Does Methodology Matter? Adolescent Reporting of Sexual Behavior in a Randomized Trial in Urban India

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Abstract:

Background: Adolescents often have difficulty reporting sexual behaviors on standard face-to-face interviews, particularly in socially conservative settings. Audio Computer Assisted Self Interview (ACASI) has been suggested as a potential survey method to improve reporting; however, ACASI has been relatively untested among less educated adolescents in developing countries.

Methods: We compare three different survey methodologies, face-to-face interviews, ACASI and culturally appropriate interactive interviews in a randomized crossover community trial with a matched pair design. The sample includes unmarried adolescents, 583 boys and 475 girls, ages 15-19 in four slums in Delhi, India. Study participants were randomized to receive two survey methods in random order. Each adolescent had a face-to-face interview and either ACASI or interactive interview.

Findings: Both boys and girls reported more behaviors with the interactive survey as compared to face-to-face interviews. Twenty-eight percent of boys reported sexual intercourse on interactive compared to 20% on face-to-face interviews (p=0.0002) and 7% of girls reported having sex on interactive interviews compared to 2% on face-to-face interviews (p=0.002). In comparison to face-to-face interviews, girls report fewer sexual behaviors on ACASI across a range of behaviors while boys reported more for some behaviors and less for others.

Conclusions: In comparison to face-to-face interview, ACASI does not consistently lead to higher reporting; however the culturally appropriate interactive methodology led to more reports across a range of sensitive behaviors for both boys and girls. Future research

on adolescent sexual behavior should pay careful attention to gender of the respondent, survey methodology and the population under study.

Introduction

Reproductive health issues can be intensely private and at the same time, circumscribed by strict social norms. Understandably, it is difficult to get accurate and honest information on sexual behaviors [1]. The problem of obtaining information on reproductive health issues is compounded when assessing the sexual behaviors of young people particularly in settings where premarital sex is taboo. Given the fact that there are 1.2 billion young people who comprise the largest youth cohort in the history [2], there is an urgent need for initiatives that respond to the needs of young people. Though adolescents comprise approximately 23% of the India's population (230 million), adolescent sexuality has been largely neglected [3-5] [6]. With the concern that adolescents are likely to be the worst hit by the AIDS epidemic, the Indian national government, donor agencies, policy makers, and NGOs have recently begun to focus on young people's sexual and reproductive health [7] [8].

Background

Face-to-face interviews are the most frequently used methodology to obtain information from adolescents about their sexual behavior. This methodology may lead to underreporting of sensitive behaviors due to concerns about privacy and confidentiality, fear of judgment from older interviewers, and social desirability bias [9]. Audio Computer Assisted Self Interview (ACASI) has been suggested as a good alternative to encourage honest reporting of sensitive behaviors [10]. Computerized interviewing is gaining popularity among the survey researchers because it is believed to improve the quality of data and decrease the cost of data collection. Respondents can answer questions in complete privacy, even if their reading ability is limited. Because survey data are stored on the computer, they are less vulnerable to inadvertent disclosure to interviewers or others. ACASI also provides i) a completely standardized measurement system- every respondent (in a given language) hears the same question in exactly the same way (limiting interviewer biases); ii) can incorporate complex skip patterning, branching, consistency and range checking and iii) efficient multilingual administration of surveys iv) less non-response to individual questions v) creates an automatic dataset allowing for immediate data

management and analysis [11 12]. Results from studies using ACASI suggest that it is likely to encourage reporting of stigmatizing or illegal behaviors and could potentially reduce social desirability bias [13 14 15 16 12].

ACASI has not been used extensively in developing countries. Two recent studies looked at the use of ACASI in the African context. Results from Kenya [17] suggest that ACASI produced a more diverse picture of adolescent sexual activity (including sexual coercion) than the face-to-face interviewer administered method. In one district in Kenya, researchers found that adolescent girls were significantly more likely to report having had sex in face-to-face interviews as compared to ACASI and paper and pencil self-administered questionnaires. While boys reported more on ACASI, the findings were not strong or consistent enough to suggest that ACASI should be the preferred method of interviewing [17 18]. In a second district, ACASI generated significantly more reports on a range of sensitive behaviors among girls, and lower sexual activity in boys, who tend to exaggerate their level of sexual activity in face-to-face interviews [17 18]. In a study to assess feasibility of ACASI in Zimbabwe, 86% of women preferred ACASI to interviewer administered interviews. However, women with primary school or less education (53%) reported problems with computer use compare to women in higher educational groups (10-12%) [11].

