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Conversation and Compliance: Role of Interpersonal Discussion and Social Norms in Public Communication Campaigns

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This study explores the role of interpersonal discussion and social norms in a public health campaign, the BBC Condom Normalization Campaign, designed to promote conversation and change the public perception of condom use in India. Drawing upon the integrative model of behavioral prediction, attitudes, self-efficacy, subjective norms, and descriptive norms were predicted to relate to behavioral intentions to use condoms. It is important to note that the valence of discussion was hypothesized to relate to each of these more proximal predictors. The authors used structural equation modeling to test the model on 3 separate samples of Indian men between

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the ages of 15 and 49 years: (a) high-risk men who had sex with nonspouses; (b) low-risk, sexually inactive, unmarried men; and (c) low-risk, monogamous, married men. Results were similar for low- and high-risk audiences, with valence of discussion about condoms predicting condom-related attitudes, self-efficacy, and subjective and descriptive social norms with respect to condom use, which, in turn, predicted behavioral intent to use condoms. These findings underscore the need to take not only the frequency but also the valence of interpersonal discussion into account when assessing the effect of health campaigns. Implications for theory and design of future public communication campaigns are explored.

Public communication campaigns are increasingly focusing not only on direct messaging strategies but also on indirect ways of influencing audience behavior. For example, social norms campaigns that provide people with accurate information about the prevalence of risky behaviors have been effective in promoting a reduction in those behaviors when their actual prevalence was lower than estimated prevailing norms (Smith, Atkin, Martell, Allen, & Hembroff, 2006). Similarly, in a 10-year review of health communication campaigns, Noar (2006) found that interpersonal discussion sparked by campaigns could improve their reach and effectiveness in influencing behavior. This study focuses on the BBC World Service Trust's Condom Normalization campaign that aimed to change social norms around condom usage in India by encouraging open discussion of the taboo topic of condoms.

Researchers widely agree that the design and evaluation of health communication campaigns should be guided by theory (Noar, 2006; Valente, 2002). The integrative model of behavioral prediction (Fishbein & Cappella, 2006) was used as the main theoretical foundation in the development and evaluation of the BBC Condom Normalization campaign. Given the goals of this campaign, particular attention was paid to the role of social norms. The present research also incorporates an important new element to the integrative model of behavioral prediction, namely interpersonal discussion. In particular, we propose the need to account for the valence (positive or negative) of conversation with regard to communication campaigns. We used structural equation modeling to test the relations among interpersonal discussion, subjective and descriptive norms, and behavioral intentions. Given that the BBC Condom Normalization campaign expressly focused on encouraging discussion and changing social norms, it provides a unique opportunity to study how these constructs produce potential behavioral effects.

Interpersonal Discussion

In their examination of voting behavior, Katz and Lazarsfeld (2006) highlighted the importance of interpersonal communication in understanding the effect of mass media by proposing the two-step flow model—that media influences opinion leaders who, in turn, influence their contacts directly (Katz, 1957; Lazarsfeld, Berelson, & Gaudet, 1948). As they stated, "... the response of an individual to a campaign cannot be accounted for without reference to his social environment and to the character of his interpersonal relations" (Katz & Lazarsfeld, 1955/2006, p. 25). Although the basic model may be overly simplistic, it does underscore the importance of studying public health campaigns within their social contexts. Bandura (2001) incorporated a similar idea into his social cognitive theory, wherein he suggested that media effects occur through "dual paths of influence" (p. 285) directly and indirectly through individuals' connections with their social networks. According to Bandura (2001),

"when media influences lead viewers to discuss and negotiate matters of import with others in their lives, the media set in motion transactional experiences that further shape the course of change" (p. 286).

A variety of studies have attempted to examine the interpersonal communication that is stimulated by mass media campaigns (see the *Communication Theory* special issue on "Conversation and Campaigns": Cho et al., 2009; Compton & Pfau, 2009; Hardy & Scheufele, 2009; Morgan, 2009; Southwell & Yzer, 2009). Examining family planning practices among women in Bolivia, Valente and Saba (1998) studied the way that a mass media campaign interacted with interpersonal communication networks. For those women whose networks included few people using family planning methods, the campaign had a large influence on their contraceptive decisions. In contrast, for those women whose networks included many people already using contraception, the media campaign was not as significant a contributor to their decision-making process (Valente & Saba, 1998). A study examining the effects of an MTV HIV/AIDS prevention campaign on interpersonal communication similarly found that respondents who were exposed to the media campaign were more likely to discuss HIV/AIDS with interpersonal contacts than those who were not exposed (Geary et al., 2007). It is important to note that these conversations further improved HIV/AIDS prevention behavior.

