METHODS REPORT

Gender-of-Voice Effects in an ACASI Study of Same-Sex Behavior

Kristine Fahrney, Jennifer Uhrig, and Tzy-Mey Kuo

April 2010

RTI Press

RTI INTERNATIONAL

About the Authors

Kristine Fahrney, MSc, is a survey director in RTI International's Survey Research Division.

Jennifer Uhrig, PhD, is the deputy director of the Health Communication Program in RTI International's Social Policy, Health, and Economics Research unit.

Tzy-Mey (May) Kuo, PhD, is a research psychologist in RTI International's Social Policy, Health, and Economics Research unit.

RTI Press publication MR-0017-1004

This PDF document was made available from **www.rti.org** as a public service of RTI International. More information about RTI Press can be found at **http://www.rti.org/rtipress**.

RTI International is an independent, nonprofit research organization dedicated to improving the human condition by turning knowledge into practice. The RTI Press mission is to disseminate information about RTI research, analytic tools, and technical expertise to a national and international audience. RTI Press publications are peer-reviewed by at least two independent substantive experts and one or more Press editors.

Suggested Citation

Fahrney, M., Uhrig, J., and Kuo, T. (2010). Gender-of-Voice Effects in an ACASI Study of Same-Sex Behavior. RTI Press publication No. MR-0017-1004. Research Triangle Park, NC: RTI International. Retrieved [date] from http://www.rti.org/rtipress.

This publication is part of the RTI Press Methods Report series.

RTI International
3040 Cornwallis Road
PO Box 12194
Research Triangle Park, NC
27709-2194 USA

Tel: +1.919.541.6000
Fax: +1.919.541.5985
E-mail: rtipress@rti.org
Web site: www.rti.org

doi:10.3768/rtipress.2010.mr.0017.1004

www.rti.org/rtipress

Gender-of-Voice Effects in an ACASI Study of Same-Sex Behavior

Kristine Fahrney, Jennifer Uhrig, and Tzy-Mey Kuo

Abstract

Audio computer-assisted self-interviewing (ACASI) is a popular method for administering surveys of sex and other sensitive behaviors. One advantage of ACASI is that it removes the requirement that respondents divulge sensitive behaviors directly to another person. Thus, ACASI may reduce the extent to which interviewer effects compromise response accuracy. However, the literature on computers as social actors suggests that even subtle humanizing cues, such as the gender of the computer-generated voice, may cause users to react to the computer as they would to another person. The present randomized experiment examined whether the gender of the ACASI voice affects the reporting of socially undesirable HIV-risk behaviors in a sample of 405 men who have sex with men across 12 US cities. We randomly assigned participants to hear either a male or a female recorded voice. We tested for gender-of-voice effects on reports of same-sex behaviors and number of sexual partners. The male ACASI voice elicited fewer instances of unprotected receptive anal sex with an HIV-status-unknown partner ($p = .002$), whereas the male voice elicited marginally higher numbers of HIV-negative partners in the past 30 days ($p = .052$). Overall, our results suggest that interviewer effects stemming from the gender of the ACASI voice were minimal in our study. The significant (or marginally significant) effects that we did detect are consistent with findings in prior research and seem to suggest that a female voice may elicit more accurate reports.

Contents

RTI INTERNATIONAL

Introduction

Surveying people about sensitive topics raises concerns about measurement error attributable to social desirability effects and the deliberate underreporting of embarrassing or socially undesirable behaviors to gain approval from the interviewer. For example, studies about HIV/AIDS often necessitate surveying people about sensitive topics, including sexual behavior and/or drug use. Also common is conducting studies with segments of the population that are disproportionately affected by the epidemic, such as men who have sex with men (MSM) or injection drug users.

