The Use of Theory Based Semistructured Elicitation Questionnaires: Formative Research for CDC's Prevention Marketing Initiative

Susan E. Middlestadt, PhD
Karabi Bhattacharyya, ScD
Julia Rosenbaum, ScM
Martin Fishbein, PhD
Melissa Shepherd

Dr. Middlestadt, Dr. Bhattacharyya, and Ms. Rosenbaum are with the Academy for Educational Development in Washington, DC; Dr. Middlestadt serves as Vice President and Director of Behavioral Research and Evaluation, Dr. Bhattacharyya is a Research and Evaluation Officer, and Ms. Rosenbaum is a Senior Program Officer for the AIDS Communication Support Project. Dr. Fishbein is a Professor of Psychology at the University of Illinois at Champaign-Urbana and currently serves as a guest researcher for the Centers for Disease Control and Prevention. Melissa Shepherd is Acting Associate Director for Communications in the new National Center for HIV, STD, and TB Prevention, Centers for Disease Control and Prevention.

Address tearsheet requests to Susan E. Middlestadt, Ph.D., Academy for Educational Development, 1255 23rd Street, NW, Washington, DC 20037.

SYNOPSIS

THROUGH ONE OF ITS MANY HIV prevention programs, the Prevention Marketing Initiative, the Centers for Disease Control and Prevention promotes a multifaceted strategy for preventing the sexual transmission of HIV/AIDS among people less than 25 years of age. The Prevention Marketing Initiative is an application of marketing and consumer-oriented technologies that rely heavily on behavioral research and behavior change theories to bring the behavioral and social sciences to bear on practical program planning decisions. One objective of the Prevention Marketing Initiative is to encourage consistent and correct condom use among sexually active young adults.

Qualitative formative research is being conducted in several segments of the population of heterosexually active, unmarried young adults between 18 and 25 using a semistructured elicitation procedure to identify and understand underlying behavioral determinants of consistent condom use. The purpose of this paper is to illustrate the use of this type of qualitative research methodology in designing effective theory-based behavior change interventions. Issues of research design and data collection and analysis are discussed. To illustrate the methodology, results of content analyses of selected responses to open-ended questions on consistent condom use are presented by gender (male, female), ethnic group (white, African American), and consistency of condom use (always, sometimes). This type of formative research can be applied immediately to designing programs and is invaluable for valid and relevant larger-scale quantitative research.

Through one of its many prevention programs, the Prevention Marketing Initiative, the Centers for Disease Control and Prevention (CDC) promotes a multifaceted strategy for preventing the sexual transmission of HIV among people less than 25 years of age. The Prevention Marketing Initiative is an application of marketing and consumer-oriented technologies that rely heavily on behavioral research and behavior change theories to bring the behavioral and social sciences to bear on practical program-planning decisions *(1, 2)*. A key to the design of effective programs is an empirically based understanding of the factors that influence

individual behavior. Stated another way, in order to change behavior, it is first necessary to understand why people behave the way they do. According to this approach, the more a program planner understands about the factors underlying a person's decision to perform or not perform a given behavior, the more likely it is that the planner will design an effective intervention.

The CDC's Prevention Marketing Initiative programs are based on theory-driven formative research on the specific behaviors of interest. One objective of the Prevention Marketing Initiative is to encourage consistent and correct condom use among sexually active young adults. This paper describes the use of a semistructured elicitation procedure during the formative research phase to identify and understand underlying behavioral determinants of consistent condom use in several segments of the population of unmarried, heterosexually active young adults between 18 and 25. It is important to note that this article describes only one portion of CDC's formative behavioral research. Additional research is being done that addresses a variety of other populations, including other segments of the young adult population.

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Role of Elicitation Procedures

Formative research to design effective programs can use both qualitative and quantitative methods. A key early step in such formative research is to understand the determinants of behavior and to identify which of a variety of potential determinants are the best ones to target in national and local interventions. Here, the focus is on a qualitative method, known as an elicitation procedure, to identify these potential determinants. As will be described in subsequent sections, this type of qualitative research is immediately useful in program design and is necessary for developing fixed-item questionnaires for quantifying the relative importance of these potential determinants and for evaluating the impact of the intervention.