Southwell and Yzer (2007) summarized three potential roles of interpersonal discussion following campaigns. First, discussion can be a campaign outcome. Exposure to the campaign may lead to interpersonal discussion as when prescription drug ads encourage viewers to "talk with their doctor." Second, interpersonal discussion can act as a mediator between campaign exposure and particular campaign goals. Interpersonal conversations prompted by the campaign may establish or undermine perceived normative support within social groups and further affect intentions and behavior (Chatterjee, Bhanot, Frank, Murphy, & Power, 2009; Hornik & Yanovitzky, 2003; Southwell & Yzer, 2007). Last, discussion may moderate other campaign effects if it primes specific forms of information processing. For instance, while exposure to a condom promotion campaign may lead to an increase in HIV/AIDS prevention knowledge, interpersonal discussions may activate thinking on personal relevance and influence risk perception.

For the purpose of this article, we focused on the first two potential roles of interpersonal discussion outlined earlier. Given that the Condom Normalization campaign deliberately encouraged individuals to talk about condoms, interpersonal discussion is intended to be one of the direct effects of the campaign. In addition, we examined the potential role of discussion as a mediator of campaign effects. Thus, we predicted the following:

Hypothesis 1: Exposure to the campaign will be positively associated with interpersonal discussion.

The studies discussed earlier indicated that interpersonal communication increased the prevalence of social norms supporting prevention behaviors. Although these and other studies establish a link between exposure and discussion about campaigns, most studies assume that the discussions generated by these campaigns were positive. However, as David, Cappella, and Fishbein (2006) noted, interpersonal discussion needs to be investigated in a more nuanced fashion. In their studies of 4adolescents, they found that participating in chat room discussion can actually

produce boomerang effects (e.g., reducing social norms against marijuana use). If interpersonal discussion is fostered in an environment in which the prevailing social norms are against the recommended behavior—as was the case with the open discussion of condoms in India prior to the Condom Normalization campaign—then there may be a greater likelihood of backlash against a campaign (Morgan, 2009). Thus, our second hypothesis is the following:

> Hypothesis 2: The valence of interpersonal discussion will be associated with (a) attitudes, (b) self-efficacy, (c) subjective norms, and (d) descriptive norms such that conversations in support of condoms promote the goals of the campaign.

Attitudes and Self-Efficacy

As indicated earlier, the theoretical foundation of the Condom Normalization campaign was the integrative model of behavioral prediction. This theory builds on earlier health communication models such as the theory of reasoned action (Fishbein & Ajzen, 1975) and the theory of planned behavior (Ajzen, 1991; Fishbein & Cappella, 2006; Fishbein & Yzer, 2003). The authors stated:

> According to the model, any given behavior is most likely to occur if one has a strong intention to perform the behavior, if a person has the necessary skills and abilities required to perform the behavior, and if there are no environmental constraints preventing behavioral performance (Fishbein & Yzer, 2003, p. 166).

Although these skills and environmental conditions can clearly affect whether a behavior is actually performed, performance of a behavior requires a choice, so behavioral intention is the "best *single* predictor" of actual behavior (Fishbein, 1980, p. 83, emphasis in original).

Baseline data and formative research in India revealed not only low incidence of condom use but also a lack of strong intention to perform the behavior. The integrative model suggests three primary determinants of intention: the attitude toward the behavior, an individual's perceived self-efficacy with respect to the behavior, and the perceived norms concerning the behavior (Fishbein & Cappella, 2006; Fishbein & Yzer, 2003). Here, attitudes refer to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991). Self-efficacy relates to an individual's assessment of his or her ability to perform a particular behavior (Bandura, 1997, 2004). Drawing from the integrative model of behavioral prediction, we hypothesized the following:

> Hypothesis 3: Attitudes will be positively associated with behavioral intentions.
> Hypothesis 4: Self-efficacy will be positively associated with behavioral intentions.

Social Norms

The Condom Normalization campaign aimed to increase discussion about condoms and positively change norms about condoms throughout Indian society. By reducing

stigmatization of condoms, the ultimate goal was to increase condom use among high-risk men. We subsequently discuss two types of norms—subjective and descriptive—and their potential relevance to the Condom Normalization campaign.

The integrative model for behavioral prediction specifically incorporates subjective norms, beliefs about what relevant others think is appropriate, as one of the key predictors of behavioral intentions. According to the model, subjective norms comprise normative beliefs and the motivation to comply with relevant others' beliefs (Ajzen, 1985; Fishbein, 1980; Fishbein & Yzer, 2003). Numerous empirical studies have used these theories to examine health behaviors. Within the field of HIV/AIDS prevention, subjective norms have been found to significantly predict intention to use condoms (Boer & Mashamba, 2005). As a result, we predicted the following:

Hypothesis 5: Subjective norms are positively associated with behavioral intentions.

