

Evaluating the Impact of a National AIDS Prevention Radio Campaign in St. Vincent and the Grenadines¹

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Based on extensive formative research in the three Eastern Caribbean countries of St. Lucia, St. Vincent and the Grenadines, and Grenada (Fishbein, Middlestadt, & Trafimow, 1993; Fishbein, Trafimow, et al., 1993), a three-nation, mass media, condom use campaign was developed. In order to assess the impact of the campaign, a follow-up survey was conducted in St. Vincent and the Grenadines. This paper examines the effectiveness of the campaign by comparing responses on this survey by respondents who were or were not exposed to the campaign. A statistically significant impact of exposure to the campaign was obtained, indicating that a well-designed, empirically based, mass media campaign can be an effective tool in the battle to prevent the spread of AIDS.

Based on extensive formative research in the three Eastern Caribbean countries of St. Lucia, St. Vincent and Grenada (Fishbein, Middlestadt, et al., 1993; Fishbein, Trafimow, et al., 1993; Fishbein et al., 1995), a three-nation

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condom use campaign was developed. Analyses of focus group discussions and of national Knowledge, Attitudes, Beliefs, and Practices (KABP) surveys indicated a high degree of sexual activity among youth, parental disapproval of condom use, and parental desire to protect their children. In addition, the data clearly indicated that perceived normative pressure was a key determinant of condom use in these populations. More specifically, the more one talked to others about condom use, and the more one believed that their friends used condoms, the more likely was one to have personally used condoms (Fishbein, Middlestadt, et al., 1993; Fishbein et al., 1995).

Utilizing this information, a radio campaign that lasted approximately two months was targeted primarily to parents of teenage children. The central message of the campaign was, "When you can't protect them anymore ... condoms can." Parents were urged to talk with their teenagers about sexual responsibility and safer sex. In order to assess the impact of the campaign, a follow-up survey was conducted in St. Vincent. The present paper examines the effectiveness of the campaign by comparing responses on this survey by respondents who were or were not exposed to the campaign.

Method and Procedures

Approximately 6 weeks after the completion of the campaign, a nationwide quota sample of 100 teenagers, 100 parents of teens, and 100 other adults was interviewed in their homes. The survey instrument assessed people's exposure to and perception of, the campaign. In addition, it assessed knowledge, attitudes, beliefs, and intentions that could have been affected by the campaign.

Subjects

Respondents were selected via a multi-stage sampling plan. For purposes of the survey, St. Vincent was divided into 10 geographical areas, and interviewers were instructed to obtain 30 interviews in each area. A quota sheet with interlocking controls for age, gender, and status (teens, parents of teens, other adults) was developed to regulate the selection process for the interviewers. Teens were defined as those between 15 and 20, and the quota called for an equal number of 15-17-year-olds, and 18-20-year-olds. While no age control was placed on parents of teens, other adults were sampled within four age categories: 21-30; 31-40; 41-50; and 51-59. An equal number of males and females was sampled in each of the above age-by-status categories.

A random starting point was identified in each area, and interviewers went to every third house from that starting point. If a prospective respondent (i.e., one meeting the quota) was found in the household, a private, face-to-face interview was conducted. If no prospective respondent was identified, the household was excluded. This process resulted in 307 completed interviews, with approximately 100 respondents (50 males and 50 females) in each status group. Recall, however, that while controls for age were placed on teens and other adults, they were not placed on parents of teens. As a result of this, respondents from 25 to 29 were undersampled, while those between the ages of 30 and 49 were oversampled. In addition, very few respondents aged 55 to 59 were included in the sample.

In order to make the data projectable to the 15-54-year-old population of St. Vincent, the data were weighted by age and gender such that the weighted data accurately reflected the age-by-gender population figures. Further tests of the weighting model supported its validity with respect to a number of other demographic characteristics (e.g., education, religiosity, employment status, family size). Thus, the data to be presented are based on a weighted sample of 297 respondents (109 teens, 102 parents of teens, and 86 other adults).

Questionnaire

As indicated above, in addition to measuring a number of demographic variables, the questionnaire (or, more precisely, the interview instrument) contained a number of AIDS KABP items. Among other things, it assessed knowledge about AIDS, particularly about modes of transmission. In addition, it asked respondents if they could do anything to protect themselves from AIDS and, if so, what. In order to assess the impact of the campaign, several items measured beliefs and attitudes about condom use, as well as perceived norms concerning condom use. The interview also contained standard questions concerning sexual practices and condom use. More important, a number of questions asked respondents whether they had discussed responsible sex and condom use with others. Finally, the survey assessed exposure to the campaign. The specific items used to obtain this information are described below. With the exception of the demographic and behavioral items, most of the remaining questions were asked in a “yes-no” or a 5-point, *agree* (+2) to *disagree* (-2) format.