The formative research for the Prevention Marketing Initiative is based on constructs from three major theories of behavior, the Theory of Reasoned Action *(3-6)*, the Health Belief Model *(7-11)*, and Social Cognitive Theory *(12-14)*. While these theories differ in many respects, a comparison of their constructs yields agreement on key variables that an applied researcher should consider in conducting formative research to design an intervention *(15)*. Further, these theories are in agreement on a number of measurement issues. Several of the key variables are general and have a fixed content. Items assessing these general constructs can be written and researched once the behavior has been identified. Other constructs, however, have "variable" content that can be specified only through qualitative research with the target population. Stated another way, to put into operation the "variable" constructs of these theories, a qualitative research phase, using what is called an elicitation, is recommended.

Briefly, to conduct an elicitation, a series of open-ended questions is asked about the specific behavior in the specific target populations of interest. A content analysis of responses to open-ended questions is then used to identify the "salient" or most frequently mentioned items. For example, the Theory of Reasoned Action requires that an open-ended elicitation procedure be used to identify the salient consequences (advantages and disadvantages) of performing the behavior. Responses to open-ended questions about the good things and the bad things that happen if the behavior is performed can be analyzed to determine the "salient" consequences for the specific behavior in the specific target population. Similarly, in defining and measuring self-efficacy, Social Cognitive Theory requires the identification of circumstances under which performance of a behavior is more or less difficult. Notice, neither the specific salient consequences (advantages and disadvantages of performing the behavior) nor the specific circumstances (facilitators and barriers) which make a behavior more or less easy to perform are decided by the researchers themselves.

This type of qualitative research using semi-structured elicitation questionnaires with the members of the populations of interest can serve three purposes. First, the qualitative data gives program designers terminology and words in the language of the populations of interest. This is vital to the design of effective interventions. Second, by including those who do and do not perform a behavior, it is possible to conduct preliminary analyses to identify the differentiating determinants to be addressed by an intervention. Finally, the research can be used to design a quantitative instrument to verify the differentiating determinants with higher power statistical tests (both overall and by subgroup) and to evaluate the effectiveness of the intervention.

This paper describes the methodology and sample results from elicitation research with several segments of the population of heterosexually active, unmarried young adults. The results will illustrate the three purposes served by this type of qualitative formative research.

Method

Overview. The methodology was designed to provide qualitative data for understanding condom use behavior among a sample of unmarried, sexually active young adults. A pilot study was conducted with 101 respondents from the Balti-

more/Washington, DC, area. With some modifications, the study was expanded to three additional sites—Kansas City, Missouri; Oakland, California; and Birmingham, Alabama. The sites were chosen to provide a range of responses reflective of the population diversity of the country.

One purpose of the pilot study was to determine whether, in conducting formative research on sensitive issues like sexual behavior, one should use face-to-face interviews or self-completion questionnaires. The face-to-face approach allows one to interview people at all levels of literacy and allows for probing when answers are incomplete. However, it requires skilled interviewers, takes more time, is more costly, and may inhibit candid responses. The self-administered approach may provide increased confidentiality, allows research with less skilled interviewers, and is less costly for data gathering. However, it might not elicit the same quality of responses due to literacy issues and because further probing of respondents would not be possible. To help make this decision, respondents in the pilot study were randomly assigned to one of the two formats. A comparison of the responses by format revealed no differences in the number or the nature of responses. In addition, in a 1-page questionnaire, respondents reported no preference for one format over the other. Therefore, a self-administered format was selected for the 3-city study.

Specifying the Behavior. The first step in conducting this type of formative research is to identify and specify the behavior of interest. This step is not only the most important, but is often the most difficult. For example, defining condom use is not as straightforward as it might seem. This is particularly true for women. Do women "use" condoms? Or do women "tell" their partners to use condoms? In the pilot study, men were asked about using a condom and women were asked about telling their partner to use a condom. To many of the women in the pilot study, this implied a verbal action; several of the respondents, however, described nonverbal ways to accomplish condom use. Therefore, in the expanded study all respondents were asked about "you and your partner using a condom." And, more specifically, the activity was condom use during vaginal intercourse.