The tendency toward providing socially desirable responses can be affected not only by the presence (or absence) of an interviewer, but also by the particular characteristics of a given interviewer. This tendency is commonly referred to as *interviewer effects*. Interviewer effects occur when the topic is sensitive and is associated with interviewer characteristics such as age, gender, and race. Although interviewer characteristics have been demonstrated to affect responses to questions about sexual behaviors, the directionality of findings from previous studies is mixed. Two studies found that respondents reported fewer sensitive behaviors to male than to female interviewers (Catania, Gibson, Marin, Coates, & Greenblatt, 1990; DeLamater, 1974). In contrast, others found that respondents reported more sensitive behaviors to male than to female interviewers (Abramson & Handschumacher, 1978; Johnson & DeLamater, 1976).

A related challenge in conducting surveys of sexual behaviors is the well-documented gap in the number of partners that men and women report. Numerous studies have found that men report having had substantially more sexual partners than women report (Laumann, Gagnon, Michael, & Michaels, 1994; Smith, 1991). Researchers have explored several possible explanations for this discrepancy, concluding that intentional misreporting (Smith, 1991) and unintentional misreporting (Wiederman, 1997) are the most likely sources of the discrepancy. Whereas women tend to underestimate their number of sexual partners, men tend to overestimate their number of sexual partners.

Audio computer-assisted self-interviewing (ACASI) and telephone audio computer-assisted self-interviewing (T-ACASI) have become increasingly popular methods of administering surveys about sex and other sensitive behaviors in order to minimize interviewer effects. That is, ACASI and T-ACASI enable study participants to respond to survey questions privately. By removing the requirement that respondents divulge sensitive behaviors to another human, ACASI and T-ACASI may reduce the extent to which interviewer effects compromise response accuracy (Turner et al., 1998).

The literature on computers as social actors (CASA) suggests that computer users ascribe human traits to computers. Even subtle cues, such as the gender of the computer voice, can cause users to react to the computer as they would to another person. (For a more detailed review of this literature, see Couper et al., 2004). Based on findings from the CASA literature, we can infer that the same pattern of gender-of-interviewer effects occurs when one uses ACASI techniques as occurs in traditional face-to-face interviewing. If this inference is true, the selection of a voice within an ACASI study may be just as important as the selection of interviewing staff in traditional face-to-face interviewing.

Two earlier studies examined the significance of ACASI voice selection, but neither directly tested whether gender of the ACASI voice affected reports of sensitive behaviors. In their ACASI field test, Rogers, Miller, Forsyth, Smith, and Turner (1996) varied the gender of the recorded voice. The authors did not discuss whether gender of the voice influenced reports of sensitive behaviors, but they did report that gender of the voice did not affect data quality (measured in terms of length of time to complete the questionnaire). Turner and colleagues (1998) varied the gender of the ACASI voice in cognitive testing for the National Survey of Adolescent Males. Follow-up debriefing items revealed that most respondents were unable to report whether the ACASI voice was male or female. Although the authors did not report whether gender of the voice actually influenced reports of sensitive behaviors, they concluded that gender of voice is unimportant, even in surveys about sex (Turner et al., 1998).

Three studies directly examined the effect of the gender of the T-ACASI voice on reports of sensitive behaviors (Couper, Singer, & Tourangeau, 2004; Nass, Robles, Heenan, Bienstock, & Treinen, 2003; Tourangeau, Couper, & Steiger, 2003). Only Nass and colleagues (2003) found that the gender of the recorded voice affected disclosure. Specifically, they found that respondents were more likely to disclose sensitive behaviors to the female recorded voice than to the male recorded voice.

Little evidence exists regarding whether gender of the recorded voice affects reporting of sensitive behaviors; only five published studies even indirectly address this question. Although no previous studies have *directly* examined whether the gender of an ACASI voice affected reports of sensitive behaviors, ACASI studies almost always use either a female recorded or a synthetic voice (Couper et al., 2004). One exception is ACASI studies conducted with MSM; these use male voices to match the gender of the ACASI voice to that of the respondents in an effort to encourage honesty in reporting of sensitive behaviors (see Wolitski et al., 2005). Our study is the first to test specifically whether gender of the ACASI voice affects reporting of sensitive behaviors in a sample of MSM.

