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Is experience with one illicit drug associated with perceptions of the believability of anti-drug messages?

Sandra C. Jones  
*University of Wollongong*, sandraj@uow.edu.au

John R. Rossiter  
*University of Wollongong*, jrossite@uow.edu.au

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Cannabis (marijuana) use is on the increase in many countries, particularly among teenagers. Information dissemination is likely to become the main vehicle for minimising the harms associated with cannabis use. Thus there is a clear need to develop informative and convincing communication strategies to target young (potential and incipient) cannabis users. Cognitive dissonance theory, as well as research with warning labels on other products, suggests that young people who currently use cannabis will find the information about cannabis and the information about other drugs (with which they have no experience) less believable than will non-users. This study finds support for the hypothesis regarding cannabis and cocaine, though not heroin.

Disciplines
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Is experience with one illicit drug associated with perceptions of the believability of anti-drug messages?

Sandra C. Jones
Graduate School of Public Health
University of Wollongong

and

John R. Rossiter
Department of Marketing
University of Wollongong

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1 Sandra C. Jones
Graduate School of Public Health
University of Wollongong
Northfields Ave
Wollongong NSW 2522
AUSTRALIA
Phone +61 2 9580 6999
Fax +61 2 9580 3311
Email sandraj@uow.edu.au
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Abstract
Cannabis (marijuana) use is on the increase in many countries, particularly among teenagers. Information dissemination is likely to become the main vehicle for minimising the harms associated with cannabis use. Thus there is a clear need to develop informative and convincing communication strategies to target young (potential and incipient) cannabis users. Cognitive dissonance theory, as well as research with warning labels on other products, suggests that young people who currently use cannabis will find the information about cannabis and the information about other drugs (with which they have no experience) less believable than will non-users. This study finds support for the hypothesis regarding cannabis and cocaine, though not heroin.

Keywords: social marketing, anti-drug messages, user segments

Introduction
Illicit Drug Use
The 1999 National Household Survey on Drug Abuse found that 88 million Americans aged 12 or older had used an illicit drug at least once in their lifetime, including 14.8 million who had used an illicit drug in the last month. Additionally, they estimated that there were 2.6 million new cannabis users in the United States in 1997, and 2.3 million new users in 1998 (www.samhsa.gov).

Recent US surveys of adolescent drug use have found that: one in thirteen 6th graders and one in five 7th graders have tried cannabis (http://www.drugfreeamerica.org); more than 25% of 12th grade students used illegal drugs on a monthly basis, and almost 9% on a daily basis (http://www.pridesurveys.com); and 54% of high school seniors reported using an illicit drug at least once (http://monitoringthefuture.org).

Effects of Drug Education
It has been claimed that school based drug programs at best produce only tiny gains (in reducing drug use), but most often have no effect, and in some cases even result in increased drug use (Roche, 2000).

Studies show that, in relation to safe-drinking advertisements, ad recall, ad evaluation, and perceived ad effectiveness are higher among nonusers of alcohol (Bozinoff et al., 1989). In the case of drug warnings, the implication of this is that if an individual has positive experiences (or, at least, has not had negative experiences) they are considerably less likely to believe health warnings than someone with no experience (or negative experience) of the drug(s). Additionally, cognitive dissonance theory (Festinger, 1957) suggests that people who engage in a particular behaviour (such as drinking alcohol or taking drugs) will be motivated to discount negative information in order to maintain consistency between their beliefs and their actions. Related to this, research has shown that occasional users of tobacco and cannabis rate messages about negative effects of regular use as more believable than do regular users (Resnicow et al., 1999). Also, research on teenagers’ perceptions of alcohol-related risks shows that increased experience with drinking alcohol is associated with decreased belief in the negative effects of alcohol (Finn and Brown, 1981); and research on alcohol warning labels shows that users of alcohol
(particularly frequent users) find warnings about the negative effects of alcohol significantly less believable than non-users (Andrews et al., 1991).

Medical practitioners working in a drug crisis unit stated that “it is commonly held that adolescents, on discovering that some portion of information given by a drug educator is either incorrect or just inconsistent with their experiences become profoundly sceptical of all information from other “establishment” sources” (Levy and Brown, 1973, p. 1072). The present study tests this hypothesis by examining whether, when presented with claims about the side-effects of cannabis, students who use cannabis will find not only the information about cannabis less believable than will non-users but also the information about other drugs (with which they have no experience).

Additionally, this study looks at the relationship between trying and rejecting one drug and perceptions of the harmfulness of that drug and other drugs. This relationship is hypothesised to hold regardless of the causal direction of the association. If ex-users’ cessation was caused by perceptions of harm — that is, they ceased using cannabis because they experienced (or were otherwise convinced of) its negative effects — they will have increased perceptions of harm from that drug and, by association, other drugs. If their perceptions of harm were caused, or increased, by cessation — as would be suggested by cognitive dissonance theory (Festinger, 1957) — they are likely to identify themselves as a non-drug user and believe strongly in the negative effects of all illicit drugs.

Research in the area of tobacco smoking shows that ex-smokers rate tobacco as more harmful than do smokers. The causation question is equally applicable in this area, where it has not been determined whether the differences in risk perceptions between committed smokers and quitting smokers are due an increased risk perception motivating a quit attempt or quitters increasing their risk perceptions in order to justify the effort of quitting (Boney McCoy et al., 1992). For example, relapsed smokers’ (ex-smokers who restarted smoking) perceptions of risk associated with smoking have been found to decline after they relapse (Gibbons et al., 1991).

