

Robert Hornik, PhD

LDI Senior Fellow,
Wilbur Schramm Professor of
Communication
University of Pennsylvania

Lela Jacobson, PhD

Health Communication and
Behavioral Scientist
The Children's Hospital of
Philadelphia

The Best Laid Plans: Disappointments of the National Youth Anti-Drug Media Campaign

Editor's Note: As part of its war on drugs, the U.S. government spent nearly \$1 billion between 1998 and 2004 for the National Youth Anti-Drug Media Campaign. The campaign had three goals: educating children and teenagers (ages 9 to 18) on how to reject illegal drugs, preventing them from starting drug use, and convincing occasional users to stop. Analyzing the effects of this campaign is important not only for future funding decisions but also for more effective targeting of future efforts. This Issue Brief summarizes a Congressionally-mandated evaluation of the campaign's effects on youths' cognitions and behavior around marijuana use.

National Youth Anti-Drug Media Campaign widely disseminated anti-drug messages targeted at youth

The anti-drug campaign was a comprehensive social marketing effort directing anti-drug messages toward youth, their parents, and other influential adults. Media outlets included television (local, cable, and network), radio, the Internet, magazines, and movie theaters. The campaign also developed partnerships with civic, professional, and community groups, and conducted outreach to the media, entertainment, and sports industries.

- Almost all ads fit into three categories: 1) resistance skills and self-efficacy, to increase youths' skill and confidence in their ability to reject drug use 2) normative education and positive alternatives, addressing the benefits of not using drugs and 3) negative consequences of drug use, including effects on academic and athletic performance. The emphasis on each category varied over the course of the campaign.
- Across multiple media outlets, the campaign projected that it would expose youth to an average of 2.5 ads per week. Based on ad purchases, 64% of ad exposure was from television and radio.
- Most ads were developed free-of-charge by advertising agencies working with the Partnership for a Drug-Free America.
- To unify the ads, beginning in 2001, the campaign incorporated a brand phrase: "_____ : My Anti-Drug" (with Soccer, for example, filling in the blank). In late 2002, the campaign altered the ads' mix of messages to focus on negative consequences of marijuana use specifically.

Study examines the cognitive and behavioral effects of the campaign on youths over time

To examine the campaign's effectiveness, Hornik and colleagues surveyed three cohorts of youths aged 9 to 18 years four times between September 1999 and June 2004. The survey included questions about campaign recall, cognitions and behavior related to marijuana use, and individual and household characteristics.

- The investigators used the National Survey of Parents and Youth (NSPY), an in-home survey administered on laptop computers. The interviewer recorded answers for the opening sections, but for most of the interview, to protect privacy, respondents heard prerecorded questions and answer categories through headphones and responded via touch screen selection on the computer. Interviews were conducted in English or Spanish.
- A nationally representative sample of youths was surveyed in four rounds over five years. In round 1 a total of 8,117 youths were interviewed with 6,516, 5,854, and 5,126 in follow-up rounds 2-4, respectively. The first-round response rate was 65%, with 86%-93% of still eligible youths subsequently interviewed in later rounds.
- All reported drug-related outcomes were specific to marijuana use, largely because marijuana is by far the illicit drug most heavily used by youths. Analyses were restricted to youths who were nonusers of marijuana at the current round or previous round. The focus on nonusers and their transition to first use is consistent with one of the campaign's goals: preventing initiation of any drug use. To the extent that the campaign did target a specific drug, it was marijuana.

Study measures ad exposure and examines associations with cognitions, intentions to use, and use of marijuana

The investigators measured exposure in two ways: reported recall in general, and by specific recall of television and radio ads that had aired in the two months preceding the interview. The respondents viewed or heard the ads on the computer and were asked if they remembered seeing, or hearing, them in recent months and if so, how often. Prior to the exposure questions, youth were asked about their cognitions and behavior related to marijuana use.

