Social Norms for Condom Use: Implications for HIV Prevention Interventions of a KABP Survey with Heterosexuals in the Eastern Caribbean

Martin Fishbein, University of Illinois, Champaign-Urbana
Susan E. Middlestadt, Academy for Educational Development
David Trafimow, Virginia Polytechnic Institute

ABSTRACT

In the fall of 1990, a Knowledge, Attitude, Belief & Practices (KABP) survey was administered to a representative sample of residents of St. Lucia. The KABP questionnaire contained a large number of questions that could reasonably be expected to be related to whether or not people use condoms. To a certain extent each of these questions can be viewed as an attempt to assess one of the variables identified by one or more theories of behavior and behavior change. More specifically, questions on the KABP were identified as possible indicators of: AIDS Knowledge, Cues to Action, Perceived Susceptibility, Perceived Severity, Perceived (Locus of) Control, Normative Pressure and Condom Use Outcome Expectancies. Statistical analyses indicated that to some extent, each of these variables was related to condom use. However, the analyses also indicated that perceived normative pressure to use condoms was, by far, the single most important determinant of condom use behaviors on St. Lucia. The implications of this finding for designing mass media campaigns to increase condom use is discussed, and a normative campaign is strongly recommended.

INTRODUCTION

In the fall of 1990, a Knowledge, Attitude, Belief & Practices (KABP) survey was administered to a representative sample of residents of St. Lucia. St. Lucia is a small island country of located in the Eastern Caribbean. The survey was designed, developed and implemented as a collaborative project among the AIDS Technical Support: Public Health Communication Component (AIDS/COM), the Caribbean Epidemiology Centre (CAREC), the Ministry of Health of St. Lucia, Family Health International, Inc. and Caribbean Market Research Ltd. Funding was provided by the Offices of Education, Health and Population, Bureau for Research and Development, United States Agency for International Development, Project No. 936-5972, Contract No. DPE-5972-Z-00-7070-00.

The KABP questionnaire contained a large number of questions that could reasonably be expected to be related to whether or not people use condoms. Among other things, the questionnaire assessed people's knowledge about AIDS, including their understanding of how AIDS is transmitted and how it can be avoided. It also assessed the respondents' perceptions that they are personally at risk for AIDS, as well as their propensity to engage in a number of risky behaviors such as unprotected anal and vaginal sex with one or more sexual partners. In addition, the questionnaire assessed the extent to which respondents believed that they had control over their lives in general, control over their health, and, control over the likelihood that they could avoid AIDS. Further, it assessed their knowledge of condoms, their beliefs about the ease or difficulty they would experience in obtaining condoms, and their beliefs that condom use would increase or decrease their sexual pleasure. Finally, the questionnaire asked if they had discussed condoms with their friends and it asked them about their friends' use of condoms.

Many national AIDS control programs conduct basic surveys to assess the level of knowledge, attitudes, beliefs and practices (KABP) of their populations. These surveys are typically used for descriptive purposes and to provide baseline data. However, in this paper we will argue that these surveys provide valuable data for testing theoretical hypotheses and for guiding the development of behavior change interventions. To a certain extent, each of the items assessed in typical KABP survey taps variables that have been identified by different theories of behavior and behavior change. For example, surveys typically include measures of knowledge and perceived risk that are central variables in the health belief model (see, e.g., Becker, 1990; Janz & Becker, 1984). Self efficacy or one's belief in his or her ability to avoid AIDS is a central aspect of social learning theory (see, e.g., Bandura, 1977a, 1977b), and beliefs about condom use and perceived norms are central constructs in the theory of reasoned action (see, e.g., Fishbein, 1980; Ajzen & Fishbein, 1980). The present paper attempts to show how questions in the KABP survey can be used to tap these theoretical constructs and the determine which, if any, of these variables are related to condom use (i.e., to determine which of these variables discriminated between sexually experienced respondents who had Ever or Never used a condom). More specifically, 49 questions on the KABP were identified as possible indicators of seven theoretical variables: AIDS Knowledge, Cues to Action, Perceived Susceptibility, Perceived Severity, Perceived (Locus of) Control, Condom Use Outcome Expectancies and Perceived Normative Pressure.

METHOD

A complete description of the methodology of the study is available in Fishbein, Trafimow, Francis, Helquist, Eustace, Ooms and Middlestadt (in press). Briefly, respondents were 591 residents of St. Lucia between the ages of 15 and 60. They were interviewed in their homes by trained interviewers. The data presented here are weighted for age and sex to make them projectable to residents of the country within this age group. In addition, the present report is restricted to those respondents who are sexually experienced (i.e., to those who report they had had sexual intercourse). These respondents were further asked whether they had ever used condoms. Responses to this question allowed us to classify sexually experienced residents of St. Lucia into two groups: those who had Ever used a condom versus those who report that they had Never used a condom.

