

Assessing Condom Use Intentions through the Theory of Planned Behavior

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ABSTRACT

This study used the theory of planned behavior to try to understand condom use intentions for college students. Students reported their attitudes, norms, perceived control, and intentions in the domain of condom use. Control perceptions, subjective norms, and two indirect attitudes were the main predictors for condom use intentions with occasional partners. STD prevention programs aimed at college students should focus on changing attitudes, norms, and perceived levels of control with regard to condom use.

INTRODUCTION

Sexually transmitted diseases are a concern for sexually active youth. In 2000, 31,293 people aged 13-24 were reported to be HIV positive (STD Surveillance, 2003). Youth have greater chances of contracting STDs compared with other age groups due to "multiple barriers to quality of STD prevention services, including lack of insurance or other ability to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality" (STD Surveillance, 2003). Women aged 15-19 have the highest rates of gonorrhea compared to other groups of women and all "sexually active adolescents have high rates of chlamydia infection." Since "there has not been a ... decline in the newly diagnosed HIV cases among the youth" (STD Surveillance, 2003) and with the increased risks youths encounter in contracting STDs, it is beneficial for sexually active youth and for society that new ways to promote safe sex through condom use are found.

Research has shown that merely telling people to use condoms to prevent themselves from getting AIDS and other STDs is not enough to change people's behaviors (Albarracin, et al., 2001). In a study conducted by the Centers for Disease Control, simple didactic messages that focused on the health risks associated with unprotected sex were less likely to promote condom use than interactive sessions based on theoretical models. Counseling sessions that employed theories from the behavioral sciences had the greatest impact on promoting condom use (Albarracin, et al., 2000). Since it appears that merely informing youth of the health dangers of unprotected sex is not enough to change behavior, it is imperative to use theoretical models that are successful in predicting and changing behavior.

LITERATURE REVIEW

Research regarding condom use and AIDS prevention has generally centered on the theory of reasoned action (TRA) and the theory of planned behavior (Glasman & Albarracin, 2003).

The theory of reasoned action was developed by Fishbein and Ajzen in order to understand the variables that influence behavior. In the model, behavior is influenced by intentions, and intentions are influenced by attitudes and subjective norms, as shown in Figure 1.

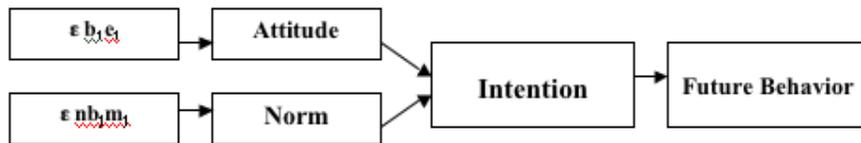


Figure 1. A visual representation of the Theory of Reasoned Action showing that Future Behavior is affected by Intentions, Attitude, and Norms.

Future behavior, B , is therefore a function of a person's intention, I , to engage in a behavior. According to the TRA, a person will typically use a condom with an occasional partner if their intentions to do so are high. Intentions are determined by a person's attitude and the subjective norm of important referents:

$$I \approx A_B + SN_B$$

Attitude is the extent a person feels either positively or negatively toward the behavior. Attitude can be measured either directly or indirectly. It is usually assessed directly with a set of bipolar semantic differential scales like "condom use is unpleasant/pleasant, bad/good, unimportant/important, etc." When measured indirectly, attitude can be determined by the beliefs (b_i) a person has regarding the behavior times the evaluative factors (e_i) relating to the beliefs. For instance, a person's belief about whether or not using condoms with their occasional partner would be responsible can be measured with a statement like strongly disagree/strongly agree. The evaluative factor relating to the belief is measured with bipolar statements such as "being responsible when having sex is bad/good". The evaluative factor is then multiplied by the belief and summed across all salient beliefs, to construct the overall indirect attitude toward condom use:

$$A_B \approx \sum \epsilon b_i e_i$$

The other factor influencing Intentions is Subjective Norm. Subjective Norm is determined by the beliefs of important referents multiplied by the participant's motivation to comply with each referent. Normative beliefs of referents are assessed with statements such as "How important is it to your occasional partner that you use a condom during vaginal intercourse." Motivation to comply is generally measured with statements like "I do what my occasional partner wants not very often/very often." Multiplying the referent's beliefs by the motivation to

comply and summing across all salient referents is referred to as indirect subjective norm and is denoted as

$$SN_B \approx \sum \epsilon nb_j m_j$$

where nb_j is the normative belief of referent j and m_j is the participant's motivation to comply with referent j . Thus, a person's intentions to use condoms will be greater if they perceive that their occasional partner believes they should use condoms and the respondent wants to comply.