Methods

Research Design

We conducted this study as part of a larger experiment that examined the effects of presenting the risks of different sexual behaviors. Respondents completed an ACASI interview that asked, among other things, questions about their recent sexual behaviors and number of sexual partners. We randomly assigned respondents to hear either a recorded male ACASI voice or a recorded female ACASI voice. The institutional review boards at both the Centers for Disease Control and Prevention and RTI International approved the study design.

We used a non-probability-based, purposeful sample for this study. We recruited respondents for the study using published advertisements, flyers, referrals from local organizations serving the target population, street outreach in select neighborhoods, and market research proprietary databases. Potential sample members completed a telephone screener to determine eligibility for participation. To participate, individuals had to be male, be 18 years of age or older, self-report as being HIV negative or of unknown HIV status, and have engaged in unprotected anal sex with a man in the past 6 months.

We scheduled appointments with 514 men who were determined to be eligible based on the telephone screener. Of the 514 men scheduled, 463 showed up at the data collection site and completed the interview (a participation rate of 90 percent). Of the 463 who completed the interview, we ascertained that 58 did not meet the eligibility criteria for the study (described above) based on the survey data. These men were excluded from the sample. Thus, the final sample included 405 male participants.

Data collection for this study occurred between May and August 2004 in market research facilities in 12 cities across the United States: Atlanta, Baltimore, Boston, Chicago, Fort Lauderdale, Houston, Los Angeles, Miami, New York City, Philadelphia, San Diego, and Washington, D.C.

As respondents arrived for the appointment, we asked each one to provide written informed consent before escorting him to a cubicle in the production room and logging him into the ACASI program. A staff member provided instructions to the respondent regarding the use of the laptop and requested that the respondent wear headphones so that he could hear the questions read aloud as he viewed them on the screen. We trained respondents how to adjust the volume but not how to turn it off. Although respondents might have been able to turn the volume all the way down, we noted that they kept the headphones on their heads, suggesting that they were listening to the audio. To verify that the respondent could use the software and to address any questions that arose, the staff member remained with him during the completion of an ACASI tutorial. The staff person was available if the respondent needed assistance, but allowed the respondent to complete the interview in private. On average, the interview took 1 hour to complete. We paid respondent $75 for participating.

Variables

Our independent variable of interest was gender of the recorded ACASI voice (male or female, also referred to as the *male or female voice condition*). Our dependent variables included total number of sexual partners in the past 6 months; number of HIV-negative, HIV-positive, or HIV-status-unknown sexual partners in the past 30 days; and whether each sexual encounter the respondent reported having in the past 30 days was unprotected or protected. We constructed these dependent variables from questions that had been asked in the baseline questionnaire, which we had adapted from measures developed by Wolitski et al. (2005). All questions were asked in an open-ended format, where the participant used a keypad to enter the number of times or partners.

Statistical Methods

We began by calculating descriptive statistics (i.e., frequencies) for the characteristics of our respondents and computed Fisher's exact test to determine whether respondent characteristics differed in any statistically significant way by voice condition, that is, whether the respondent heard a male or a female voice (Fisher, 1934). Similar to the chi-square test, Fisher's exact test calculates the probability distribution for testing the independence between two categorical variables. The chi-square test provides an estimated probability based on asymptotic theory (i.e., assuming sample size is large), whereas Fisher's exact test provides the exact probability value. Therefore, Fisher's exact test produces more accurate p-values than does the chi-square test when the sample size is small or when some cells in the contingency table have small sample sizes (as in our study).

We also calculated descriptive statistics (i.e., means, standard deviations, maximums, and valid n) for our dependent variables. We used linear regression to estimate the number of reported sexual partners by voice condition and logistic regression to test the effect of voice condition on reported sexual behaviors, controlling for sociodemographic characteristics.