RESULTS

In order to better understand condom use behavior in St. Lucia, we first examined the extent to which each item (or cluster of items) was related to whether one had ever or never used a condom.

Knowledge

It has often been assumed that the more one knows about a disease and how it is transmitted, the more likely one is to engage in health promoting behaviors. In order to test this notion, we considered several different indicators of knowledge:

Transmission Knowledge. Respondents were asked to describe how "people can get infected with the virus that causes AIDS". Respondents were given a score of +1 for each correct mode of transmission they identified, and a score of -1 for each incorrect transmission mode. The sum of the scores served as

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a measure of transmission knowledge. Generally speaking, whether people were well or poorly informed based on this index of transmission knowledge seemed to have little relationship to their condom usage. Contrary to expectations, knowledge about AIDS transmission was not significantly related to condom use (r = .07, n.s.).

**Disease Knowledge.** Respondents were asked three “Yes/No” questions that were focused upon the disease itself. More specifically, these questions addressed the difference between having AIDS and being HIV positive, and tested knowledge about the implications of this distinction for being able to identify people who are infected with the virus. For each question, a respondent received a +1 for a correct response, a -1 for an incorrect response, and a score of 0 when he or she was uncertain or didn’t know. The sum of the scores served as a measure of disease knowledge.

In contrast to knowledge about transmission, knowing that there is a difference between being HIV positive and having AIDS and knowing the implications of this distinction is related to one’s condom use behavior. The more one knows about this aspect of the disease, the more likely is one to have used a condom (r = .20, p < .01). For example, among those respondents who know there is a difference between having AIDS and being HIV positive, almost 25% have used a condom. In contrast, among respondents who believe there is NO difference between being seropositive and having AIDS, only 58% have used a condom. This difference is statistically significant (x² = 12.21, p < .001).

**General Knowledge.** Finally, the KABP also contained three “Agree/Disagree” questions that addressed both knowledge of the disease (e.g., People can generally sense if their sexual partner is an AIDS carrier) and more general knowledge about transmission (e.g., Little is known about how AIDS is spread). Responses to each item were scored from 1 to 5. These three measures were added to form a measure of general knowledge.

Consistent with expectations, this measure of general knowledge was also related to condom use behavior; the more general knowledge one had, the more likely was one to have used a condom (r = .17, p < .01).

**Cues to Action**

According to the health belief model and other models of behavioral change (e.g., Kanfer, 1976), one is unlikely to adopt health protective behaviors unless something happens to make the individual consider changing his or her behavior. These “cues to action” may be either internal (e.g., symptoms) or external (e.g., knowing someone with AIDS, being exposed to a mass media AIDS message). It follows that those exposed to one or more AIDS cues should be more likely to have used a condom than those who have not been exposed.

Two such cues were assessed in the KABP. First, respondents were asked if they had seen a play or movie about AIDS. Second, they were asked if they personally knew someone who was HIV positive and/or who had AIDS. Consistent with expectations, those who have seen a play or movie about AIDS are significantly more likely to have used condoms than those who have not been exposed to such materials (x² = 9.75, p < .01). Similarly, those who know someone who is HIV positive and/or who has AIDS, are somewhat more likely to have used condoms than are those without such personal experiences with AIDS (x² = 3.54, p < .10).

**Perceived Susceptibility and Severity**

According to the health belief model, people are unlikely to engage in health protective behaviors unless (1) they believe they are personally susceptible to (i.e., at risk from) a given illness and (2) they believe that getting the illness will have severe, serious consequences on their lives. In order to test this notion we considered a number of different items.

**Perceived Susceptibility.** Respondents were asked if they thought they were personally at risk for AIDS. In contrast to expectations, this relatively direct assessment of perceived susceptibility was unrelated to condom use (x² < 1, p > .05).

A number of other indicators of perceived susceptibility, however, were related to condom use. For example, respondents were asked what they thought was the most serious health problem on St. Lucia. Consistent with expectations, those spontaneously mentioning AIDS were significantly more likely to have used condoms than those who did not mention AIDS (x² = 4.40, p < .05, r = .10, p < .05).

A somewhat different indicator of vulnerability was based on four “agree/disagree” questions directed at respondents’ beliefs about the degree to which one should be concerned about AIDS in St. Lucia. For example, respondents were asked whether they believed that AIDS was a serious problem on St. Lucia, whether there were more important things to worry about, and whether AIDS was a U.S. or foreign disease. Responses to these items were summed to provide an overall index of AIDS Concern. Consistent with expectations, the more one was concerned about AIDS in St. Lucia, the more likely was one to have used a condom (r = .15, p < .01).