In contrast with subjective norms, descriptive norms are those beliefs about what other people actually do (Lapinski & Rimal, 2005). Although descriptive and subjective norms can be congruent, they can also contradict each other. With respect to HIV, for example, although it is widely believed that people should use condoms, it is also well known that many do not. Descriptive norms are not included in the integrative model for behavioral prediction. However, descriptive norms may have the ability to affect behavior, though in a different way than subjective norms do (Lapinski & Rimal, 2005). Thus, we predicted the following:

Hypothesis 6: Descriptive norms are positively associated with behavioral intentions.

Taken together, these hypotheses yield the conceptual diagram shown in Figure 1. All of the hypotheses are tested simultaneously using structural equation modeling.

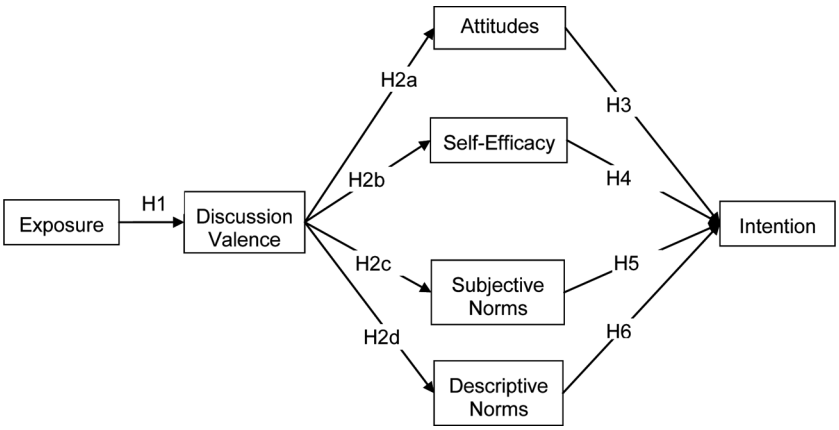

Figure 1. Conceptual model.

HIV/AIDS in India

In most regions of India, sexual transmission accounts for the majority of HIV cases (Bhattacharya, 2004; N. Chatterjee & Hosain, 2006; Saggurti & Malviya, 2009). Promotion of condoms to reduce the risk of HIV/AIDS through sexual transmission is therefore a key strategy identified and promoted by the National Aids Control Organization. Existing sociocultural norms and beliefs about sexual conduct and gender relations, however, continue to act as barriers to condom use (Saggurti & Malviya, 2009; Sarkar, 2008; Sevlan et al., 2005).

Across studies conducted in India, it has been found that open discussion of sexual matters is considered inappropriate (Bhattacharya, 2004; Roth et al., 2001; Sevlan et al., 2005; Singhal & Vasanti, 2005). Furthermore, among married and unmarried couples, male dominance contributes to skewed power relations and sexual decision making (Verma, Pelto, Schensul, & Joshi, 2004). Thus, among heterosexual couples, predominantly it is men who make decisions about whether to use condoms. The social stigma associated with condoms, the lack of privacy where condoms are sold, and the complexity associated with condom negotiation are significant barriers to condom use (Sarkar, 2008). As these studies indicate, campaigns need to change prevailing social norms around the acceptability of condoms (Decker et al., 2010; Roth et al., 2001). In response to these challenges, the Condom Normalization campaign aimed to change social norms regarding use of condoms by targeting not only high-risk men but also Indian society as a whole. The campaign designers hoped that influencing social norms about condoms generally might allow those at high risk to change their attitudes and intentions toward condoms. However, preventing HIV and condom use may not be equally relevant to all segments of the Indian population. As a result, our final research question was "Does the hypothesized model vary by risk group?"

Method

Campaign

Funded by the Bill and Melinda Gates Foundation, the BBC World Service Trust in India designed and implemented the mass media component of a campaign aimed at promoting condom usage among men by normalizing discussion and use of condoms.[1] In designing the campaign, two audiences were identified: (a) a high-risk group of men with multiple sex partners and (b) a secondary group that included all other men between the ages of 15 to 49 years. The campaign aimed to make condoms more acceptable for society as a whole in hopes that those at high risk would then be more likely to use condoms.