Hypotheses

H1: Compared with never-users and ex-users of cannabis, students who are current users of cannabis will rate the messages on negative effects of cannabis as less believable.

H2: Compared with never-users and ex-users of cannabis, students who are current users of cannabis will rate the messages on negative effects of other illicit drugs as less believable.

Method

Participants: The participants in this study were 209 Australian college students; mean age 20.2 years (SD 2.7); 71% were born in Australia; and 49% were female.

Intervention Materials: The messages on consequences of drug use used in the intervention materials for this study were taken verbatim from the American Council for Drug Education’s website (http://www.acde.org). The only change made was the deletion of the word “crack” from the materials on cocaine, as crack has almost zero usage incidence in Australia.

Questionnaire measures: For each of the statements about cannabis (14 items), cocaine (13 items) and heroin (14 items), participants were asked to rate the likelihood of each consequence as either “not at all believable,” “slightly believable,” “quite believable” or “very believable.” The instructions emphasised that they were to respond in terms of their opinion of the likelihood of each consequence. They were also asked about their previous use of cannabis, cocaine and heroin.
Results

Cannabis usage status: Slightly less than half (44%) of the participants had ever used cannabis. Of the total sample, 19% described themselves as current users, 25% as ex-users, and the remainder as never-users.

Prior use of cocaine and heroin: Of the 209 participants, 18 reported ever using cocaine and seven ever using heroin.

Believability of cannabis messages: Overall, the messages appeared to be quite credible to the students. As shown in Table 1, the mean rating for 11 of the 14 items was “quite” to “very” believable; and none of the items were rated as “slightly” or “not at all” believable. A composite measure (the mean rating across the 14 items) showed that the cannabis messages as a group were rated 3.1, that is, just above “quite believable.”

We hypothesised that the current user group would rate the cannabis messages overall (composite score) less believable than did either of the other two groups. As shown in Table 2, this relationship was indeed demonstrated (non = 3.2, ex = 3.1, current = 2.6, p = .000).

The current users rated all 14 messages as less believable than did either of the other two groups. Nine of these differences were statistically significant: loss of concentration and coordination, impaired judgment, increased risk of accidents, diminished inhibitions, increased risk of AIDS and STDs, increased heart rate, anxiety and paranoia, hallucinations, and psychological dependency. One additional item approached significance: diminished short-term memory (p = .06).

<table>
<thead>
<tr>
<th>Table 1: Believability of cannabis messages by usage of cannabis</th>
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<tr>
<td>Impaired perception</td>
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<td>Diminished short term memory</td>
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<td>Loss of concentration/coordination</td>
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<td>Impaired judgment</td>
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<td>Increased risk of accidents</td>
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<td>Loss of motivation</td>
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<td>Diminished inhibitions</td>
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<td>Increased risk of AIDS/STD</td>
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<td>Increased heart rate</td>
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<td>Anxiety, paranoia</td>
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<td>Hallucinations</td>
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<td>Damage to body systems</td>
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<td>Increased risk of cancer</td>
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<tr>
<td>Psychological dependency</td>
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<tr>
<td>COMPOSITE SCORE</td>
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Believability of other drug messages: Again, the messages appeared to be quite credible to the participants. The composite mean rating for the cocaine items was 3.2 (just above “quite believable”), with mean ratings for 10 of the 12 items between “quite” and “very” believable and the remaining three just below “quite” believable. The composite mean rating for the heroin items was 3.3 (again just above “quite believable”), with mean ratings for 10 of the 13 items between “quite” and “very” believable and none below “slightly” believable.
The current cannabis user group rated the cocaine and heroin messages as a whole less believable than did either of the other two groups. This result was significant for cocaine (never = 3.3, ex = 3.1, current = 2.9, p = .002), but not for heroin (never = 3.3, ex = 3.3, current = 3.2, ns).

**Cocaine.** The current cannabis users rated 11 of the 13 cocaine items as less believable than did the other two groups (Table 2). Significant differences were found for cocaine for:
cardiovascular incidents, neurological incidents, psychiatric complications, risk of traumatic injury, sexual dysfunction, and nausea and headaches.

**Heroin.** The pattern for believability of messages about heroin was less consistent than for cannabis and cocaine. Across the three groups, the current users rated four of the 15 messages as least believable. The most believable ratings were given by the ex-users for six statements and by the never-users for four statements. However, none of these results were statistically significant.

**Discussion**

The results support the hypothesis that current users of cannabis are less likely to believe messages about the negative effects of cannabis that are ex-users or never-users. Of the 14 messages about cannabis, all were rated least believable by the current users. The cross-sectional nature of the study means that we are not able to infer causation; that is, do the current users use cannabis because they believe it is not harmful, or do they believe it is not harmful because they use it (and, as yet, have not experienced harm). In any case, strong anti-cannabis messages do not appear to act as a deterrent among current users.

Further, the results partially support the hypothesis that experience with one drug is associated with different perceptions of the likelihood of negative consequences of other drugs. The current users of cannabis found the messages about the negative consequences of cocaine less believable then did either of the other two groups, suggesting that positive attitudes to cannabis associated with previous use may have a carry-over effect for other drugs. The “halo effect” for current users seemed only to extend to cocaine, which was seen as less harmful by the current cannabis users, but not heroin.

**References**


