this demand may be due to the favourable reputation that cocaine has enjoyed for many years as a safe, nonaddictive drug.

Although cocaine was not widely available at the time of the study, 10% of teenagers knew someone who currently used cocaine. Intention to use cocaine was greater if the respondent knew a cocaine user. This finding suggests that if cocaine became more available in the community, and exposure to cocaine users increased, then demand for cocaine would also increase.

Intention to use cocaine was closely associated with drug beliefs that favoured the use of drugs, and with self-use of other drugs, particularly illicit. Cocaine use has been shown to be closely related to the use of both licit and illicit drugs, particularly marijuana (Clayton, 1985; Kandel, Murphy, & Kraus, 1985). Drug beliefs were also influenced by exposure to drug users in the social network. Both pro-drug beliefs and exposure to drug users were common at all ages and increased with age. This interaction between intention to use cocaine, drug beliefs, self-use of drugs, and drug use in the social network must be kept in mind when proposing strategies for preventing a cocaine problem in Australia.

Our data suggest that the community needs to be informed of the negative consequences of using cocaine. After many years of favourable "publicity" for cocaine, it

is time to emphasize its dangers. Recent media attention, though perhaps well-intentioned, has tended to sensationalize the cocaine problem in the United States, rather than present a balanced view of the problem.

The prevailing attitudes towards drugs in general among Sydney teenagers would seem to favour the use of cocaine, or any other drug. These attitudes are common even in 14 year olds. Australia is in an excellent position to implement and test the effectiveness of drug prevention programs to help children develop attitudes against using drugs, to help them learn non-drug coping skills and to give children and teenagers the skills to overcome social pressure to use drugs. The social psychological approach has been successful in preventing the uptake of cigarette smoking in teenagers, and may be equally effective with other drug behaviors (Johnson, 1986).

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