Behavioral research on the population of unmarried 18- to 25-year-olds indicated not only that most people were sexually active, but that they (or their partners) have used condoms at least once, and that many reported always using condoms. Thus, consistent condom use rather than just condom use was chosen as the behavior of interest.

Finally, since one would expect determinants of condom use to be different for a serious or main partner, rather than casual partners, it was necessary to ask about both types of partners. The above considerations resulted in a definition of two behaviors: "You and [your main partner] using a condom every time you have vaginal intercourse," and "You and [your casual partner] using a condom every time you have vaginal intercourse."

Sample size. The sample for the main study consisted of 314 young adults: 103 from Birmingham, 109 from Oakland, and 102 from Kansas City. To be eligible for the study, a respondent had to be between 18 and 25 years of age and unmarried, had to have had vaginal intercourse in the 3 months preceding the interview, and had to have used a condom at least once. Respondents who met these basic eligiblity criteria were then screened for inclusion in a more detailed purposive sampling design.

Sample design. The sample design was a 2 x 2 x 2 x 2 x 2 design: gender (male, female), by ethnic group (white, African American), by socioeconomic status (disadvantaged, not disadvantaged), by type of partner (serious, casual), and by consistency of condom use (sometimes, always). There were from 8 to 12 individuals in each of the 32 cells. This sampling design allowed the identification of salient aspects both overall and separately by the key demographic characteristics. Furthermore, it allowed preliminary analyses to identify which aspects differentiated "always" from "sometimes" condom users.

The screening interview. Eligible respondents were identified with a short (10-item) telephone screening interview. Gender was determined on the basis of voice, and ethnic group by the term respondents selected as the one that best described their racial or ethnic background. Note, this phase of the research focused on African Americans and whites. In particular, the sample of whites consisted of those who explicitly identified as white, and did not include Native Americans, Asian/Pacific Islanders, Hispanic/Latinos, those who chose another ethnic designation, or those who refused to answer the question.

Assessing socioeconomic status was more difficult. The goal was to have sufficient numbers of young adults from relatively disadvantaged households. In the pilot study, respondents were classified as economically disadvantaged based on their total current household income and household size. Economically disadvantaged was defined at 185 percent of poverty level, taking into account household size (for example, less than $14,000 for a one-person household, $18,000 for two, $21,000 for three...). This proved to be inadequate. The young adults in the sample were generally in transition from one socioeconomic status to another and from one type of household to another. Some respondents lived with their parents. Others either lived on their own or with housemates where financial resources were not always shared. Many respondents were reluctant or unable to report their annual household income. In addition, more than 50 percent of respondents were college students who had very low incomes, but were not representative of most people with low socioeconomic status. In the expanded study, assessment of socioeconomic status was based on the status of the household in which they grew up. That is, respondents who said that when they were in high school, their household received support from Aid to Families and

Cover sheet and list of open-ended questions

Definitions in cover sheet

There are many types of sexual partners. But when we say this sexual partner, we want you to think of:

(Initials) _____

Please think only of this sexual partner when answering the following questions.

There are many different kinds of sexual activity. When we say vaginal intercourse, we want you to think of: Sexual intercourse where the man puts his penis in the woman's vagina.

There are many words for condoms. These are sometimes called rubbers, sleeves, jimmies, raincoats, trojans.

Open-ended questions

What do you see as the **advantages or good things** that would happen if you and your partner used a condom EVERY TIME you have vaginal intercourse?

What do you see as the **disadvantages or bad things** that would happen if you and your partner used a condom EVERY TIME you have vaginal intercourse?

What makes it **difficult or impossible** for you and your partner to use a condom EVERY TIME you have vaginal intercourse?

What makes it **easier** for you and your partner to use a condom EVERY TIME you have vaginal intercourse?