The media campaign, broadcast in four phases in 2007 and 2008, consisted of a series of public service announcements (PSAs) designed to provoke and promote conversations about condoms and encourage positive views of condoms. The first PSA posed a riddle whose answer was "condom" and encouraged people to call in with the answer to win prizes. The second PSA depicted a popular indigenous

[1]The campaign was part of the Bill and Melinda Gates Foundation Avahan initiative. In conjunction with the campaign, local organizations conducted interpersonal interventions with high-risk groups to promote condom use and also distributed condoms. Only the mass media campaign is considered here.

game in which the winner chanted "Condom!" rather than the game's required chant "Kabaddi!" By encouraging people to say the word "condom" aloud and showing the protagonist rewarded for repeating "condom," these two PSAs promoted talking about condoms. The third PSA featured a cell phone ringing with a unique condom a cappella ring tone. The final PSA featured a woman calling a dog by his name, "Condom." These two PSAs focused on showing community settings and public support for saying "condom" in an effort to change social norms around condoms.

BBC World Service Trust originally planned to air the series of PSAs in four southern Indian states and to use two neighboring states as control sites. However, on the basis of audience response to the initial PSA, the National Aids Control Organization decided to broadcast the PSAs on state-owned and cable television channels nationally. As a result, the planned pre/post study design with a control group was compromised. Instead, level of exposure to the campaign in the four originally targeted southern states was used for campaign evaluation.

Procedure

The endline survey used systematic random sampling stratified by district. Overall, 5,718 surveys (a 90% response rate) were administered face to face in the language prevalent in each of the study states. Once a respondent was sampled, his eligibility was assessed. All respondents were men between 15 and 49 years of age who watched cable or satellite television at least 3 days a week and had heard of condoms. After determining eligibility, a respondent's exposure to and engagement with the campaign were assessed. All respondents were then asked a series of questions on HIV/AIDS-related knowledge, attitudes, and behavioral intentions.

Sample

Because the campaign might have differential effects on men of varying risk levels, three sub-samples were analyzed separately. The first group consisted of 1,161 men identified as high risk: those who were unfaithful to their wives (having multiple sex partners) and unmarried men who reported having sex. The second group was 1,908 unmarried men who reported never having had sex. Last, the third group included 2,619 monogamous married men.

Measures

Exposure

Exposure to the campaign was measured for each of the four PSAs. For each, respondents first reported their aided recognition of having seen the advertisement in the previous year while viewing a storyboard of the PSA. Aided recognition (rather than spontaneous recall) was used as the primary exposure measure to ensure that respondents reported exposure to the correct campaign (Valente, 2002), as India had multiple campaigns around HIV/AIDS. For each recognized PSA, respondents were asked to describe the PSA, report its slogan, and provide the main message of the PSA. This helps to reduce the effect of yea saying. For each PSA, respondents were assigned an exposure score ranging from 0 to 4 on the basis of the number of elements of the ad correctly recalled. These exposure scores were then summed across PSAs, yielding a final exposure score ranging from 0 (*no PSAs recognized*)

to 16 (*PSA, description, slogan, and main message accurately recalled for all four PSAs*).

Discussion of Condoms

Respondents were asked whether they had ever discussed condoms with anyone. If they responded positively, they were also asked to report specifically with whom they had discussed condoms. In addition, respondents were asked to report the valence of their discussions of condoms with each category of person. Specifically, they were asked to report whether they talked about condoms very negatively, somewhat negatively, somewhat positively, or very positively. The valence of interpersonal discussion was calculated as the average valence across those categories, such that higher numbers indicate more positive talk about using condoms.

Attitudes

We assessed attitudes toward condoms with nine items on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Example items included the following: "It is a healthy habit to use condoms" and "Condoms allow you to enjoy sex without any worry." The scale had an acceptable Cronbach's alpha of .72.

Self-Efficacy

We assessed self-efficacy on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Examples of the five self-efficacy items included the following: "I feel confident in my ability to discuss condoms with any partner I might have" and "I feel confident that I could purchase condoms without feeling embarrassed." Cronbach's alpha for the self-efficacy scale was.70.

Subjective Norms

Following Boer and Westhoff (2006) in the method described by Fishbein and Ajzen (1975), we measured subjective norms in two steps. First, we asked respondents about their normative beliefs: whether their relevant others (female friend/girlfriend, wife, fiancé, relative, neighbor, colleague, someone you met casually, commercial sex worker, male friend, and others) think the respondent should use condoms. Then, we asked respondents to report their motivation to comply with those beliefs. Answer options were on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). For a particular relevant other, the normative beliefs were multiplied by the motivation to comply, and the results were summed to create the subjective norm scale.

Descriptive Norms

Following Rimal and Real (2003), we asked respondents to report on a scale from 0 to 10 how many men, out of 10 men their age, they thought used condoms. Answers were continuous and could range from 0 to 10.