All respondents were asked whether they had seen or heard an ad about AIDS or condoms in the past 5 months. Fully 89.6% (266) of the sample reported some exposure to ads directed at AIDS or condom use. As might be expected, however, there was more than one AIDS campaign in the country; and to identify those who might have been exposed to the radio

Table 1

A Demographic Comparison of Exposed and Nonexposed Respondents

	Exposed (%) (N = 213)	Nonexposed (%) (N = 84)	
Age			
15-19	39.6	38.1	
20-29	25.4	25.0	$\chi^2(3, N = 297) = 5.10, ns$
30-44	26.2	20.2	
45-54	8.8	16.7	
Gender			
Male	49.3	42.8	$\chi^2(1, N = 297) = 1.06, ns$
Female	50.7	57.2	
Religiosity			
Practice religion	84.9	85.9	$\chi^2(1, N = 297), ns$
Don't practice	15.1	14.1	
Employment			
Employed	50.6	45.2	$\chi^2(1, N = 297), ns$
Unemployed	49.4	54.8	
Education			
Primary school	11.6	18.3	$\chi^2(3, N = 297) = 7.57, p < .10$
Primary	52.2	60.4	
Secondary	24.0	16.5	
Post-secondary	12.2	4.8	
Literacy			
Problem reading	11.3	28.3	$\chi^2(1, N = 297) = 12.78,$ $p < .001$
No problem	88.7	71.7	

Table 2

A Behavioral Comparison of Exposed and Nonexposed Respondents

	Exposed (%) (<i>N</i> = 213)	Nonexposed (%) (<i>N</i> = 84)	
Sexually experienced			
Yes	88.3	84.1	$\chi^2(1, N = 297), ns$
No	11.7	15.9	
Number of partners			
0 or 1	65.7	61.1	$\chi^2(1, N = 297), ns$
2 or more	34.3	38.9	
Number of children			
None	47.0	43.7	$\chi^2(3, N = 297) = 3.82, ns$
1	16.0	9.1	
2	8.2	11.7	
3 or more	28.8	35.4	

campaign, respondents were asked to indicate where they had seen or heard the ad. Of those who reported seeing or hearing an ad, 85.9% (225) spontaneously mentioned radio as at least one source of the ad. As an additional check, respondents who reported seeing or hearing an AIDS-related ad were also asked to recall the content of the ad and to describe its message. Here too, the vast majority (84.2%, $n = 224$) provided a description that was consistent with the radio ad, and only 11 respondents who recalled content did not report radio, exposure. Thus, fully 71.6% (213) of the sample not only reported hearing an AIDS-related ad on the radio but were able to describe its content. For purpose of analyses, these respondents were classified as "exposed" to the campaign, while the remaining 28.4% (84) were classified as "nonexposed."

Results

The first question that must be asked is whether these two groups (exposed

and nonexposed) are comparable. As can be seen in Table 1, exposure was not related to age, gender, religiosity, or employment status. In addition, although there was a tendency for the exposed respondents to be better educated than the nonexposed respondents, this difference was only marginally significant, $\chi^2(3, N = 297) = 7.57, p < .10$. Consistent with this tendency however, nonexposed respondents were significantly more likely to have problems reading English than were the exposed respondents, $\chi^2(1, N = 297) = 12.78, p < .001$. Although this could potentially confound results, the fact that the campaign was presented orally (via radio), greatly reduces the importance of this difference.

The two groups also differed significantly with respect to their access to the media. Given that part of the definition of exposure required hearing the ad on the radio, it is not surprising to find that exposed respondents were more likely to have a radio in their homes (97.5%) than were nonexposed respondents (83.4%), $\chi^2(1, N = 297) = 19.76, p < .001$. Similar to this, in comparison to nonexposed respondents, exposed respondents were also more likely to have TV sets in their homes (79.3% vs. 67.8%), $\chi^2(1, N = 297) = 5.09, p < .05$.

As an additional test of comparability, three behavioral indicants were considered. More specifically, as can be seen in Table 2, the two groups were equally likely to be sexually experienced (i.e., they were equally likely to report having had intercourse at least once), and those who were experienced reported similar numbers of sexual partners in the past year. In addition, exposed and nonexposed respondents reported having similar numbers of children.