Who (individuals or groups) do you think would **object or disapprove** if you and your partner used a condom EVERY TIME you have vaginal intercourse?

Who (individuals or groups) do you think would **approve or support** you if you and your partner used a condom EVERY TIME you have vaginal intercourse?

Imagine someone who uses a condom EVERY TIME they have vaginal intercourse with their sexual partner. How would you describe that person? What are they like? That is, what do you see as the characteristics or qualities of a person who uses a condom EVERY TIME they have vaginal intercourse with their sexual partner?

Now imagine someone who NEVER uses a condom when they have vaginal intercourse with their sexual partner. How would you describe that person? What are they like? That is, what do you see as the characteristics, qualities, or attributes of a person who NEVER uses a condom when they have vaginal intercourse with their sexual partner?

Dependent Children (AFDC) or Women, Infants, and Children (WIC) programs; free school lunches; food stamps; or Medicaid were considered relatively disadvantaged.

As part of the screening process, respondents were asked to list their four most recent sex partners (within the last 3 months) by providing the partners' initials. For each partner, they were asked to identify the relationship as either serious or casual and to indicate how often they used condoms with this partner (every time, almost every time, sometimes, almost never, and never). Respondents used their own criteria to decide the status of the relationship.

Based on responses to the above screening interview, a respondent was considered eligible or ineligible for the current study. Eligible respondents were offered $50 if they were willing to come to a central place and answer a more detailed self-administered questionnaire. In total, 1,842 households were called, 480 contained eligible young adults, and 452 of these eligible young adults agreed to come to the central location. When they arrived, their screening data were used to assign them to one of the 32 cells in the sampling design. For example, half of the male and half of the female participants were assigned to complete the questionnaire with their most recent casual partner in mind. The other half (of each gender) were asked to respond with their most recent serious partner in mind. More specifically, respondents were given the initials of the partner whom they had described during the screening interview as a serious or casual partner and were asked to answer all questions with that partner in mind. In addition, for each type of partner, half of the respondents assigned to that partner type had indicated they always used a condom with this partner, while the other half indicated they were inconsistent condom users. As descirbed previously, ethnicity (white, African American) and socioeconomic status (disadvantaged, not disadvantaged) were also considered in assigning eligible respondents to a cell in the sampling design. In the final sample, complete data were obtained from 314 eligible individuals who filled the 32-cell design.

Procedure. A private marketing research firm was retained to recruit participants and administer the questionnaire. Working with a marketing firm provided easy local community access through its network of affiliate agencies throughout the country. The marketing firm supervised its local affiliates in recruiting participants to fill the previously

Table 1. Formative research on condom use for the Prevention Marketing Initiative: consequences of using a condom every time, percent of respondents by sex

Consequences		Percent	
Quotations	*Advantages*	*Male*	*Female*
Protect both me and my partner from pregnancy Will prevent unwanted pregnancy No kids We can keep from getting pregnant	Prevent pregnancy	74	72
No social diseases It helps us prevent disease It would prevent passing the AIDS virus I wouldn't catch diseases There would be less risk for both of us of catching anything	Prevent STDs	66	74
Enjoy the act of sex more because there will be fewer worries You won't be as scared so therefore intercourse will be better; less to worry about so that you can be more relaxed No worries about babies Be more relaxed, there would be no regrets, peace of mind that chances are slim to none that I could've become pregnant (or caught a disease)	Worry less	22	19
Safe sex Keeps me safe even if he's sleeping around It would make the world a safer place Overall safety of each partner	Be safe and protected	14	15
Discover new ways to use it–as in putting it on I'll be able to go at it for a longer period of time Depending on the condom, stimulation for the woman	Better sex	5	5
I would think that my partner would see me as someone who exercises good judgment It could maybe teach us more responsibility It shows a sign of maturity	Shows responsibility	6[1]	2
Wouldn't have to mess up as many towels Keeps you from making a mess	Less mess	3	3
Quotations	*Disadvantages*		
You won't get that skin-to-skin feel No bad things, it just doesn't feel natural Doesn't feel too good with condom Condoms don't feel as satisfying; leaves a desire unfilled Can cause irritation	Less pleasurable feeling	50[1]	33
The condom might slip off But the condom can get lost It could bust or come off Rubber getting stuck in you There's a chance that the rubber could break	Condom fails to protect (slips or bursts)	15[1]	31
None I see no bad things about it To be really honest, there is nothing bad that you could get out of using a condom	No disadvantages	19	23
Possibility of transmitting STDs Could get pregnant–catch diseases–give diseases Either of us could catch a disease, partner could become pregnant	Get an STD or pregnant	13	16
Sometimes it is awkward getting it on in time Timing–not romantic to stop and put a condom on Sometimes it ruins the mood When in the heat of the passion you don't feel like getting a condom because it breaks the sexual urge	Ruins or interrupts mood	14	12
Inconvenience Sometimes they're not handy	Condom unavailable or inconvenient	9	6
She might get offended because she wants a baby Would keep you from having children if that's what you want Not having a baby if you wanted one	Can't get pregnant	6[1]	1