One other indicator of personal vulnerability was considered. Specifically, it seems reasonable to assume that those with multiple partners will see themselves as more susceptible to AIDS than those who are monogamous or who have abstained from sex. If this is the case, those with multiple partners should be more likely to take health protective measures. Consistent with this, the correlation between number of partners and condom use was statistically significant (r = .10, p < .05).

**Perceived Severity.** Respondents were asked whether they believed that AIDS causes great suffering to those who get it. In contrast to expectations, this relatively direct measure of severity was unrelated to condom use (x² < 1, p > .04). Respondents were also asked whether they believed that there was a cure for AIDS. It seems reasonable to assume that a life threatening disease without a cure will be perceived as more severe than one with a cure and that, those believing there is no cure should be more likely to take health protective measures. Consistent with this, those believing there is no cure for AIDS were significantly more likely to have used a condom than were those believing there is a cure (or who were uncertain). That is, among those believing there is no cure for AIDS, 67% have used a condom; among those believing there is a cure for AIDS, only 54% have used a condom (x² = 7.84, p < .01; r = .13, p < .01).

**Perceived (Locus of) Control**

According to almost all social learning theories (e.g., Bandura, 1977b; Kanfer, 1976; Rotter, 1954) people should be more likely to perform health protective behaviors if they believe that what happens to them is due to their own actions rather than to chance or fate. As Bandura (1977a) has pointed out however, general attributions of control may be less important than specific ones. For example, although one may feel that one has little control over one’s life (in general), one may nevertheless believe that one has control over one’s health (i.e., that one’s health is more related to internal
than to external factors). Similarly, even though one may not believe that one has control over one’s health (in general), one may believe that whether or not one is exposed to AIDS is under one’s control. Thus, measures of perceived (locus of) control have moved from general measures to more specific ones, and it is generally assumed that the more specific the measure the stronger its association with behavior.

Since the KABP contained items designed to measure General Locus of Control, Health Locus of Control, and AIDS Locus of Control, it was possible to explore this hypothesis. Consistent with expectations, the more one attributes outcomes to internal rather than external factors, the more likely one is to have used a condom. However, as expected, this relationship varied with item specificity. That is, the correlation between condom use and general locus of control was not significant (r = .08, n.s.), that between condom use and Health locus of control was significant (r = .10, p < .05), and that between condom use and AIDS locus of control was also significant (r = .13, p < .01).

In addition to these measures of locus of control, respondents were asked if they believed that it was possible to do something to protect oneself against AIDS. Consistent with expectations, those saying “Yes” were significantly more likely to have used condoms than those saying “No” (x² = 9.11, p < .01; r = .11, p < .05).

**Beliefs about Condom Use (Outcome Expectancies)**

According to all behavior theories, the more one believes that performance of a given behavior will lead to more positive than negative outcomes, the more likely one is to perform that behavior. Several questions on the KABP appeared to address this issue. For example, people who said that one could do something to protect oneself from AIDS, were asked what could be done. Consistent with expectations, those who spontaneously said one way to protect oneself was to “always use a condom” were significantly more likely to have used a condom than those not mentioning this method of protection (x² = 7.78, p < .01; r = .13, p < .01).

Second, respondents were asked whether they believed that using a condom would increase, decrease or have no effect on sexual pleasure. It seems reasonable to assume that the more one believes that condom use will decrease sexual pleasure, the less likely one is to use a condom. In contrast to expectations however, exactly the opposite was true: those who believe that condom use decreases pleasure are significantly MORE likely to have used a condom than are those who believe condom use increases or does not affect sexual pleasure. Specifically, among those who believe condom use decreases pleasure, fully 76% have used a condom. In contrast, among those believing that condom use increases or does not affect sexual pleasure, 58% have used a condom (x² = 15.11, p < .01; r = .08, n.s.).

Although initially surprising, these findings make considerable sense. That is, although beliefs about outcomes may influence future performance, they are also expected to reflect past experience. Viewed from this perspective, it is not unreasonable to have found that, in comparison to those who have never used a condom, those who have actually used condoms are more likely to believe that their use decreases sexual pleasure.

Finally, we assumed that embarrassment surrounding the purchase of condoms would be related to condom use. That is, it seems reasonable to assume that people who are embarrassed to buy a condom will be less likely to purchase (and thus use) condoms than those who are not embarrassed. Consistent with expectations, this belief was positively related to condom use; those who reported they would be embarrassed to buy a condom were significantly less likely to have used one than those who reported they would not be embarrassed (x² = 11.54, p < .01; r ≈ .16, p < .01).