Our analysis of the reports of unprotected sexual behavior by voice condition needed to consider the total number of sexual encounters that each respondent reported. In other words, simply comparing the mean number of unprotected sexual behaviors between voice conditions could confound frequency of sexual activity with likelihood of using protection for any given encounter. To handle this confounding, we analyzed the unprotected sexual behavior within all sexual encounters of each individual. Thus, we included all sexual encounters for each individual.

Because sexual encounters with the same individual are often correlated with each other, we had to correct the analysis to account for the clustered nature of these data. Otherwise, the results might have underestimated standard errors. To address this challenge, we used RTI International's SUDAAN™, a software package specifically designed to provide accurate analyses of correlated data, to estimate logistic regression models of the unprotected sexual behavior data.

We began by creating a data set, with each record representing an individual sexual encounter. We then coded each encounter as 1 if it was unprotected and as 0 if it was protected. Therefore, an individual respondent had multiple records, depending on his number of sexual encounters. Next, we estimated logistic regression models, using the MULTILOG procedure, treating each individual as the primary sampling unit in order to handle clustering, assuming sampling with replacement.

ResultS

Table 1 provides information about the sociodemographic composition of the sample overall and within each voice condition. Results from Fisher's exact test indicate that participant characteristics did not differ significantly between the two experimental groups. Table 2 presents descriptive statistics for all dependent variables.

Risky Sexual Behavior

Only unprotected receptive anal sex with an HIV-status-unknown partner showed statistically significant voice effects. Respondents in the male voice condition were 65 percent less likely to report having had unprotected sex than were respondents

Table 1. Sample demographic characteristics, by voice condition

Demographic Characteristic	Voice Condition (%)		Total Sample		*p*-value
	Female	Male	*N*	%	
Age					
18–29	33.0	28.9	125	30.9	
30–39	29.4	31.3	123	30.4	
40–49	25.8	28.0	109	26.9	
50–64	11.9	11.8	48	11.9	.8406
Race					
American Indian/Alaska Native	1.0	1.4	5	1.2	
Asian	3.1	3.8	14	3.5	
Black or African American	9.3	15.2	50	12.3	
Hispanic, Latino, or Chicano	14.4	7.1	43	10.6	
Native Hawaiian/Pacific Islander	0.5	0.5	2	0.5	
White	68.0	70.1	280	69.1	
Other	3.6	1.9	11	2.7	.1180
Education					
Did not complete high school	1.5	2.4	8	2.0	
High school diploma or GED	13.4	11.8	51	12.6	
Some college or associate's degree	35.1	40.3	153	37.8	
Bachelor's degree	33.5	27.5	123	30.4	
Master's, doctoral, or other professional degree	16.5	18.0	70	17.3	.6287
Sexual Orientation					
Homosexual	77.8	73.9	307	75.8	
Heterosexual	1.0	1.4	5	1.2	
Bisexual	21.1	24.2	92	22.7	
None of the above/unsure	0.0	0.5	1	0.2	.7187

Table 2. Description of dependent variables

Dependent Variable	Female Voice Condition		Male Voice Condition	
	Mean (SD)	Range	Mean (SD)	Range
Unprotected Sexual Encounters with HIV-Negative Main and Casual Partner(s) in Past 30 Days				
Insertive anal sex	2.42 (6.07)	0–60	3.44 (8.05)	0–54
Receptive anal sex	1.65 (4.32)	0–25	2.02 (6.55)	0–75
Unprotected Sexual Encounters with HIV-Positive Main and Casual Partner(s) in Past 30 Days				
Insertive anal sex	0.16 (0.98)	0–12	0.31 (2.17)	0–30
Receptive anal sex	0.08 (0.45)	1–4	0.26 (3.11)	0–45
Unprotected Sexual Encounters with HIV-Status-Unknown Main and Casual Partner(s) in Past 30 Days				
Insertive anal sex	1.15 (4.63)	0–45	1.09 (3.65)	0–43
Receptive anal sex	0.93 (4.25)	0–46	0.29 (1.00)	0–8
Total Number of Sexual Partners				
Total in past 6 months[a]	12.03 (19.26)	2–180	14.05 (17.53)	1–120
HIV-negative partners in past 30 days	1.84 (3.00)	0–20	2.95 (6.97)	0–50
HIV-positive partners in past 30 days	0.29 (1.40)	0–15	0.55 (2.63)	0–30
HIV-unknown partners in past 30 days	3.10 (8.68)	0–99	3.20 (6.99)	0–54