[1]$p<.05$

Table 2. Formative research on condom use for the Prevention Marketing Initiative: who approves or disapproves of condom use every time, pecent of respondents by consistency of use

Salient references		Percent	
		Always	Sometimes
Quotations	Approve	(n=157)	(n=156)
Parents Parents are definitely in support My parents and her parents Dad My mother	Parents	54	57
Friends My more mature friends Some friends Friends that have made mistakes in their lives	Friends	47	42
My sister Brothers Family My family encourages the use of condoms My grandmother bought me a box of condoms before, so their support is evident Relatives	Family and relatives	41	36
Doctors Sometimes your doctor tells you to use a condom Planned Parenthood Health department	Medical providers	22	16
Most importantly me and my girlfriend; it affects us personally We would support ourselves because we are mature adults My sexual partner	Partner and self	19	16
CDC AIDS groups STD clinics The disease agencies, the AIDS groups, groups that promote safe sex People from CDC	AIDS organizations	13	15
Church Religious organizations	Church people	7	6
	Disapprove		
No one Everyone would be very proud No one I know None because I don't discuss my sex life I don't think anyone would disapprove; my friends and I perceive using a condom as very responsible	No one	57	53
Church The Catholic Church My church says you shouldn't sleep together before marriage Some religious groups who are pro life	Church and religious groups	16	14
Some of my friends Peers who influence you not to use a condom His friends would think I wasn't loyal to him Friends who say it ruins the mood Friends mostly–they say it's not the real thing	Friends	10	11
Woman partner I would No one but myself; my opinion and my partner's are the only ones to consider Me, but not as much as him Wife Partner Definitely me	Partner and self	4[1]	12
Some parents Parents if they find them Once I'm married, my parents (they want grandkids)	Some parents	7	6

[1] $p<.05$

described sampling design matrix. It should be noted that the use of local affiliates, while increasing the ease of nationwide access, decreased control of the actual data collection process. Local affiliate agencies recruited participants through the use of existing marketing data bases and a computer-assisted telephone interviewing (CATI) system. Agency data bases were unable to fill the complete quota for economically disadvantaged participants required for the research; therefore, "reverse telephone directories" (using phone prefixes in lower income areas to identify potential respondents) were used to supplement agency lists.

Questionnaire. The questionnaire began with a cover sheet that defined the meaning of specific terms used throughout. These definitions are presented in the boxed text on page 21. The box also shows the open-ended questions that were asked to elicit salient consequences, salient referents, salient facilitators or barriers, and salient qualities for the behavior of using a condom every time. In addition, the questionnaire contained open-ended questions on two other behaviors, refusing to have sex and discussing condom use, and an assessment of intentions, subjective norms, attitudes, and general demographic characteristics.

Content Analysis. The responses to the open-ended questions were entered into a word processing file by a team of coders. Similar responses to each question were grouped together. These groups of responses were reviewed to create a final set of coding categories for each question. Using a word processing macro function, an SPSS program was created with variables for each category. Integrating the file of open-ended data with the file of close-ended data allowed the calculation of the percent of respondents mentioning each category, both overall and by different subgroups of respondents.