A recent randomized field trial in India compared ACASI, face-to-face and self-administered surveys among 1500 unmarried 18-22 year old males in Pune, India. While ACASI was effective among more educated, computer literate college students, results were mixed in the slums. Males residing in the slums more often reported having sex in face-to-face interviews as compared to ACASI (35% vs. 11%, p=0.001) [19].

In this study, we compare responses of unmarried male and female urban youths from Delhi, India across three different survey methodologies, face-to-face interviews, ACASI and culturally appropriate interactive interviews. We expected that ACASI and interactive interviews would decrease social desirability bias and encourage more reporting. We also hypothesized that the study population

would report a greater range of behaviors on either ACASI or interactive interviews in comparison to face-to-face interviews.

Methods:

Study design

A household enumeration in November 2003 and March-April 2004 preceded the main study. A total of 2118 households were enumerated in 5 slums and approximately 1200 unmarried adolescents ages 15-19 were identified. The survey instruments were pretested in one of the five slums in April-May, 2004. A seven day training program was organized for 24 interviewers in July 2004 to communicate research aims and procedures, sensitize and inform them on issues related to adolescent sexuality, enhance their skills in community mobilization and in administering interviews using different methodologies.

A randomized community trial with a matched pair crossover design was conducted between August and November, 2004. All unmarried 15-19 year olds living in four slums of Dakshin Puri, Delhi were eligible to participate in the study. In families with more than one eligible adolescent, all eligible adolescents were invited to participate in the study. Parental consent was sought before enrolling eligible adolescents in the survey and for the adolescent, the consent form was read aloud and the respondents were encouraged to ask questions. The study was approved by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board and a local Institutional Review Board in India.

After the respondent signed off the consent form, the principal investigator or a research assistant gave each participant an envelope bearing an identification number with a slip that specified the sequence and the type of methodology. Every survey participant provided sociodemographic information in a face-to-face interview followed by the two different survey techniques in the predetermined sequence. Every respondent had a face-to-face exit interview (Figure 1). All the interviews were administered on the same day.

The random allocation sequence was determined by the principal investigator using Stata v7 [20]. The study participants were randomized to one of the four interview groups: (1) face-to face interview followed by interactive interview, (2) interactive interview followed by face-to face interview, (3) face-to-face interview followed by audio-CASI, and (4) Audio-CASI followed by face-to-face interview. The planned sample size for the study was 960 participants: 240 (120 boys and 120 girls) in each of the four data collection groups. This sample size allowed detection of differences by interview mode of 8% or more at a power of 80% and an alpha of 0.025. The final sample included 583 boys and 475 girls.

To minimize the travel time for the survey respondents, three field offices were established. On average, a study participant made an overall time commitment of 90-120 minutes to the survey. Data were manually checked and entered into Microsoft Access.

Survey Methodologies:

All efforts were made to keep the questions across methodologies as similar as possible. The interactive methodology was developed in collaboration with Vikalp Design, Udaipur, Rajasthan, India. It included a five-segment audio drama that recreated situations from the lives of respondents to decrease the embarrassment in discussing issues related to sexuality and sex behaviors. Male and female dolls were used to ask questions related to homosexual behaviors and how pregnancy occurs. A confidential individual response sheet that was interviewer-guided but interviewer-blinded was used to ask questions on sexual behaviors. The response sheet had appropriate visuals (these were pretested for comprehension and cultural sensitivity) to enable illiterate respondents to mark their responses. Respondents were given a sheet with their ID number and then the interviewer explained the questions on the master sheet while the respondent followed the instructions on his/ her sheet. After marking their responses, the respondents folded the response sheet and dropped them into a box.

