Consistency in the Reporting of Sexual Behavior: An analysis of an interview mode experiment in Sao Paulo, Brazil

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Introduction

The AIDS pandemic has increased the need to gather comprehensive data on sexual behavior in developing countries. Inaccurate reporting of sexual behavior hinders efforts to identify the underlying mechanisms driving the epidemic and therefore can adversely affect intervention strategies to reduce transmission; it also provides a misleading picture of HIV/STI risk. In addition to distorting information on who is having sex in a given population, under what circumstances and with whom, estimates of condom use are apt to be seriously biased.

Audio-computerized self-interviewing (ACASI) was developed to address concerns about the influence of interviewers in surveys where sensitive questions are asked. With ACASI, software is designed so that the respondent hears both the question and the response categories through headphones. The respondent answers each question by pressing a number on a keypad, touchscreen or computer keyboard. The advantage of ACASI over face-to-face interviews is that neither the investigator nor anyone else in the area where the interview is being conducted hears the question or response, thus reducing social desirability bias. Moreover, unlike self-administered interviewing, which requires that the respondent be literate and competent to fill out a questionnaire, ACASI can be used without the respondent reading the questions on the computer screen. In addition, the researcher does not have to be concerned with differences in the characteristics or interviewing styles of the interviewers (Tourangeau, Rips and Rasinski 2000).

In the last 15 years numerous studies in the United States have experimentally evaluated the use of computerized administration of interviews to obtain more accurate reporting of sensitive behaviors. Data have been collected on the use of injection drugs, abortion, same-gender sex, and violent behavior—with significantly higher levels of these sensitive and illegal behaviors reported than in face-to-face interviews and paper and-pencil self-administered questionnaires (Fu et al. 1998; Hewitt 2002; Tourangeau and Smith 1996; Turner et al. 1998; Turner, Miller and Rogers 1997). ACASI has also been used successfully in specialized surveys of gay men, injecting drug users and women at high risk of HIV exposure (Des Jarlais et al. 1999; Gross et al. 2000; Metzger et al. 2000).

Recent studies in developing countries have increasingly begun to implement computerized interviewing techniques. Surveys using ACASI have been conducted in such diverse settings

as Kenya (Hewett, Mensch, and Erulkar 2004; Mensch, Hewett, and Erulkar 2003), Malawi (Mensch, Hewett, and Gregory 2006), Thailand (Rumakom, Philip Guest, Waranuch Chinvarasopak et al. 1999), India (Potdar and Koenig 2005), Vietnam (Linh et al., 2006) and Mexico (Lara, Ellertson, Diaz et al. 2001. While the results from these studies indicate that computerized interviewing generally provides higher reporting of risk behaviors than standard face-to-face interviews, the findings are not as compelling as those from studies conducted in the U.S.. In the developing world reporting of sensitive behavior with the computer appears to be dependent in part on the types of questions asked, the setting, and study population.

Objective

This paper will examine data from an experimental study evaluating home versus clinic based screening and diagnosis for STIs among women visiting a primary care clinic in São Paulo, Brazil. As well as evaluating diagnostic technologies for STIs, the study also included an experimental evaluation of the use of computerized interviewing for obtaining more accurate reporting of sexual and other risk behaviors. In addition to random assignment to home or clinic based screening for STIs, women were randomized at enrollment to either a face-to-face interviewer-administered survey or an audio-computer assisted self-interview. The enrollment interview included basic questions on the participant's background, reproductive behavior, sexual behavior, contraceptive use, prior STI infections, and alcohol and drug use. It also included questions about sexual activity and condom use for the participant's last three sexual partners. Biological specimens were obtained for gonorrhea, chlamydia and trichomoniasis. At the six week follow-up interview, which was conducted with the computer for all participants including those in the FTF group at enrollment, many of the same questions on sexual behavior, partners and condom use were repeated as were questions on births, pregnancies and abortion.