The theory of reasoned action has been extensively studied to determine its predictive power (Albarracín, et al., 2001) and is usually an adequate means of assessing intentions for volitional behaviors. However, to predict intentions for behaviors that are not completely under volitional control, Ajzen developed the theory of planned behavior (TPB). This theory, as depicted in Figure 2, differs from the TRA with the addition of a third variable--perceived behavioral control.

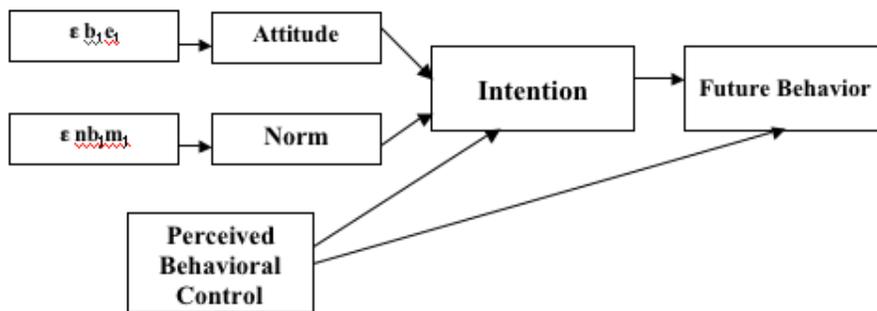


Figure 2. A visual representation of the Theory of Planned Behavior showing that Future Behavior is affected by Intentions, Norms, Attitude, and Perceived Behavioral Control and that Perceived Behavioral Control also affects Intentions.

Perceived Behavioral Control refers to the degree of control a person believes they have in performing a behavior and influences both Intentions and Behavior directly.

$$B \approx I + PBC$$

$$I \approx A_B + SN_B + PBC$$

Therefore, a person who believes they have control over the decision to use a condom will develop greater intentions to perform this behavior than someone who does not believe they have control. Perceived behavioral control is measured with questions that determine the participant's perceptions of control such as

“How much of the decision to use a condom is up to you” and “Do you see yourself as the kind of person who could get your partner to use a condom.”

The theory of planned behavior is especially useful in examining condom use because it accounts for the perceived control a person might or might not believe they have in convincing their partner to use a condom. Thus, to examine intentions to use condoms, a study was designed and administered to college students using the theory of planned behavior.

METHODS

Procedure and Participants

In exchange for extra credit points a 36-question survey was administered to 128 college students taking either Introduction to Marketing or Introduction to Statistics. Students signed up to participate by accessing the College Experiments Website, which is linked to both participating courses. The description of the study on the website emphasized the sensitive nature of the topic being researched and specified that the participants had to be at least 18 years old. The sessions were held in the [College of Business](#) Experimental Laboratory in Bryan Hall.

To ensure the privacy of each participant, the questionnaire was completed in private cubicles. Participants were asked a number of questions to determine their attitudes, norms, perceived behavioral control and intentions related to condom use and were not required to answer any questions that they found offensive or disturbing. The experimenter first distributed the Informed Consent forms, collected the signed forms, and then issued a paper receipt to each participant. Then, the participants were seated in one of the lab’s 24 individual cubicles, where an unmarked questionnaire and an unmarked envelope had been placed. The participants completed the questionnaire at their own pace, and placed it in the envelope and sealed it. The experimenter remained in the room to maintain experimental control, but was off to the side where she could not observe any individual’s responses. After completing the questionnaire, participants were asked to place their envelopes in one of two identical boxes that were placed out of the line of sight of the experimenter. In that way, the anonymity of the participants was guaranteed.

Measures

The questionnaire was designed to assess condom use intentions when having vaginal intercourse with occasional partners participants had in the past or may have in the future. An occasional partner was defined as a person with whom the participant was not in a monogamous relationship and as someone with whom they infrequently had sexual intercourse. Due to past research that showed that different factors influence condom use intentions for main and occasional partners, the survey only examined condom use with occasional partners (Glasman & Albarracin, 2003).

Attitudes

Direct attitudes were measured with three semantic differential scales of the form, "using condoms when you have sexual intercourse with your occasional partner is: bad/good, unpleasant/pleasant, unimportant/important." Indirect attitudes were assessed by first asking participants to use a 7-point semantic differential scale to express their beliefs about condom use. The belief statements, shown in Table 1, were drawn from earlier related research (Albarracin et al., 2000).