The ACASI software was developed by Geetika Software in Udaipur, Rajasthan, India. For a majority of the respondents, the survey was the first opportunity to use a computer; hence, the software

needed to be user-friendly. Every question was reworded such that each question had a maximum of four response categories (yes, no, do not know, and no response). The four responses were represented by visual images. The respondent would hear the question and the responses on the headphones and had to click on the appropriate response. The voiceover was matched by the sex of the respondent. Respondents could listen to a question again and modify their responses. The only additional skill required to respond to the computer-based methodology was the ability to use the mouse. Pretesting suggested that respondents were able to use this methodology, despite minimal computer exposure.

Statistical and Analytic Techniques

Data were analyzed using Stata v7. All analyses were conducted separately for males and females since we felt the levels of reporting would be different by gender. In order to assess the effectiveness of the randomization, sociodemographic characteristics between the four groups were compared (four for males and four for females). Next, we assessed whether order of survey type mattered using p-values from Fisher's exact tests. Then, we assessed whether adolescent males and females report differently based on which methodology was used. To assess differences in individual-level responses, we employed a matched case-control analysis, and report percentages and McNemar's significance probabilities. Finally, we compared overall rates of reporting between interactive interviews and ACASI and tested for statistically significant differences using Fisher's exact tests.

Results

Response Rates

Out of a total of 1293 eligible respondents (719 boys and 574 girls), 1058 adolescents (583 males and 475 girls) participated in the study as showed in Figure 1. We conducted 1058 face-to-face interviews (583 for boys and 475 for girls), 535 interactive interviews (293 for boys and 242 for girls) and 523 ACASI (290 for boys and 233 for girls) and all the interviews were fully completed. The overall response rate was 82%. The response rates differed by community and gender. The response rates for females ranged from 69% to 88% with an overall response rate of 83% while the average

response rate for males was 81%, ranging from 80 to 83%. Boys did not participate mainly because they were busy with jobs or they were not interested in the survey. The main reason for non-participation of girls was lack of parental permission. Some girls also refused because they were not interested. Those who refused to participate in the survey did so before being randomly assigned to a set of interview methodologies. Missing data were minimal (0. 2 to 1% across the 8 sub-groups presented).

Randomization and Order

Table1 shows the randomization by the four study groups. The results in Table 1 demonstrate that the randomization was successful. Next, we conducted an analysis to determine whether the order in which the methodologies were administered mattered (data not shown). Order of survey administration was not significantly related to the responses so we collapsed the data by methodology for the remaining analyses.

Reporting Behaviors by Methodology: Face-to-Face vs. Interactive and ACASI

Table 2 describes the relationship between survey methodology and reported levels of behavior among the boys, with each boy serving as his own control. The eleven behaviors are listed in order from least to most sensitive. Out of the eleven behaviors, boys gave significantly more reports on the interactive methodology for six items compared to face-to-face interviews. For the remaining five behaviors there was no statistical difference. For the more sensitive behaviors, 28% reported having sex on interactive methodology compared to 20% on face-to-face interviews ($p=0.0002$) and 27% reported sexual harassment on interactive interviews compared to 22% on face-to-face interviews ($p=0.04$). Twelve percent of the male respondents reported coerced sex on interactive interviews compared to 9% on face-to-face interviews ($p=0.04$). Seventy percent acknowledged that homosexual behavior is possible in interactive interviews in comparison with 60% on face-to-face interviews ($p=0.001$).

Of the eleven sensitive behaviors examined between face-to-face interviews and ACASI, boys reported more behaviors on two outcomes on ACASI and significantly fewer on ACASI for three behaviors. Twenty-seven percent reported having sexual intercourse on ACASI compared to 21% on face-to-face interviews (p=0.03) while 22% report having touched someone from the opposite sex on face-to-face interviews in comparison to 11% on ACASI (p=0.0001). Also, 58% acknowledged that homosexual behavior is possible in face-to-face interviews compared to 50% on ACASI (p=0.02).

Table 3 shows the results from females. For four out of the eleven behaviors, girls reported more on interactive interviews compared to face-to-face interviews. Among the more sensitive behaviors, 7% girls reported having sex on interactive methodology compared to 2% on face-to-face interviews (p=0.002). In comparing face-to-face to ACASI, there are six behaviors where there are statistically different results and all reveal higher reporting on face-to face interviews. For the more sensitive behaviors, 6% reported having touched someone from the opposite sex on face-to-face as compared to 1.3% on ACASI (p=0.003) and 38% reported being forcibly touched on face-to-face interviews compared to 14% on ACASI (p=0.00001).