Results and Discussion

As described previously, this type of qualitative, formative research can serve several purposes. The actual open-ended responses provide a rich source of information about terminology, language, and word choice that can help both program designers and researchers begin to understand the meaning of consistent condom use within various segments of the population. A detailed frequency analysis of responses to open-ended questions, overall and by subgroup, can generate hypotheses which can be tested in subsequent larger-scale quantitative research and can suggest ideas for intervention design. The specific terms and phrases used for categories of responses can be used in the construction of a quantitative instrument. Finally, preliminary assessments as to potential targets of opportunity for interventions can be made by comparing "always" to "sometimes" condoms users.

The 2 x 2 x 2 x 2 x 2 sampling design allows a variety of one-way and n-way comparisons among the subgroups in terms of the frequency of mentioning each category of response to each type of open-ended question. Thus, it is not possible to present all the results. Instead, this section presents sample results to illustrate the uses and next steps with these data from both a program design and research perspective.

Specifically, this paper presents three tables of sample results of the content analysis, one focusing on the perceived consequences elicited by asking the respondents to list advantages and disadvantages of using a condom every time; one giving the salient social referents elicited by asking respondents who would approve and who would disapprove if they used a condom every time; and one examining the facilitators and barriers to condom use that were obtained by asking repondents about circumstances that make consistent condom use easy or difficult.

In each case, the table gives the category, the percent of participants mentioning the category separately by a demographic variable, and a list of quotations to illustrate the category content. For each response category, the content analysis provides an extensive list of actual quotations, only some of which are presented in the table in order to provide more detailed meaning for each category. The significance tests reported here are simple 2 x 2 chi-square tests. It is important to view these tests as preliminary and suggestive. In each section, the results will be discussed in terms of ideas for intervention design and for construction of a quantitative instrument.

Salient Consequences by Gender. Table 1 presents the salient consequences of using a condom every time by gender. The table shows the percentage of men and women who mentioned each specific category, as well as a selected list of quotations. For example, the category "worry less" is further explained by the quotations, which make it clear that using condoms reduces worry about both pregnancy and disease. In examining the salient consequences, it is important to note that some of the consequences are health consequences, but many are not. Using a condom every time can prevent pregnancy as well as HIV infection and other sexually transmitted diseases. However, reduced worry, increased safety, and effects on pleasure and mood, all NON-health aspects, are perceived to be consequences of condom use in these populations of unmarried, heterosexually active 18- to 25-year-olds.

Note, too, that some consequences are perceived to be advantages by some people and disadvantages by others. For example, while most of the young adults perceived pregnancy prevention to be an advantage, some listed it as a disadvantage. As another example, while most respondents viewed condom use as decreasing sexual pleasure, some indicated that it could have positive affective effects in terms of less worry and better sex.

The frequency analysis of qualitative data by gender revealed only one difference between men and women in the salient or most frequently mentioned positive consequences. Men were slightly more likely than women to mention that using a condom every time would result in their being considered a responsible person. In contrast, there were several interesting differences in the frequency of negative consequences listed. Men were more concerned than women about the reduction in pleasurable feeling from using a condom, while women were more concerned than men about the condom breaking, slipping off, or getting "stuck inside." Note that pregnancy prevention was mentioned as a disadvantage more often by men than by women.

From the perspective of designing programs, these results suggest a number of opportunities. Clearly, one strategy, particularly for men, might be to deal with the negative consequences of condom use on pleasure. Another strategy, particularly for women, would be to address the worry about the condom coming off.