SD = standard deviation.

[a] Two outliers were excluded from the analysis.

in the female voice condition (odds ratio = 0.35, p = .003; Table 3). Aside from unprotected receptive anal sex with a known HIV-positive partner, unprotected receptive anal sex with an HIV-status-unknown partner is the riskiest type of sexual behavior. Thus, it represents an extremely sensitive question in the baseline questionnaire.

Number of Partners

We used linear regression to estimate the number of reported sexual partners by voice condition, controlling for sociodemographic characteristics (Table 4). Of the four questions about number of partners, we found a marginally statistically significant voice effect for only one: the number of HIV-negative partners in the past 30 days. Respondents in the male voice condition reported an estimated 1.05 more HIV-negative partners in the past 30 days than those in the female voice condition (p = .0519)

Table 3. Logistic regression results for number of unprotected sexual encounters in the past 30 days, by HIV status of the partner and type of sexual activity

Variable	OR	95% CI
Unprotected Sexual Encounters with HIV-Negative Main and Casual Partner(s)		
Insertive anal sex, male voice condition	1.12	0.72, 1.73
Receptive anal sex, male voice condition	1.14	0.70, 1.84
Unprotected Sexual Encounters with HIV-Positive Main and Casual Partner(s)		
Insertive anal sex, male voice condition	0.79	0.21, 3.03
Receptive anal sex, male voice condition	0.98	0.08, 11.80
Unprotected Sexual Encounters with HIV-Unknown Main and Casual Partner(s)		
Insertive anal sex, male voice condition	0.69	0.39, 1.24
Receptive anal sex, male voice condition	0.35*	0.18, 0.68

OR = odds ratio; CI = confidence interval.

* $p < .05$.

NOTE: The estimated voice effect controlled for sociodemographic characteristics listed in Table 1 and used the female voice condition as the reference category.

Table 4. Estimated effects of ACASI voice gender on self-reports of the number of sexual partners from linear regression models

Number of Partners	Estimated Difference (Male-Female)	*p*-value
Total number of partners in past 6 months[a]	2.10	.2498
HIV-negative partners in past 30 days	1.05	.0519
HIV-positive partners in past 30 days	0.23	.2875
HIV-unknown partners in past 30 days	0.15	.8490

[a] Two outliers were excluded from the analysis, one from each voice condition.

NOTE: Estimated effects controlled for sociodemographics listed in Table 1.

Discussion

In general, surveying people about their sexual behavior is very sensitive, and doing so raises concerns about measurement error attributable to interviewer effects. Using ACASI to administer surveys about sensitive topics is a popular method for combating interviewer effects. However, because the CASA literature suggests that computer users ascribe human traits to computers (Couper et al., 2004), gender-of-voice effects may well exist in ACASI studies. Although studies of general populations have tended to employ a female ACASI voice as the norm, studies of MSM have employed a male voice under the tacit assumption that matching the gender of the voice to the gender of the respondents will encourage honesty (Wolitski et al., 2005).

Our study was the first to test for ACASI gender-of-voice effects on reports of sensitive behaviors and number of sexual partners with a sample of MSM. The questions asked in our study may be viewed as especially sensitive because of the potential stigma associated with asking about instances of unprotected same-sex behaviors and numbers of same-sex partners.