Reporting Behaviors by Methodology: Interactive vs. ACASI

In Table 4, we present the percentage of adolescents reporting behaviors when comparing interactive and ACASI methodologies. As each adolescent answered on face-to-face and another method (interactive or ACASI), comparisons are across individuals. For three of the eleven behaviors, boys reported significantly more behaviors on interactive compared to ACASI interviews. Among the more sensitive behaviors, 22% boys reported having touched someone from the opposite sex on interactive interviews in comparison to 11% on ACASI (p=0.0001) and 70% of boys acknowledged that homosexual behavior on interactive compared to 50% on ACASI (p=0.0001). Girls reported more behaviors on interactive compared to ACASI for six of the behaviors (Table 4). Seven percent females reported having sex on interactive interviews in comparison with 3% on ACASI (p=0.001) and 36% girls report being touched forcibly in contrast with 14% on ACASI (p=0.0001). Girls acknowledged

that homosexual behavior is possible more often on interactive as compared to ACASI (22% vs16%, p=0.0001).

Discussion

Using a randomized controlled trial with a cross-over design in urban Delhi, we find that adolescents reported different levels of emotional and physical behaviors depending on the survey methodology. Both boys and girls reported more behaviors using the interactive survey as compared to face-to-face. While some of boys' reporting differed on face-to-face compared to ACASI, there was no consistent pattern. Girls consistently reported more behaviors on face-to-face interviews compared to ACASI. While the pattern is more mixed for boys, it is evident that ACASI methodology does not uniformly lead to more reports, as expected. Findings from this study indicate that the appropriateness of survey methodology is likely to vary by the behaviors and populations under study [21]. In addition, although the current study could not assess which method provided the most valid responses, for the purposes of program design and health interventions, we feel that erring on the side of higher reports is preferable.

Based on the study design and the fact that almost everyone who enrolled in the study completed it, the results should have good internal validity. The study findings might be more relevant to disadvantaged urban youth in India. However, evidence suggests that though this group is at a higher risk of negative reproductive health outcomes, it has been studied less often [22,23]. Findings from this study should also provide cues for methodological experiments in varied socioeconomic and educational settings.

In comparison with other studies assessing premarital sexual activity of young people in India, results from this survey report sexual activity among both boys and girls on the higher side. Studies have typically found less than 10% of girls and 15-30% boys report premarital sexual experience across a diverse range of settings [23]. Twenty eight percent boys and 7% girls on interactive interviews report having sexual intercourse. Particularly for the females, these are some of the highest reports of

sexual activity in a population-based sample in a disadvantaged urban setting. It is likely that the interactive sheets were viewed as truly confidential, and adolescents readily understood the questions, and felt comfortable reporting their behaviors.

The study findings (70% boys in contrast to 22% girls on interactive interviews acknowledge that homosexual behaviors are possible) also suggest that homosexual behaviors are taboo. Future programs in the area of adolescent sexual health need to inform and sensitize young people, particularly females on this issue.

Another important issue that emerges from this study is the prevalence of sexual harassment with up to 27% of boys and 38% of girls who reported being forcibly touched and up to 12% of boys and 3% of girls who reported that someone tried to force them to have sexual intercourse. Other studies suggest that sexual harassment and coercion are problems that adolescents face in developing countries [24] and in India, a school-based study in Goa [25] indicated that one-third of the students had experienced at least one type of sexual abuse in the previous 12 months. The long term mental health and psycho-social outcomes of such experiences can be devastating, including low self-esteem, isolation, depression and substance abuse. Evidence also suggests that youth who experience coercion are more likely to experience subsequent incidents of forced sex, as well as (consensual) sexual risk-taking behaviors, and consequently increased risk of unintended pregnancy and sexually transmitted infections[26].

The data presented in this study underscore the need for interventions for adolescents as some of them are sexually active before marriage, experiencing harassment in a context where the HIV epidemic is taking hold. However, the results from this study also point to the need for better methods to elicit information from adolescents to design more appropriate interventions and develop better policies. While the interactive methodology led to the reporting of more behaviors in this population, future research on adolescent sexual behavior should pay careful attention to gender of the respondent, survey methodology and the population under study.