**Normative Pressure**

According to the theory of reasoned action as well as Triandis’s (1980) theory of subjective culture, perceived norms are important determinants of behavior. The more one perceives social pressure to perform a behavior, the more likely one is to actually perform that behavior. The KABP contained three questions that assess social pressure.

First, respondents were asked whether they talked to their friends about using condoms. Consistent with expectations, those who had talked to friends were significantly more likely to have used condoms than those who had not talked to their friends (x² = 101.1, p < .001; r = .44, p < .001).

Second, respondents were asked whether they thought their friends used condoms. As expected, those who believed their friends used condoms were significantly more likely to have used condoms themselves than were those who were unsure of their friends’ behavior or who believed that their friends did not use condoms (x² = 69.83, p < .001; r = .39, p < .001).

Finally, respondents were asked if a sexual partner had ever suggested using condoms. Consistent with expectations, those whose partners had suggested condom use were more likely to have used condoms than were those who had not had partners who had suggested condom use (x² = 149.88, p < .001; r = .54, p < .001).

**Testing the Relative Importance of the Theoretical Variables**

The above analyses indicate that, to a certain extent, each of the theoretical variables is related to condom use. Thus for example, at least in St. Lucia, some types of AIDS knowledge (i.e., disease knowledge and general knowledge) are related to condom use, while other types of knowledge (i.e., transmission knowledge) are not. Similarly, some measures of susceptibility and severity are related to condom use, while others are not. In order to provide a more rigorous test of the relationships between each of these theoretical variables and condom use, individual items were combined to develop indices to assess each variable. That is, all the knowledge questions were combined to form a single knowledge index; the higher the score, the more knowledge one has about AIDS. Similarly, based upon the health belief model, a single index of perceived threat was constructed. More specifically, according to the health belief model (see Becker, 1990), Cues to Action, Perceived Susceptibility and Perceived Severity act jointly to influence one’s perception of the degree to which one is personally threatened by a given illness. The greater the threat, the more likely one should be to take preventive action. Three other indices were developed: (1) a single measure of locus of control that combined the general, health, and AIDS specific items; (2) an outcome expectancy score; and (3) a measure of normative pressure.

Table 1 presents the mean standardized scores for each of the above five variables (as well as the means for the subscales or items comprising those scores) for those who have Ever or Never used a condom. In addition, the Table shows the correlation between each of the scores and condom use.