A prior paper based solely on the enrollment interview from the Brazil study found that ACASI produced higher reporting of sexual and risk behaviors than FTF interviews. In addition, stronger associations between risk and STI were found in the computerized administration mode, with STI-positive women more likely to underreport risk behavior in the FTF interview (Hewett et al. 2006). However, this paper did not examine consistency in reporting. An analysis from an earlier methodological experiment that we conducted in Kenya revealed that while ACASI produced higher reporting of the most sensitive behaviors as it has in our Brazil study, reporting of sexual activity was much more inconsistent compared to the interviewer administered mode (Hewett, Mensch, and Erulkar 2004). While it was not clear whether the interviewer in the FTF mode reconciled inconsistent answers or whether the respondent in the ACASI mode was less concerned with providing contradictory responses, the Kenya study indicates the need to further explore consistency in reporting of sensitive behavior.

The objectives of this paper are to investigate the consistency in reporting of sexual behavior at the enrollment interview by interview mode — FTF versus ACASI — as well as consistency in reporting between enrollment and the six-week follow-up by interview mode group — FTF (enrollment)/ACASI (follow-up) versus ACASI (enrollment)/ACASI (follow-up). The goal is to determine whether there are particular questions that produce inconsistent

answers as well as to identify sub-groups of women for whom inconsistent reporting is more common.

Data Collection

For this study 818 women age 18−40 were recruited during educational meetings on STIs diagnosis and prevention at the "Centro de Saúde Escola Dr. Alexandre Vranjac, Barra Funda (CSEBF)," a health center run by the Santa Casa Faculty of the Medical Sciences in a low income area of São Paulo. Women from within the clinic population participating in family planning, cervical cancer screening, mother's groups, pediatric care and general services were invited to attend study recruitment sessions, while efforts were made to recruit at least one-third of participants from the catchment area of the clinic. To be eligible for the study women had to be within the age range, self-identify as literate and not require immediate care for a gynecological-related problem.

Participants assigned to the FTF mode were interviewed by trained research staff and clinicians in a private room of the clinic. Respondents completing the ACASI interview were assigned to use one of three computers that were isolated from each other and the main clinic room by protective screens. For the computerized interview, respondents were instructed how to answer the questions, utilizing an external mini-keypad connected to a notebook computer. Although some keys were color coded to simplify tasks, e.g., moving to the next question, replaying the audio, repeating the previous question, respondents were required to enter numeric responses to answer, e.g., 1 = yes or 2 = no. ACASI respondents heard instructions and questions through headphones, while reading text on the computer screen. Although the computerized questionnaire skipped not-applicable questions, the program did not enforce logical consistency in the respondent's answers. The computerized interviewing software was developed at the Population Council using Microsoft Visual Basic 6.0 and Access. EPI Info 6.0 was used to data enter the face-to-face surveys, which were double entered.

Consistency Analysis

As mentioned above, the consistency analysis will investigate logical discrepancies within the enrollment interview and between the enrollment and the six week follow-up interviews by interview mode. Consistency at enrollment can be assessed because sexual behavior questions were asked both in Section C of the questionnaire: "Sexual Health and STDS" and Section D: "Sexual behavior". Consistency between the enrollment and the six week follow-up interviews can be assessed because common questions were asked at both interviews and because at the six week follow-up women were asked about new partners since the start of the study. The following list summarizes the discrepancies that will be explored:

<u>Consistency at enrollment: ACASI vs. FTF</u>

1. Respondent reported that she never had sex but indicates a) sexual partners; b)anal sex; c)oral sex; d) recency of sex; or e) condom use.
2. Respondent reported that she never used contraception but indicates condom use.

<u>Consistency between enrollment and 6 week follow-up: ACASI/ACASI vs. FTF/ACASI</u>

1. Children ever born
2. Pregnancies

3. Abortions
4. Number of sexual partners
5. Age of partners (if no new partners in past 6 weeks)
6. Duration of partnerships (if no new partners in past 6 weeks)
7. Characteristics of last sex (condom use, alcohol, drugs) if have not had sex in last 6 weeks