Table 1
Belief Statements about Condom Use with Occasional Partners

Using Condoms would decrease sexual pleasure
Using condoms would protect you from getting AIDS and other STDs
Using condoms would protect your occasional partner(s) from getting AIDS and other STDs
Using condoms would make you feel safer
Using condoms would be the responsible thing to do
Using condoms would make your worry less
Using condoms would make you feel good about yourself
Using condoms would show your occasional partner that you care
Using condoms would make your occasional partner think you have an STD

Then participants were asked to give an evaluative rating to each of the nine beliefs relating to condom use such as "a decrease in sexual pleasure is bad/good" and "feeling safe when you have sex is bad/good" consistent with the standard procedure used by researchers on the TPB (Glasman & Albarracin, 2003). The answers to the beliefs and evaluative term questions were then converted from a 7-point scale to a -3/3 bipolar scale where positive answers received 1, 2, or 3 (depending on how strongly they agreed with the statement) and negative answers received a -1, -2, or -3 (depending on how strongly they disagreed with the statement). A neutral answer received a 0 rating. To find the overall indirect attitude toward condom use, the beliefs were multiplied by their corresponding evaluative term and summed.

Norms

Common normative referents were gleaned from prior research (Glasman & Albarracin, 2003) and included people that the participants considered important like the participant's occasional partner, family, friends, and their doctor. The participants were asked how important it was to these people that they used a condom when they had vaginal intercourse with their occasional partner. The participants responded to the question with a 7-point scale ranging from very unimportant to very important. These responses were then converted to a -3/3 bipolar scale in the same fashion that the beliefs and evaluative terms for attitudes were converted. Then participants were asked how willing they were to comply with each referent. These questions were rated on a unipolar 1 to 7 scale. To assess the overall measure of subjective norms, the perceived referent belief about condom use was multiplied by the participant's motivation to comply with each referent and summed.

Control Perceptions

Participants were asked seven questions to assess how much perceived control they had in the domain of condom use. They were asked how much of the decision to use/not use a condom was up to them and if they saw themselves as the kind of person who could get their occasional partner(s) to use a condom every time. They were also asked questions to see how likely they would be to use condoms under extenuating circumstances, illustrated in Table 2.

Table 2
Control Perception Questions

How likely would you be to use condoms when your occasional partner(s) refuses to use condoms?
How likely would you be to use condoms when you are very excited?
How likely would you be to use condoms when your occasional partner(s) is very excited?
How likely would be to delay having sex when condoms are not readily available?
How likely would you be to use condoms with your occasional partner(s) when you have to delay/postpone sex to purchase condoms?

Each question was answered using a 7-point scale and then converted to a bipolar -3/3 rating.

Intentions

Intentions to use condoms in the future were measured with the following two questions: "how likely is it that you will use a condom with your occasional partner(s) in the future?" and "how motivated are you to use a condom with your occasional partner(s)?" and were measured on a 1-7 point scale.

RESULTS

A regression illustrates how well attitudes, norms, and perceived behavioral control affected intentions to use condom use. See Table 3.

Table 3
Effect of Attitudes, Norms, and Perceived Control on Intentions to Use Condoms

Independent Variable	Beta	T	Significance
Attitude	-.003	-.049	.961
Norms	.361	5.317	.001
Perceived Control	.518	7.567	.001

R²=.595

Norms and perceived control were both significant in explaining intentions to use condoms with p-values

of .001. However, attitude was not statistically significant. Thus, norms and perceived control are better predictors of condom use than are attitudes.

To assess which subjective norm predicted condom use intentions best, a regression was run to determine whether the norms of each referent had a large impact on intentions to use condoms. The results of the subjective norm regression are presented in Table 4.

Table 4
Effect that Norms have on Intentions to Use Condoms

Independent Variable	Beta	T	Significance
Norm of Occasional Partner	.646	9.522	.001
Norm of Family	.119	1.766	.080
Norm of Friends	-.015	-.213	.832
Norm of Doctor	.151	2.348	0.21
R ² =.497			

The results showed that the norms of the occasional partner and doctor were highly significant and the norms of family and friends did not show a statistical significance in predicting condom use intentions. Thus, the more a person perceives that their partner expects them to use a condom, the greater the person's intentions to use a condom will be.

The relationship between individual beliefs and intentions to use condoms is depicted in Table 5.

Table 5
Effect of Beliefs on Intentions to Use Condoms

Independent Variable	Beta	T	Significance
Belief about sexual pleasure	-.358	-4.239	.001
Belief about protecting yourself from contracting STDs	.001	.013	.989
Belief about protecting your partner from contracting STDs	-.127	-1.230	.221
Belief about safety	.038	.384	.701
Belief about responsibility	.215	2.379	0.19
Belief about worrying less	.039	.380	.704
Belief about feeling good about yourself	.107	.916	.362
Belief about showing partner that you care	.144	1.103	.272
Belief about making partner think you have an STD	-.042	-.529	.598
R ² =.319			

Two of the beliefs did predict condom use intentions: the beliefs that using condoms would reduce one's sexual pleasure and would be the responsible thing to do correlate with condom use intentions. Therefore, the more a person believes that using condoms would be the responsible thing to do, the greater their intentions to

use condoms. Also, the more a person believes that using condoms would reduce sexual pleasure, the lower their intentions to use condoms are.