Behavioral Intentions Toward Condoms

We assessed behavioral intentions on a 4-point scale ranging from 1 (*very unlikely*) to 4 (*very likely*) to use a condom the next time the respondent had sex.

Table 1. Means, standard deviations, and covariances for model variables

	Exposure	Discussion valence	Attitudes	Subjective norms	Descriptive norms	Self-efficacy	Intention
High-risk group							
M	4.7	3.5	3.1	10.3	4.4	16.3	3.2
SD	3.2	0.7	0.5	2.9	2.0	2.4	0.9
Exposure	9.99						
Discussion valence	0.27	0.52					
Attitudes	0.16	0.11	0.22				
Subjective norms	0.82	0.52	0.18	8.63			
Descriptive norms	0.71	0.22	0.24	0.46	4.00		
Self-efficacy	0.75	0.38	0.68	0.62	1.27	5.86	
Intention	0.23	0.08	0.17	0.40	0.45	0.76	0.89
Unmarried sexually inactive group							
M	5.3	3.5	3.0	9.4	3.7	16.0	3.1
SD	3.5	0.8	0.5	3.1	2.0	2.7	0.8

Exposure	12.21						
Discussion valence	0.45	0.60					
Attitudes	0.27	0.12	0.24				
Subjective norms	1.91	0.60	0.31	9.43			
Descriptive norms	0.69	0.21	0.26	1.02	3.88		
Self-efficacy	0.76	0.37	0.74	0.96	1.00	7.17	
Intention	0.43	0.08	0.13	0.36	0.25	0.58	0.66
Married monogamous group							
M	4.1	3.4	3.0	9.0	3.8	16.0	1.9
SD	3.2	0.8	0.5	2.8	1.9	2.6	1.0
Exposure	10.01						
Discussion valence	0.23	0.54					
Attitudes	0.21	0.10	0.24				
Subjective norms	0.98	0.60	0.26	7.89			
Descriptive norms	0.45	0.18	0.28	0.93	3.65		
Self-efficacy	0.57	0.34	0.70	0.79	1.14	6.85	
Intention	0.31	−0.02	0.07	0.20	0.35	0.47	0.95

Analysis

We assessed the hypotheses using structural equation modeling. We calculated the covariance matrices using PRELIS 2 (see Table 1 for means, standard deviations, and covariance matrices for each group), weighting back to the population of cable and satellite viewers in India. The structural equation model was run using maximum likelihood estimation of the observed variables with LISREL 8. Each relation within the model was tested individually (alpha level set at .05), and the entire model was tested globally using goodness-of-fit measures.

Results

All participants were men between 15 and 49 years. In particular, 35.3% were 15 to 24 years of age, 39.7% were 25 to 35, and 25% were between 36 and 49. The sample was split between urban (53.7%) and rural (46.3%) respondents. The majority of the sample (81.1%) reported watching television 6 to 7 days a week.

We used structural equation modeling to test the hypotheses for the high-risk group (standardized parameter estimates shown in Figure 2). The model was not a good fit to the data. The χ^2 (12) was 452 ($p < .05$). The root mean square error of approximation (RMSEA) was 0.18, well above accepted bounds. Likewise, the CFI of 0.65 was too low. However, all of the hypotheses were supported at the local level, with p values $<.05$. Thus, the model seemed to hold promise, so we conducted post hoc examination of the modification indexes.

Examination of the modification indexes suggested freeing the correlation for the error terms for attitudes and self-efficacy. This correlation was consistent with the theory underlying the model and made sense given the similarity in the way the questions were asked. Thus, the model was reestimated without a constraint on the correlation between attitudes and self-efficacy. The resultant model (Model 2) is shown in Figure 3. As with the original model, all of the hypotheses were supported. In particular, the path from exposure to discussion valence was strongly positive (Hypothesis 1: 0.12). In turn, the paths from discussion valence to attitudes (Hypothesis 2a: 0.34), self-efficacy (Hypothesis 2b: 0.22), subjective norms (Hypothesis 2c: 0.25), and descriptive norms (Hypothesis 2d: 0.15) were also significantly