Consistent with our previous discussion, it can be seen in Table 1 that all five theoretical variables are significantly related to condom use. In contrast to those who have never used a condom, people who have used a condom: (1) have more knowledge about AIDS (r = .24, p < .01); (2) are more threatened by AIDS (r = .24, p < .01); (3) are more likely to attribute a variety of outcomes to internal rather than to external causes (r = .13, p < .01); (4) are more likely to hold behavioral beliefs supporting condom use (r = .19,
TABLE 1
St. Lucia: Relationships between Condom Use and Selected Theoretical Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Never</th>
<th>Ever</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge</strong></td>
<td>-0.54</td>
<td>0.33 **</td>
<td>.21 **</td>
</tr>
<tr>
<td>Transmission</td>
<td>1.90</td>
<td>2.18</td>
<td>.07</td>
</tr>
<tr>
<td>Disease (Yes/No)</td>
<td>1.79</td>
<td>2.11 **</td>
<td>.20 **</td>
</tr>
<tr>
<td>General (Agree/Disagree)</td>
<td>9.66</td>
<td>10.73 **</td>
<td>.17 **</td>
</tr>
<tr>
<td><strong>AIDS Threat</strong></td>
<td>-0.47</td>
<td>0.32 **</td>
<td>.24 **</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>-0.41</td>
<td>-0.46</td>
<td>-0.03</td>
</tr>
<tr>
<td>Most Serious Problem</td>
<td>0.64</td>
<td>0.73 *</td>
<td>0.10 *</td>
</tr>
<tr>
<td>Perceived Concern</td>
<td>13.17</td>
<td>15.54 **</td>
<td>0.15 **</td>
</tr>
<tr>
<td>Severity I - Suffer</td>
<td>4.69</td>
<td>4.76</td>
<td>0.06</td>
</tr>
<tr>
<td>Severity II - No Cure</td>
<td>0.66</td>
<td>0.77 **</td>
<td>0.13 **</td>
</tr>
<tr>
<td>Number of Partners</td>
<td>1.12</td>
<td>1.29 *</td>
<td>0.10 *</td>
</tr>
<tr>
<td>Know AIDS/HIV</td>
<td>-0.85</td>
<td>-0.70 *</td>
<td>0.11 *</td>
</tr>
<tr>
<td>Saw Play/Movie</td>
<td>0.34</td>
<td>0.49 **</td>
<td>0.14 **</td>
</tr>
<tr>
<td><strong>Perceived (Locus of) Control</strong></td>
<td>1.48</td>
<td>2.28 **</td>
<td>.13 **</td>
</tr>
<tr>
<td>AIDS Locus</td>
<td>0.94</td>
<td>1.26 **</td>
<td>0.13 **</td>
</tr>
<tr>
<td>Health Locus</td>
<td>0.40</td>
<td>0.68 *</td>
<td>0.10 *</td>
</tr>
<tr>
<td>General Locus</td>
<td>0.11</td>
<td>0.32</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Outcome Expectancies</strong></td>
<td>-0.35</td>
<td>0.24 **</td>
<td>.19 **</td>
</tr>
<tr>
<td>Response efficacy</td>
<td>0.55</td>
<td>0.68 **</td>
<td>0.13 **</td>
</tr>
<tr>
<td>Embarrassed to buy</td>
<td>0.38</td>
<td>0.65 **</td>
<td>0.16 **</td>
</tr>
<tr>
<td>[Expected Pleasure]</td>
<td>-0.19</td>
<td>-0.29</td>
<td>[-0.08]</td>
</tr>
<tr>
<td><strong>Normative Pressure</strong></td>
<td>-1.77</td>
<td>1.04 **</td>
<td>.58 **</td>
</tr>
<tr>
<td>Talk to Friends</td>
<td>0.36</td>
<td>0.80 **</td>
<td>0.44 **</td>
</tr>
<tr>
<td>Friends Use</td>
<td>0.07</td>
<td>0.64 **</td>
<td>0.39 **</td>
</tr>
<tr>
<td>Partner Ask</td>
<td>0.11</td>
<td>0.67 **</td>
<td>0.54 **</td>
</tr>
</tbody>
</table>

*p < .05; ** p < .01

**IMPLICATIONS FOR DEVELOPING MASS MEDIA INTERVENTIONS**

Note that, by far, the strongest influence on condom use is perceived normative pressure. This suggests that attempts to increase condom use in St. Lucia should focus upon social norms. For example, a mass media campaign might suggest that people talk to their friends about condom use; or it might provide information about the frequency with which condoms are used on St. Lucia. That is, the message might point out that the majority of St. Lucians use condoms. Another strategy might be to suggest that one should talk to one's partner about condom use and/or suggest that one should ask one's partner to use a condom.

In order to determine whether it would also be useful to focus interventions upon one or more of the other variables, a series of statistical analyses were conducted to determine whether a consideration of any of the variables would add to our ability to explain condom use behavior. For example, as we noted above, perceived normative pressure correlates .58 with condom use. To determine whether a given variable, such as knowledge, contributes to our understanding of condom use behavior over and above perceived pressure, one tests to see if a consideration of knowledge in addition to perceived norms significantly increases the size of the correlation. That is, will the simultaneous consideration of knowledge and perceived normative pressure lead to better prediction of condom use behavior than that obtained from a consideration of only perceived normative pressure? These analyses indicated that none of the four remaining variables (whether considered individually or in combination) increased the size of the correlation. Thus, it would appear that if one conducts a normative campaign, little will be gained by directing interventions at any of the remaining four variables (e.g., Knowledge, Perceived Threat, Perceived (Locus of) Control, or Behavioral Beliefs).

**SUMMARY & CONCLUSIONS**

In this paper we have tried to show how KABP surveys can be used to test hypotheses derived from different theories of behavior. More important, we have tried to show that these tests can provide valuable insights into the relative importance of a number of theoretical variables as determinants of health protective behaviors. Specifically, we have seen that central variables from the Health Belief Model (e.g., Perceived Knowledge, Perceived Threat, Beliefs about Condom Use), Social Learning Theory (Locus of Control, Beliefs about Condom Use), and the Theory of Reasoned
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Action (Perceived Norms, Beliefs about Condom Use) all contribute to an understanding of condom use behavior. However, the data clearly indicate that, at least in St. Lucia, the most important determinant of condom use behavior is perceived normative pressure.

This finding clearly suggests that attempts to increase condom use behaviors in St. Lucia should focus primarily upon increasing perceived normative pressure to use condoms. From a theoretical perspective, this type of campaign has the greatest potential for successfully influencing condom use behaviors.

REFERENCES