The relationship between perceived control perceptions and intentions to use condoms is depicted in Table 6.

Table 6
Effect of Control Perceptions on Intentions to Use Condoms

Independent Variable	Beta	T	Significance
Decision to use condom	.201	3.083	.003
When partner refuses	.178	2.086	.039
When you are very excited	-.282	-2.306	.023
When partner is very excited	.362/div>	2.725	.007
When condoms are not readily available	.356	2.626	.010
When have to purchase condoms	.094	.747	.456
Kind of person to convince partner to use a condom	.024	.334	.739

R²=.566

This regression showed that all but two control perceptions have a significant relationship to condom use intentions. Delaying sex to purchase condoms and whether or not the participants viewed themselves as the type of people to convince their occasional partners to use condoms were the only control perceptions that did not show statistical significance in predicting condom use. However, if a person perceived the decision to use condoms to be up to them, then they had a greater intention to use condoms.

DISCUSSION

Consistent with past research, the theory of planned behavior served as an excellent predictor of condom use intentions (Albarracin et. al., 2001). Previous studies showed that attitudes significantly influenced intentions to use condoms. The current study, however, only showed that attitudes about sexual pleasure and responsibility during sex significantly affected intentions. Possible reasons for the difference could be a result of the group sampled. Perhaps college-aged students have differing beliefs from those seeking STD counseling at clinics (Glasman & Albarracin, 2003). Also, the beliefs of the students selected could differ from other college student population's beliefs because of different social stigmas surrounding condoms and STDs. However, this study did find two significant correlations regarding attitude: the more a person believes that condoms will reduce sexual pleasure, the less likely that person is to use condoms; and believing that using condoms is responsible increases the likelihood that a person will intend to use condoms.

Perceived behavioral control and subjective norms significantly correlated with intentions to use condoms. More specifically, the subjective norms relating to a participant's occasional partner and doctor influenced

intentions. The more a participant believed that it is important to their occasional partner or doctor to use condoms, the more likely the person is to engage in this behavior. The following control perceptions also significantly influenced intentions:

Table 7
Control Perception Questions That Significantly Influenced Intentions

How likely would you be to use condoms when your occasional partner(s) refuses to use condoms?

How likely would you be to use condoms when your occasional partner(s) is very excited?

How likely would you be to use condoms when you are very excited?

How likely would be to delay having sex when condoms are not readily available?

Therefore, the more likely a person is to delay having sex when condoms are not readily available, the stronger that person's intentions to use condoms will be.

It is important to understand how exactly each of these measures influences intentions in order to determine effective ways to change condom use behavior. Past research has shown that intentions to use condoms have increased when individuals develop favorable attitudes toward condoms or develop stronger beliefs that those around them think condom use is important. These studies have shown that merely expounding on the dangers associated with HIV and other STDs is not enough to change behavior (Albarracin et al., 2000; Albarracin et al., 2003).

One possible limitation of this study is that the data is self-reported. It is difficult to assess the degree to which the participants' reported answers might actually differ. In addition, this study did not measure the affect that alcohol or drugs might have on condom use intentions, factors that could lead to behaviors different from participants' self-reported intentions. Finally, participants were asked at the beginning of the study if they had an occasional partner. Participants were not required to have an occasional partner to complete the questionnaire. However, participants were asked to complete the survey with reference to occasional partner (s) they had in the past or may have in the future. It is possible that some of the respondents who marked that they did not have an occasional partner may never have engaged in sexual intercourse or never had an occasional partner. Therefore, their frame of reference for answering questions regarding occasional partners may not have been quite adequate.

Because merely informing people of the health related risks associated with unprotected sex is not enough to change condom use intentions, people's beliefs about condom use must be changed. The theory of planned behavior is an excellent predictor of condom use intentions (Albarracin, et al., 2001). The results of this study and others employing the theory of planned behavior should be used to promote messages via advertising campaigns and counseling sessions that are able to change people's beliefs about condom use. If people are able to view condom use positively and believe that others around them want them to use condoms, then it is more

likely that these people will develop favorable intentions to use condoms. Also, it is important to develop messages that help people feel that they have more control in the domain of condom use. With the increasing number of youth contracting STDs, there has never been a more important time to find effective, theory-based means of positively changing people's condom use intentions.

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