Finally, we also compared exposed and nonexposed respondents' answers to the question, "What ... is the most serious health problem in our country today?" Approximately 70% of each group spontaneously mentioned AIDS, $\chi^2(2, N = 297) = 1.03, p$ is not significant. Given these findings, it seems reasonable to assess the impact of the campaign by comparing the beliefs, attitudes, intentions and behaviors of these two groups.³

³Although the findings concerning differences in educational level were nonsignificant, we were concerned that education could be confounding factor. Thus, a series of analyses controlling for education were conducted. Consistent with expectations, educational level did influence some responses, but its interactions with exposure were minimal and inconsistent. Similarly, given the quota sampling plan, we also ran a series of analyses controlling for respondent status (i.e., whether the respondent was a teen, a parent of a teen, or another adult). Here we found very few differences attributable to respondent status and practically no interactions between status and exposure.

Impact on Awareness of the AIDS Hotline

Given that the campaign message ended with a statement telling listeners that they could obtain more information about AIDS by calling the AIDS hotline, the first question we asked was whether respondents exposed to the message would be more aware of the existence of the hotline than those not exposed. More specifically, all respondents were asked, "Have you ever heard of the AIDS hotline?" Consistent with expectations, those exposed to the campaign were significantly more likely to have heard of the Hotline (91.1%) than those who were nonexposed (75.2%), $\chi^2(1, N = 297) = 13.14, p < .001$.

Those answering "yes" to the above question were then asked "Have you ever called the AIDS hotline?" As can also be seen in Table 3, those exposed to the campaign were somewhat more likely to have called the Hotline (20.5%) than those nonexposed (12.6%). This difference, however, was not significant, $\chi^2(1, N = 297) = 1.70$.

Impact on Perceived Control

As indicated above, the central message of the campaign was, "When you can't protect them anymore ... condoms can." All respondents were asked, "Do you think a person can do anything to protect themselves from getting infected with the virus that causes AIDS?" Consistent with expectations, those exposed to the campaign were significantly more likely to respond "Yes" to this question (97.7%) than those who were nonexposed (86.2%), $\chi^2(1, N = 297) = 13.54, p < .001$.

Impact on Communication and Communication Beliefs

One explicit purpose of the campaign was to increase communication between parents and their teenage children. More specifically, the message tried to convince parents and teens of the importance of discussing responsible sex and condom use, and it recommended increased communication.

Two beliefs were assessed in order to measure the extent to which this message was received. More specifically, respondents were asked to indicate their degree of agreement (on 5-point scales) with the following two statements: (a) Parents should talk to their teenage children about using condoms; and (b) parents and children should talk about sexual responsibility.

In comparison to nonexposed respondents, exposed respondents were significantly more likely to agree that parents and children should talk about

Table 3

Communication About Condoms by Exposed and Nonexposed Teenagers and Parents of Teenagers

	Exposed (%)	Nonexposed (%)	
Teens only			
Talked to parents about condoms			
	(N = 79)	(N = 30)	
Yes	7.7	13.3	$\chi^2(1, N = 109), ns$
No	92.3	86.7	
Will talk to parents about condoms			
	(N = 73)	(N = 26)	
Yes	13.7	23.1	$\chi^2(1, N = 99), ns$
No	86.3	76.9	
Parents of teens only			
Talked to children about condoms			
	(N = 70)	(N = 32)	
Yes	38.7	26.4	$\chi^2(1, N = 102) = 1.49, ns$
No	61.3	73.6	
Will talk to children about condoms			
	(N = 43)	(N = 24)	
Yes	51.8	50.0	$\chi^2(1, N = 67), ns$
No	48.2	50.0	

sexual responsibility ($M = 1.87$ vs. 1.64), $F(1, 295) = 7.66, p < .01$, and were somewhat more likely to agree that parents should talk to their children about using condoms ($M = 1.52$ vs. 1.21), $F(1, 295) = 3.62, p < .06$.

In order to determine whether the campaign also had an impact on intention, behavior, or both, teenagers were asked whether they had "talked to [their] parents about using condoms in the past year." Those responding "No" were

asked if they planned "to talk to [their] parents about using condoms in the next year." Similar questions were asked of parents of teenage children. That is, parents were asked if they had "talked to [their] children about using condoms in the past year"; and those responding "No" were further asked if they intended to do so in the next year.