In designing a fixed-item instrument for evaluating the impact of using these or other strategies, each of these most frequently mentioned consequences (overall and by segment) could be assessed with two fixed-alternative items. One item would assess the strength of the participant's belief that performing the behavior would lead to the consequence; the other would assess how positive or negative the consequence is perceived to be. For example, for the consequence, "prevents pregnancy," the two items using a semantic differential self-completion format would be:

My using a condom every time I have vaginal sex with (initials) will prevent pregnancy.

likely ___:___:___:___:___:___:___ unlikely

Preventing pregnancy is

good ___:___:___:___:___:___:___ bad

Salient Referents by Condom Use. Table 2 presents the

salient referents, that is, the most frequently mentioned individual or social groups who would approve or disapprove of consistent condom use. Here, the table gives the percent of consistent and inconsistent condom users mentioning each reference group. Note, as with many behaviors, the important others with respect to condom use include parents, friends, and relatives. In addition, medical providers, the church, and AIDS organizations are potential sources of social pressure. Parents, friends, relatives, medical providers, and AIDS organizations are more frequently mentioned as approving, whereas the church was mentioned more frequently as disapproving.

"Always" condom users were slightly more likely than "sometimes" users to mention friends, relatives, medical providers, and partner as approving of using a condom every time. However, these differences in percentages were not statistically significant in the rough chi-square analysis of frequency data. With respect to those who would disapprove, the partner was mentioned significantly more frequently by "sometimes" users than by "always" users.

These results show whose opinion the young adults are concerned about in the domain of condom use. The differences between "always" and "sometimes" users in terms of the perceptions of the partner represents a clear opportunity and challenge for intervention design. The finding that "always" users are less likely to perceive resistance to consistent condom use from their partners than are "sometimes" users suggests that "always" users may have managed to overcome perceived social pressure not to use condoms. Perhaps they have found different partners; perhaps they have learned how to communicate more effectively; perhaps they have just asked their partners to use condoms and found that their partners really accepted condom use. In any case, programs that help young adults deal with the perceived social pressure from their partners are likely to facilitate consistent condom use.

In order to quantify the extent to which young adults perceive social pressure to consistently use (or to not use) condoms, two items could be written for each of these salient social referents. One item would assess the strength of the normative belief that the referent thinks one should (or should not) always use a condom; the other would assess the motivation to comply with that referent with respect to the domain under question. For the social referent of "parents," these would be:

My parents think

I should ___:___:___:___:___:___:___ I should NOT use a condom every time I have vaginal sex with (initials).

When it comes to AIDS and sex,

I want to do ___:___:___:___:___:___:___ I do NOT want to do what my parents think I should do.

Salient Facilitators by Ethnic Status. Table 3 presents the circumstances under which condom use is easy and those under which it is difficult separately for the whites and the African Americans in the sample. The convenience and availability of condoms was the most frequently reported facilitator of condom use; however, these circumstances were also mentioned quite often as a barrier. Similarly, the partner plays a role as both a facilitator and a barrier. Good communication with one's partner makes condom use easier; worry about the partner refusing to use a condom makes it more difficult. Note that only 10 percent of the young adults in this study mentioned the expense of condoms as a barrier to consistent use.

The rough analysis by ethnic status revealed some interesting differences between the whites and the African Americans. Somewhat surprisingly, a significantly higher percentage of whites than African Americans mentioned unavailability and inconvenience as a barrier. On the other hand, compared to whites, African Americans more frequently mentioned thinking about pregnancy and about disease as facilitating circumstances.

Obviously, based on these data, making condoms more available and convenient to sexually active young adults is a possible intervention strategy. In addition, these data highlight the role of communication with the partner as a barrier that could be addressed with interventions.

In developing a fixed-item assessment instrument, these circumstances could be used to create a self-efficacy scale. For each item, participants would be asked about their level of certainty from 0 (cannot do at all) through 5 (moderately certain can do) to 10 (certain can do). Thus, certain ratings would be obtained for items such as:

___ I can delay vaginal sex with (initials) if a condom is not available.

___ If (initials) did not want to use a condom for vagi nal sex, I can convince him/her that it is necessary.

Next Steps

This paper illustrates the use of semi-structured questionnaires in a preliminary qualitative phase of the formative research to understand consistent condom use for several segments of the population of unmarried, heterosexually active young adults. As previously described, this research can be useful immediately for suggestions for interventions for young adults. It helps the program designer understand how various segments of the heterosexually active young adults view and perceive one prevention strategy, consistent condom use.