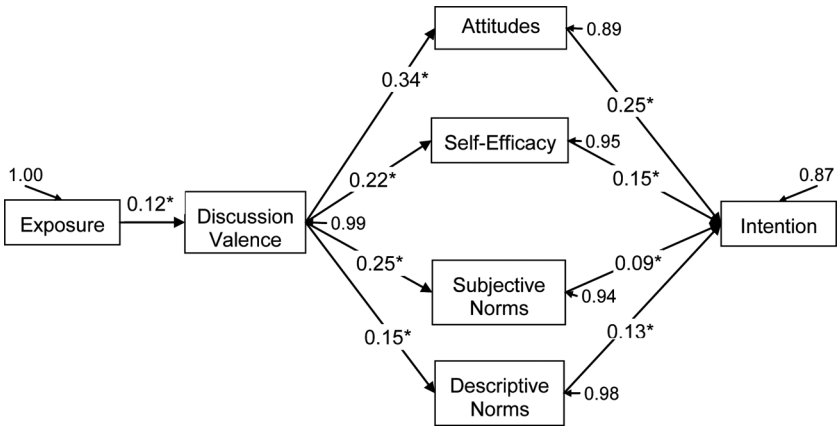

Figure 2. Model 1: Hypothesized model for high-risk group. Standardized solution. $^*p < .05$.

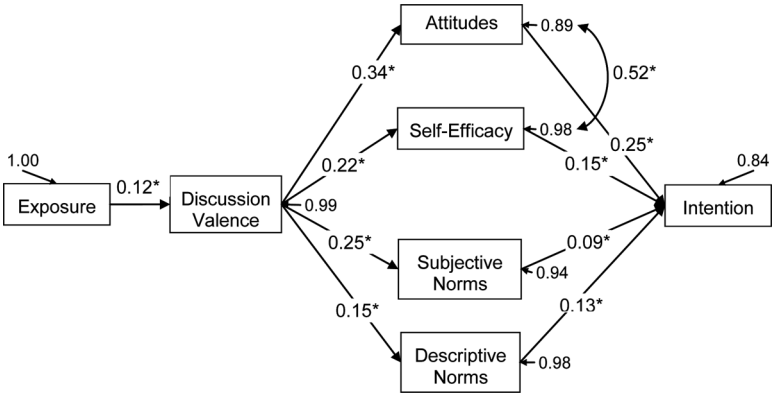

Figure 3. Model 2: Modified model for high-risk group. Standardized solution. $^{*}p < .05$.

positive. Attitudes (Hypothesis 3: 0.25), self-efficacy (Hypothesis 4: 0.15), subjective norms (Hypothesis 5: 0.09), and descriptive norms (Hypothesis 6: 0.13) then positively related to behavioral intentions. This model was a better fit to the data as shown in Table 2. With one additional degree of freedom, the χ^2 decreased to 88. The RMSEA was 0.08, within marginal range (Holbert & Stephenson, 2008). Last, the CFI of 0.94 indicated a good fit. Overall, the addition of the correlation improved the model to an acceptable fit.[2]

In addition, we ran two alternative models. For both, the correlation between attitudes and self-efficacy was included. In the first alternative model, discussion valence was allowed a direct path to exposure but not to any of the other mediating constructs. The newly estimated direct path from discussion valence to behavioral intentions was not significant. In addition, the model showed poor fit, with an RMSEA of 0.16 and a CFI of 0.79. Similarly, the second alternative model included direct paths from attitudes, self-efficacy, subjective norms, and descriptive norms to discussion valence, and no direct path from exposure to discussion valence. Discussion valence, in turn, had a direct path to behavioral intentions. Again, the model had poor global fit (RMSEA = 0.16, CFI = 0.74). Therefore, both alternative models were rejected in favor of the modified hypothesized model.

Results for the two lower risk groups followed similar patterns to the modified model for the high-risk group. Figure 4 shows the path diagram for unmarried sexually inactive men. The beta coefficients were very similar to those for the high-risk group, and all hypotheses were supported. Likewise, Figure 5 shows the path diagram for married monogamous men. The results were similar in supporting the hypothesized relation between exposure and discussion valence, and likewise between discussion valence and attitudes, self-efficacy, subjective norms, and descriptive norms. However, neither attitudes nor subjective norms significantly related to behavioral intentions. This is unsurprising in that married men who are faithful to their wives may be more motivated by family planning than protection from HIV when considering condom use. Both of these models were moderate fits to the data.

[2]We ran a variation in which we added categories of discussion partners as a separate construct. The addition of this variable did not change any of the beta coefficients, nor was the construct significantly related to campaign exposure or to attitudes. However, it did positively relate to self-efficacy, subjective norms, and descriptive norms.