- The behavior measures included lifetime, past-year, and past-30-day use of marijuana.
 - The cognitive measures included intentions to use marijuana in the next 12 months as well as attitudes and beliefs about, social norms regarding, and self-efficacy to resist marijuana use.
 - The analysis focused on three areas: 1) changes in these outcome measures over time 2) the association of individual exposures to anti-drug advertising with concurrent marijuana-related outcomes and 3) whether exposure at one round of data collection was associated with outcomes in the next round (suggesting a causal direction). All the association-focused analyses were adjusted for a wide range of potential confounding variables and, in the lagged analyses, prior round levels of the outcome variables.
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The study reveals substantial exposure to anti-drug advertising but no association with anti-drug cognitions or behavior

The study results indicate that the campaign was effective in achieving a high level of exposure to its messages, but was not successful in affecting marijuana use or related cognitions in the desired direction.

- More than 94% of respondents reported general exposure to one or more anti-drug messages per month, with a median frequency of about two to three ads per week. Fifty-four percent of youths recalled at least weekly exposure to specific campaign television ads that had aired in recent months.
- The prevalence of marijuana use stayed the same between 2000 and 2004 and did not vary by exposure to ads.
- There was little evidence of a contemporaneous association between exposure and any of the cognitive outcomes. Nonusers who reported more exposure to anti-drug messages were no more likely to express anti-drug thoughts than those youths who were less exposed.

Surprisingly, repeated early exposure to the ad campaign may have increased later positive cognitions toward and initiation of marijuana use

Some evidence suggested that exposure to the campaign messages was related to pro-marijuana cognitions on a delayed basis throughout the campaign. This is known as a “boomerang effect.”

- The findings suggest an overriding pattern of unfavorable lagged exposure effects. At one round, more ad exposure predicted less intention to avoid marijuana use and weaker anti-drug social norms at a later round.
- For example, 82.3% of youths exposed to fewer than 4 ads per month stated definite intentions to avoid using marijuana in the next round, compared to a significantly fewer 78.4% of youths exposed to 12 or more ads per month.
- In an analysis of round 3 to round 4, exposure to anti-drug ads was associated with a slight increase in initiation of marijuana use.

The anti-drug campaign may not have been novel enough or may have relayed unintended messages

A number of possible explanations exist for the failure of the media campaign to have its desired effects.

- The campaign may have added little to the large quantity of anti-drug messages youths already receive, through in-school drug education, conversations with parents or friends, or exposure to non-advertising mass media content. Exposure to campaign ads once or twice a week, at 15-30 seconds in length, would produce about one minute per week of anti-drug message exposure.
- Given the large number of anti-drug messages to which youths were subject prior to the campaign, the implicit message of the campaign may not have been novel.
- The boomerang effect is harder to explain. One possible mechanism is that the anti-drug advertising conveys the unintended message that drug use is commonplace. As a result, youths who saw the campaign ads might have concluded that their peers were using marijuana and thus, were more likely to consider using it themselves.

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POLICY IMPLICATIONS

Despite extensive funding, governmental agency support and the use of professional public relations and advertising firms, the campaign is unlikely to have produced anti-marijuana effects. In contrast, the evaluation provides tentative evidence that the campaign may have had pro-marijuana effects.

- The campaign was successful in achieving a high level of exposure to its messages, but research indicates that these messages, at least, were not effective. Whether other messages would have greater success in affecting marijuana use is an open question. However, there have been small scale experimental anti-drug campaign interventions with better evidence for success, and large scale anti-tobacco campaigns have shown more positive results.
- The campaign remains in effect, although Congress cut the budget from \$99 million in FY 2007 to \$60 million in FY 2008. The new Congress will want to carefully consider how it wants to shape further investment in this program.
- This research demonstrates the critical importance of evaluation. Well-intentioned approaches that seem obvious in their likely effect can yield unintended consequences.

This Issue Brief is based on the following article: R. Hornik, L. Jacobsohn, R. Orwin, A. Piesse, and G. Kalton. Effects of the National Youth Anti-Drug Media Campaign on Youths, American Journal of Public Health, December 2008, vol 98, no. 12, pp. 2229-2236.

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Janet Weiner, MPH, Associate Director for Health Policy, Editor

Kelly Johnson, Research Coordinator

David A. Asch, MD, MBA, Executive Director

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*3641 Locust Walk
Philadelphia, PA 19104-6218
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