For the most part, we did not find that gender of voice affected responses to the survey questions in our study. However, we did find either statistically significant or marginally significant voice effects for two outcomes. In particular, the male ACASI voice was found to elicit fewer instances of unprotected receptive anal sex with HIV-status-unknown partners relative to the female ACASI voice. However, the male ACASI voice yielded higher numbers of HIV-negative partners in the past 30 days (marginally significant).

So, which ACASI voice yielded the most accurate responses? Unfortunately, we have no easy answer to this question. In the experimental literature on social desirability effects, common practice is to assume that higher reports of socially undesirable behaviors are more accurate than lower reports. Furthermore, Nass and colleagues (2003) found that T-ACASI respondents were more likely to disclose sensitive behaviors to a female interviewer than to a male interviewer. Thus, for this study, assuming that the female ACASI voice yielded the more accurate responses in terms of frequency of unprotected receptive anal sex with HIV-unknown partners would be consistent with the social desirability literature. Indeed, given that this is one of the riskiest types of sexual activity in terms of risk of HIV infection, we find it hard to imagine that respondents would be inclined to inflate their responses to that question.

Determining whether the male or female ACASI voice yielded the more accurate estimates of HIV-negative sexual partners is a bit more complicated, however. On the one hand, some literature suggests that unmarried men are prone to inflating their number of sexual partners (Smith, 1991) and that men provide higher estimates of their partners when they are speaking to a male interviewer than when they are speaking to a female interviewer (Wilson, Brown, Mejia, & Lavori, 2002). On the other hand, these studies did not focus on MSM.

We found only a marginally significant voice effect for number of HIV-negative partners (not for number of HIV-positive partners or partners of unknown HIV status). All our study participants were HIV-negative; therefore, reporting a higher number of HIV-negative as opposed to HIV-positive or unknown-status partners may be less socially undesirable or stigmatizing. However, although not statistically significant, number of partners reported was higher in the male voice condition for all categories of partners.

Overall, results suggest that interviewer effects stemming from the gender of the ACASI recorded voice were minimal in our study. Although we cannot validate the accuracy of respondents' reports, the two instances in which we found significant voice effects (male voice eliciting fewer reports of unprotected receptive anal sex with HIV-unknown-status partners) or marginally significant voice effects (male voice eliciting higher numbers of HIV-negative partners in the past 30 days) are consistent with findings in prior research (Catania et al., 1990; DeLamater, 1974; Nass et al., 2003; Wilson et al., 2002). The findings seem to suggest that a female recorded voice may yield more accurate reports of both sensitive behaviors (higher reports) and number of partners (lower reports).

We acknowledge that our study had the following limitations. First, study participants were all MSM who were HIV negative or of unknown HIV status. We excluded women and heterosexual men, limiting generalizability of our findings beyond the MSM population. Second, we used a non-probability-based, purposeful sample because obtaining a random sample of MSM who met the inclusion criteria for the study was not possible. To obtain geographic diversity, we recruited respondents from across 12 US cities. Given that we could not validate the respondents' answers to the survey questions, we also could not determine the accuracy of their reports. Additionally, the number of unprotected sexual encounters with HIV-positive partners was low in our sample; this factor limited our ability to detect statistically significant differences across voice conditions.

Finally, we manipulated the gender of the ACASI voice for the purposes of our experiment. We selected what we considered a neutral male and a neutral female voice, although neutrality is arguably subjective. We were unable to control for other characteristics that may be attributed to an ACASI voice effect, such as perceived age, race, or sexual orientation of the voice, and we have no way of measuring whether any of these other characteristics may have influenced participant responses.

Further research is needed to determine how gender of the ACASI voice affects respondents' perceptions about the personalities behind the voices. Additional research is also needed to determine whether voice effects are present in surveys of sexual behavior when the population includes women and heterosexual males. Finally, effects associated with other characteristics, such as perceived age, race, or sexual orientation of the voice, should be explored. Researchers could investigate these effects by asking respondents to answer questions about characteristics of the ACASI voice at the end of the survey instrument.