Table 2. Fit statistics for structural equation models

	χ^2	*df*	RMSEA	RMSEA 90% CI Lower	RMSEA 90% CI Upper	CFI
High-risk group ($n = 950$)						
Model 1. Hypothesized	452	12	0.18	0.17	0.20	0.65
Model 2. Modified	86	11	0.08	0.07	0.10	0.94
Model 3. Alternative 1	249	10	0.16	0.14	0.17	0.79
Model 4. Alternative 2	279	11	0.16	0.15	0.18	0.74
Unmarried sexually inactive ($n = 1{,}208$)	162	11	0.11	0.09	0.12	0.88
Married monogamous ($n = 1{,}683$)	253	11	0.12	0.11	0.13	0.82

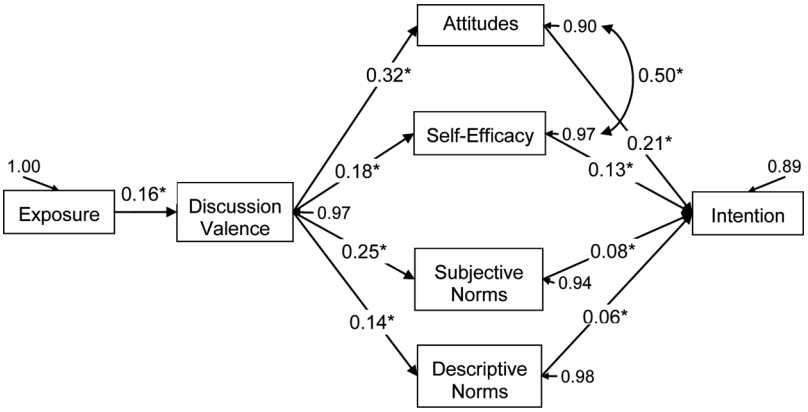

Figure 4. Model for unmarried, sexually inactive men. Standardized solution. $^{*}p < .05$.

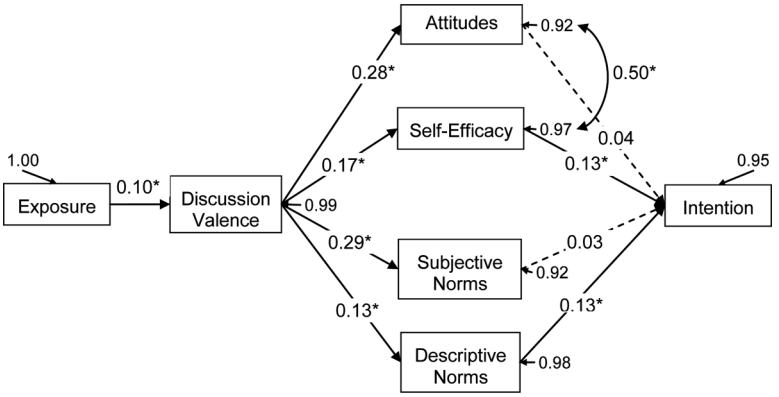

Figure 5. Model for monogamous, married men. Standardized solution. $^{*}p < .05$.

Discussion

During the course of the Condom Normalization campaign, 150 million Indian men were exposed to the PSAs. In our sample, the level of exposure to the campaign directly predicted the valence of talk about condoms with relevant others, such that higher levels of exposure related to positive discussions about condom use among all three risk groups. In turn, the tone of this discussion predicted other campaign effects including more positive condom-related attitudes, increased self-efficacy, and both subjective and descriptive norms supporting condom use. For the high-risk and the sexually inactive men, each of these constructs was significantly positively related to behavioral intentions regarding condom use. Overall, the hypothesized model based on an extension of the integrative model for behavioral prediction—adding the valence of relevant discussions and descriptive norms—was strongly supported.

To confirm the role of discussion following a campaign, two alternative models with discussion placed in line with other campaign effects or after other campaign effects were also tested. Neither model was supported. This suggests that discussion may play a key role in mediating campaign effects.

Another key finding was that the valence of the discussion surrounding condoms was important to incorporate into analysis. In other words, simply knowing whether or how much people talk following exposure to a campaign is not sufficient. Instead, knowing the content or at least the valence of that discussion is also crucial. If people discussed condoms following exposure to the campaign but talked about them negatively in a manner that reinforced existing stereotypes, then social norms for condom use might have been weakened rather than bolstered.

In all of the models tested, both descriptive norms of how many men use condoms and subjective norms about how much respondents' family and friends want them to use condoms were positively related to behavioral intentions. This finding should not be interpreted as suggesting that these constructs are overlapping or redundant. Rather, subjective and descriptive norms are quite different conceptually and could produce divergent effects. For example, for a behavior such as condom use in which strong cultural taboos are perceived, both perceiving that others engage in the behavior and believing that they think you should also engage in that behavior could have independent effects on behavioral intentions.