In addition, this qualitative research is needed for designing a close-ended questionnaire or interview for larger-scale, more powerful quantitative research. Looking

Table 3. Formative research on condom use for the Prevention Marketing Initiative: easy and difficult circumstances for using a condom every time, percent of respondents by ethnic group

Quotations	Circumstances	Percent	
		Whites (n=158)	African Americans (n=155)
Easy			
Have a couple of condoms on hand Keep condoms by the bed or in my purse in case we're out somewhere Having sex in the same place where you would have a supply of condoms Have them available To ask her to keep a couple in her purse Being in the same place every time	Condom is available and convenient	40	30
Thinking of pregnancy I don't want a child; neither does she I don't need any children The thought of me getting pregnant and disappointing my mother and family at the time I'm about to graduate from college	Don't want pregnancy	18[1]	30
The notion that I won't get AIDS We don't want to risk catching a disease The thought of disease or AIDS makes it easier	Don't want STDs	13[1]	22
To sit down and talk about it It is good when my partner and I talk about using a condom We have discussed it, and we both feel it is a good idea to use a condom Saying no without a condom and don't let your male friend talk you into nothing If we take time out and talk about it Really the only thing is if she reminds me to put it on	Good communication and understanding with partner	14	15
Thinking about how many people they may have been with before you The peace of mind it gives us to use a condom I don't have to worry where the sperm goes I want to be safe	Knowing it's safer	10	16
Won't make a mess If it was more lubricated My partner says if they were more comfortable he would use it more Certain brands are better than others Using novelties (colored condoms, etc.) makes it fun	Condom has certain good traits	7	5
Not worried about getting anything Free to enjoy sex without all the worries Peace of mind I don't have to worry about pregnancy	Want to worry less	8	3
Difficult			
Disrupts the atmosphere or mood Sometime the mood be just right and you and your partner get caught up in the moment Ruins the mood, takes away from foreplay Heat of passion On the spur of the moment, we forget	Don't want mood ruined	39	34
Inconvenience of the condom They are not in an easily accessible location Forgot to buy condoms When situation arises a condom is not available We don't always know when we will be in the mood and I don't carry a condom with me every time I see her	Condom not available or inconvenient to use	42[1]	30
Because really you cannot feel nothing Feels better without one Sometimes wanting that special closeness It makes your erection go down when it comes time to put it on	Don't want pleasurable feelings reduced	18	22
Nothing is impossible for us to use condoms because we always do There isn't anything impossible because if I'm gonna have sex, then I'll wanna be safe than sorry	Nothing makes it difficult	15	18
Sometimes "they" refuse or don't want to; sometimes "they" get upset when you ask "them" to wear a condom–and angry if you persist Partner may not want to use condoms He doesn't like to use them She don't want to use one	Partner refuses	8	8
If we could not afford to get any Becomes costly They cost too much	No money to buy condoms or too expensive	8	7
Not near a drugstore If you're in the middle of nowhere If you are not at home and don't have them around Sex in public places If we are in a remote place where condoms aren't available	Don't have condoms at the place you have sex	6	8

at the most frequently mentioned items is one approach to intervention design based on this type of qualitative research. A second approach is to compare doers to NON-doers. In this case, this would mean comparing "always" to "sometimes" users as in table 2. Items that differentiate "always" from "sometimes" users point to ways to modify what "sometimes" users think, feel, believe, and know that might facilitate an increase in the consistency of condom use. From a methodological perspective, frequency analyses of these open-ended data can provide some of this information. However, larger-scale quantitative research using close-ended questions with 5- or 7-point scales as illustrated previously provide more powerful statistical tests for additional and more accurate analyses. For example, it would be possible to do parametric tests comparing "always" to "sometimes" users, overall as well as by subgroup. Thus, an important purpose of this type of formative research is to design an effective, valid, and relevant quantitative survey instrument. By using this instrument before and after the intervention, one can evaluate the impact of the intervention on several key determinants of the behavior to be influenced.

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