Table 3 shows the percentage of exposed and nonexposed respondents responding "Yes" and "No" to each of these questions. There were no significant differences between the two groups with respect to any of these questions. Recall, however, that exposed and nonexposed respondents differed only marginally with respect to their beliefs that parents should talk to their children about using condoms. In contrast, they differed significantly with respect to their beliefs that parents and children should talk about sexual responsibility. Unfortunately, the respondents were not asked if they had talked about sexual responsibility.

Impact on Perceived Norms

Another purpose of the campaign was to increase normative pressure concerning condom use. In order to determine whether this was accomplished, respondents were asked two types of normative questions: those assessing behavioral norms, and those assessing normative beliefs (Nucifora, Gallois, & Kashima, 1993). In order to assess behavioral norms, respondents were asked: (a) "Do you and your friends ever talk about using condoms?"; (b) "Do your friends use condoms?"; and (c) "Has a sex partner ever suggested using a condom?"

Table 4 presents the responses of exposed and nonexposed respondents to each of these questions. Although exposed respondents were more likely than nonexposed respondents to answer "Yes" to each of these questions, only the question concerning friends' use of condoms reached statistical significance. More specifically, while 45.8% of exposed respondents believed that their friends used condoms, this was only true for 22.3% of nonexposed respondents, $\chi^2(2, N = 297) = 15.18, p < .001$.

Following Ajzen and Fishbein (1980), normative beliefs were assessed by asking respondents to indicate whether each of three referents (i.e., parents, sex partners, three close friends) thought they should use condoms. More specifically, using 5-point scales, respondents were asked to *agree* (+2) or *disagree* (-2) with statements such as the following: "My parents think I should use condoms." The campaign was successful in significantly increasing the normative belief that one's potential sex partners supported condom use ($M = 0.22$ vs. -0.56), $F(1, 295) = 10.15, p < .01$. Although there was also a tendency for exposed respondents to more strongly believe that their friends ($M = 0.21$)

Table 4

Impact of the Campaign on Behavioral Norms

	Exposed (%) (<i>N</i> = 213)	Nonexposed (%) (<i>N</i> = 84)	
Talk with friends about condoms			
Yes	64.6	58.4	$\chi^2(1, N = 297), ns$
No	35.4	41.6	
Friends use condoms			
Yes	45.8	22.3	$\chi^2(2, N = 297) = 15.18,$ $p < .001$
No	11.7	12.2	
Don't know	42.5	65.5	
Partner suggested condom use			
Yes	55.0	46.3	$\chi^2(1, N = 297) = 1.89, ns$
No	45.0	53.7	

and parents ($M = 0.07$) thought they should use condoms than nonexposed respondents ($M = -0.26$ and -0.27 , for friends and parents respectively), these differences were not significant, $F(1, 295) = 2.59, p < .11$, for friends; and $F(1, 295) = 1.03, p > .10$, for parents.

In order to get an additional indication of the impact of the campaign on norms, a direct measure of the respondent's subjective norm was obtained (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). More specifically, the respondents' were asked to agree or disagree (on a 5-point scale) with the following item: "Most people who are important to me think I should use condoms." Although exposed respondents had somewhat stronger subjective norms ($M = 0.16$) than nonexposed respondents ($M = -0.12$), this difference was not significant.

To summarize briefly, although the campaign successfully increased some of the respondents' behavioral norms and normative beliefs, it only tended to increase the subjective norm.

Impact on Beliefs About and Attitudes Toward Condom Use

As Fishbein, Middlestadt, and Trafimow (1993) reported, one belief that may influence respondents' attitudes toward condom use concerns the respondents' perception that purchasing condoms is embarrassing. One possible impact of a campaign that openly discusses condom use is that it may provide a climate in which it is easier (and less embarrassing) to purchase condoms. Thus, respondents were asked if they would find it embarrassing to buy condoms. Consistent with expectations, those exposed to the campaign were more likely to respond "No" (77.7%) to this question than were those who were nonexposed (66.2%). This difference, however, was only marginally significant, $\chi^2(1, N = 297) = 3.19, p < .10$.

To more directly assess the campaign's impact on beliefs about condom use, respondents were asked to indicate (on a 5-point scale) whether they *agreed* (+2) or *disagreed* (-2) that "Condoms can protect you from the AIDS virus." Although exposed respondents agreed more strongly with this statement ($M = 1.30$) than did nonexposed respondents ($M = 1.06$), this difference was not significant, $F(1, 295) = 1.24$.