Our findings support those of David and colleagues (2006), who suggested that the tone of discussion may affect how an audience responds to a message. Our findings likewise suggest that various aspects of interpersonal discussion need to be further differentiated and investigated. While our results underscore the need to take the valence of conversations into account, additional issues such as the specific content of the conversation, the identity of the conversational partner, and the personal relevance of the topic should also be considered.

Limitations

As Wakefield, Loken, and Hornik (2010) noted, a drawback of most large-scale media campaigns is that conditions in the field often lead to the inability to make strong causal claims compared to when conducting smaller, more controlled experimental designs. As a result of events beyond the control of the researchers, the original quasi-experimental design of the study was compromised by the introduction of the campaign into intended control areas. Thus, the results provided here rely on a

cross-sectional, post-only design. However, Wakefield, et al. (2010) also argue that, although it is difficult to conduct controlled experimental designs of wide-reaching campaigns, the payoffs in terms of the number of people reached directly and indirectly by mass media campaigns increase "the potential for maximum effectiveness" (p. 1262). Thus, field-based studies such as this complement experiments conducted in highly controlled conditions, and both kinds of studies are needed to understand campaign effects.

In addition, this study relies on behavioral intentions, rather than actual behavior, as the final outcome. Although such intentions have been well-supported as predicting behavior when the intentions match the actual behavior in action, context, and time (Fishbein, 1980), having actual behavioral measures would add to the robustness of the evaluation. For campaigns in which experimental control cannot be maintained, a longitudinal panel design would be preferable as it would allow better examination of causal models.

Furthermore, although this study suggests that valence is important, it was not possible to analyze the specific content of conversations beyond whether they were positive or negative. It is reasonable to suspect that the specific content might also affect attitudes, norms, and behaviors. Future research should explore how the specific discussion partners may relate to conversational content. Though we measured discussion valence by conversational partner, the sample sizes for specific partner types (e.g., male friend) were too low to allow for comparisons.

Last, the survey used relies on self-report of a culturally taboo topic. It is unclear how social desirability may have affected responses. On the one hand, there may be underreporting by respondents who do not wish to acknowledge behavior considered culturally unacceptable. On the other hand, given the concerted effort regarding HIV/AIDS prevention and the existence of multiple campaigns, respondents may also feel pressured to provide responses that campaign staff find desirable and thus overreport safer sex behaviors. Studies that culturally contextualize and look at the communication ecology within which the campaigns occur have the potential to parse out such social desirability.

Implications

This study provides a lens into the mechanisms that contribute to the effectiveness of the Condom Normalization campaign both for its immediate goal of increasing acceptance of and talk about condoms and its more distal goal of influencing condom use. The use of theory and formative research to design the campaign were crucial to its success. This study suggests that the BBC Condom Normalization campaign not only successfully increased norms and intentions for high-risk groups, but it also promoted dialogue and shifted norms among other lower risk populations who were secondary targets of the campaign. This approach may yield indirect benefits because, especially in the case of wide-reaching campaigns such as this one, changes in behavior or norms within an individual's social network can influence a person's behavioral intentions even if he or she was not directly exposed to the campaign (Valente & Saba, 1998; Wakefield et al., 2010). Hence, the changes in social norms among the low-risk secondary target audiences may reinforce the effects evidenced among the high-risk target population. Moreover, the influence on young men who are not yet sexually active is important in that these changes occurred preemptively, before they started engaging in sexual activity.

This study explored the mechanisms used to promote a societal-level shift in norms. Our findings highlight the theoretical importance of measuring not just how much people talk about campaigns but also the valence of their conversations—whether supportive or derisive. Building on existing theoretical models for public communication campaigns, this manuscript suggests a revision to current theory by incorporating descriptive norms into theories about social norms more generally and exploring the relation between norms and discussion. David and Capella's (2006) study of interpersonal interaction following the screening of an anti-drug ad previously indicated that there is a relation between discussion and subjective norms and attitudes in a controlled lab setting. Our study supports their findings by confirming a similar relation among a larger population in the field, and further suggesting that valence of conversation is a crucial variable.

Future studies should continue to explore this relation between norms and valence of conversation while simultaneously looking deeper into the nature of discussion, both in terms of content as well as discussion partners. Such a perspective could potentially increase the explanatory power of behavior prediction models and help to suggest strategies to increase the effect of future campaigns. Campaigns that target changes in the social norms of a community need to take the cultural context into consideration in both design and evaluation (Dutta-Bergman, 2005; Wilkins & Mody, 2001). Campaigns do not take place in a vacuum, but instead follow other media and social input. The entire communication ecology surrounding a topic needs to be investigated to accurately assess how campaign effects occur.

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