References

Abramson, P., & Handschumacher, I. (1978). Experimenter effects on responses to double entendre word. *Journal of Personality Assessment*, 592–596.

Catania, J., Gibson, D., Marin, B., Coates, T., & Greenblatt, R. (1990). Response bias in assessing sexual behaviors relevant to HIV transmission. *Evaluation Program Planning, 13,* 19–29.

Couper, M., Singer, E., & Tourangeau, R. (2004). Does voice matter? An interactive voice response (IVR) experiment. *Journal of Official Statistics, 20*(3), 551–570.

DeLamater, J. (1974). Methodological issues in the study of premarital sexuality. *Sociological Methods & Research, 3,* 30–61.

Fisher, R. A. (1934). *Statistical methods for research workers,* 5th ed. Edinburg: Oliver and Boyd.

Johnson, W., & DeLamater, J. (1976). Response effects in sex surveys. *Public Opinion Quarterly, 40,* 165–181.

Laumann, E., Gagnon, J., Michael, R., & Michaels, S. (1994). *The social organization of sexuality: Sexual practices in the United States.* Chicago: University of Chicago Press.

Nass, C., Robles, E., Heenan, C., Bienstock, H., & Treinen, M. (2003). Speech-based disclosure systems: Effects of modality, gender of prompt, and gender of user. *International Journal of Speech Technology, 6,* 113–121.

Rogers, S., Miller, H., Forsyth, B., Smith, T., & Turner, C. (1996). Audio-CASI: The impact of operational characteristics on data quality. In *1996 Proceedings of the Section on Survey Research Methods (ASA/AAPOR).* Alexandria, VA: American Statistical Association.

RTI International. SUDAAN™ Statistical Software, Release 10.0.1. Research Triangle Park, NC, USA.

Smith, T. (1991). *Adult sexual behavior in 1989: Number of partners, frequency, and risk* (GSS Topical Report No. 18). Chicago: National Opinion Research Center, University of Chicago.

Tourangeau, R., Couper, M., & Steiger, D. (2003). Humanizing self-administered surveys: Experiments on social presence in Web and IVR surveys. *Computers in Human Behavior, 19*(1), 1–24.

Turner, C., Forsyth, B., O'Reilly, J., Cooley, P., Smith, T., Rogers, S., et al. (1998). Automated self-interviewing and the survey measurement of sensitive behaviors. In *Computer-assisted survey information collection.* New York: Wiley.

Wiederman, M. (1997). The truth must be in here somewhere: Examining the gender discrepancy in self-reported lifetime number of sex partners. *Journal of Sex Research, 34*(4), 375–386.

Wilson, S., Brown, N., Mejia, C., & Lavori, P. (2002). Effects of interviewer characteristics on reported sexual behavior of California Latino couples. *Hispanic Journal of Behavioral Sciences, 24*(1), 38–62.

Wolitski, R., Parsons, J., Gomez, C., Purcell, D., Hoff, C., & Halkitis, P. (2005). Prevention with gay and bisexual men living with HIV: Rationale and methods of the Seropositive Urban Men's Intervention Trial (SUMIT). *AIDS, 19*(Suppl. 1), S1–S11.

Acknowledgments

This research was supported by the Centers for Disease Control and Prevention through contract number 200-2001-00123, task order 8, awarded to RTI International. The authors would like to acknowledge the following individuals for their contributions to the development and implementation of this study: Richard Wolitski, Carolyn Guenther-Grey, Jill Wasserman, Jeff Henne, Barbara Burbridge, Laxminarayana Ganapathi, Lisa Belcher, Dogan Eroglu, Cari Courtenay-Quirk, and Maria DiGregorio. We would also like to thank Ron Fichtner, Jim Hersey, Paul Biemer, Carla Bann, Bob Bray, and two anonymous reviewers for their critical review of the manuscript.

www.rti.org/rtipress **RTI Press publication MR-0017-1004**