In addition to assessing this belief about the efficacy of condom use as an AIDS preventive (a belief that is also assumed to be related to respondents' attitudes toward condom use), we assessed attitude more directly. That is, respondents were asked whether they *agreed* (+2) or *disagreed* (-2) that "It is a good idea for me to use condoms." Although there was a strong tendency for exposed respondents to agree more strongly with this statement ($M = 0.94$) than nonexposed subjects ($M = 0.46$), this difference was only marginally significant, $F(1, 295) = 3.66, p < .06$.

Impact on Intentions to Use Condoms

The final question assessed respondents intentions to "use a condom the next time I have sex." Here too, although exposed respondents tended to have stronger intentions ($M = 0.31$) than nonexposed respondents ($M = -.01$), the difference was not significant, $F(1, 295) = 1.02$.

Impact on Behavior

In order to determine whether the campaign had any effect on actual condom use, all respondents who were sexually experienced (i.e., who reported having had sex at least once) were asked if they had ever used condoms, and perhaps more important, they were also asked if they had ever suggested condom use to their partners. In addition, sexually active respondents (i.e.,

those who reported having had sex in the past 6 months) were asked to indicate the frequency of their condom use during the past 6 months (always, almost always, sometimes, almost never or never) as well as the number of times (out of the last five times they had had sex) that they used a condom. Based on their responses to these two questions, respondents were classified as having always, sometimes, or never used a condom. Although exposed respondents were somewhat more likely to have ever used a condom (69.5%) than nonexposed respondents (57.5%), this difference was only marginally significant, $\chi^2(1, N = 297) = 3.05, p < .10$. In addition, there was little or no difference between the two groups with respect to recent condom use (e.g., 25.3% of exposed and 26.0% of nonexposed respondents always used condoms) or with respect to suggesting condom use to one's partner (i.e., 59.5% vs. 56.5% for exposed and nonexposed respondents, respectively).

Discussion

Overall, the impact of the campaign was investigated by considering respondents' answers to 22 questions—9 in an agree or disagree format and 13 in a yes or no format—and 1 derived categorical variable (i.e., condom use always, sometimes, or never). With respect to 20 of these 23 responses, the results indicated a positive impact of the campaign (6 statistically significant, 3 marginally significant, and 11 others in the right direction) Although the remaining three questions indicate a slight impact in the wrong direction, the differences were nonsignificant. Directional findings of this magnitude are highly significant ($p < .001$ by sign test). In addition, a MANOVA in which all nine agree or disagree questions served as dependent variables also resulted in a statistically significant exposure effect, $F(9, 283) = 2.00, p < .05$. It thus appears that a national radio campaign can effectively produce changes in beliefs and attitudes that may ultimately lead to behaviors that will reduce the spread of HIV.

More specifically, the data presented above provide relatively strong evidence that the campaign effectively influenced a number of targeted beliefs. For example, those exposed to the message were significantly more likely to believe that it is possible to protect oneself from AIDS than were those not exposed to the campaign. In addition, those exposed to the campaign were significantly more likely to believe that parents and teens should discuss sexual responsibility than were those not exposed to the campaign. Similarly, the message seems to have significantly influenced some normative beliefs. That is, compared to those not exposed to the message, those who were exposed were significantly more likely to believe that their potential sex partners thought that they should use condoms. Perhaps equally important, compared to nonexposed

respondents, exposed respondents were more likely to believe that their friends used condoms.

In addition, the campaign had a marginal effect on the behavioral belief that buying a condom would be embarrassing. Although the changes in these normative and behavioral beliefs did not, in and of themselves, produce significant changes in attitudes and subjective norms, they do appear to have started a change process. That is, both attitudes and subjective norms were more positive among exposed, than among nonexposed respondents, with the difference in attitude approaching significance. Given these relatively small immediate impacts on attitudes and subjective norms, one cannot expect a marked change in intentions (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Consistent with this, there was only a slight, nonsignificant tendency for exposed respondents to have stronger intentions to use a condom during their next sexual experience than nonexposed respondents.

Finally, it is worth pointing out that the campaign also had at least one other beneficial effect. Those exposed to the campaign were significantly more likely to be aware of the AIDS hotline than were those not exposed. Given the often repeated skepticism concerning the potential effectiveness of mass media campaigns, we believe that the present findings provide clear and compelling evidence that a well-designed, empirically based mass media campaign can be an effective tool in the battle to prevent the spread of AIDS.

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