Figure 1: Randomization Plan

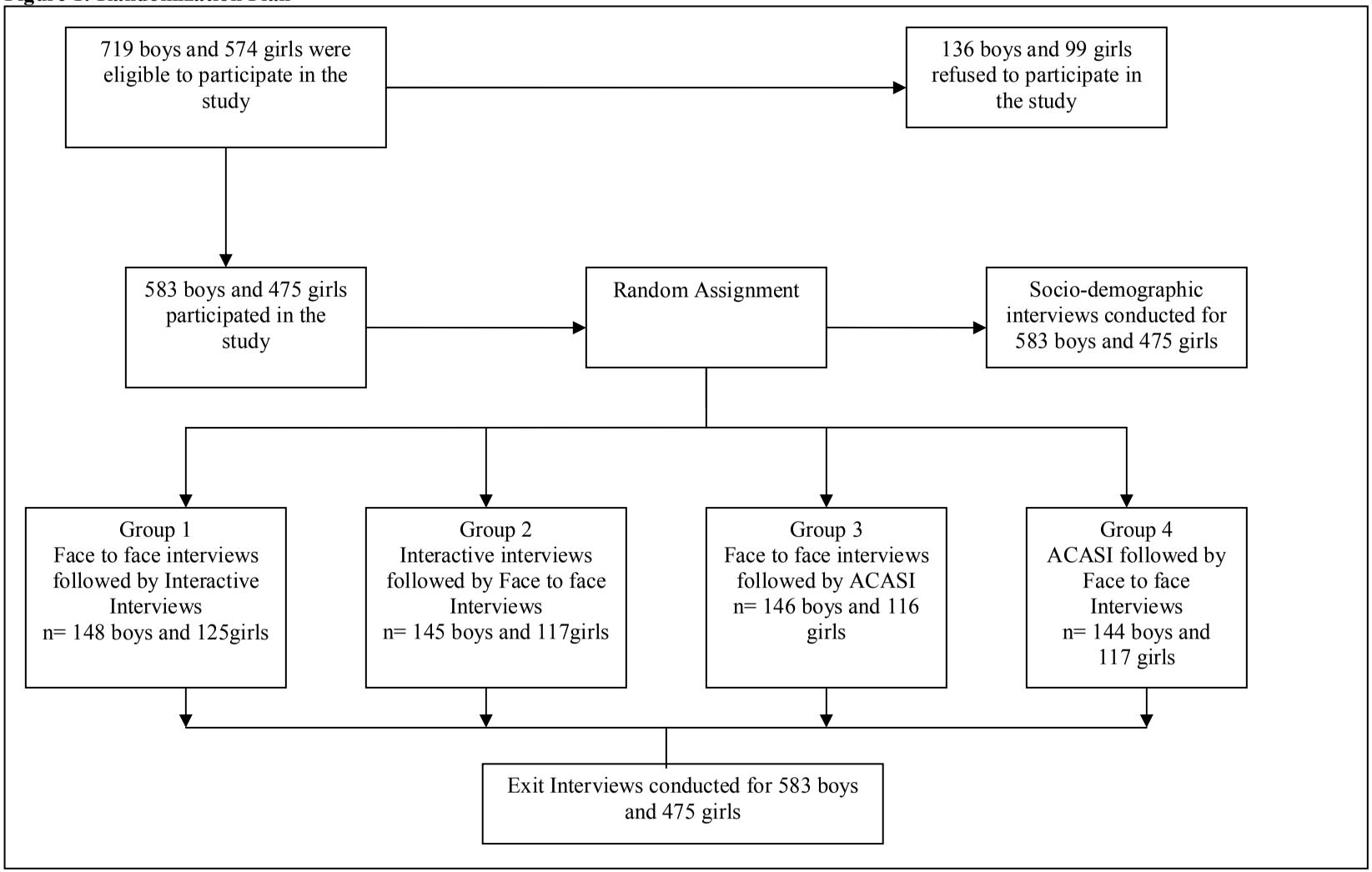

Table 1: Socio-demographic Characteristics of the Respondents According to the Randomized Group

Socio-demographic Characteristics	Boys n=583					Girls n=475				
	Group 1 n=148	Group 2 n=145	Group 3 n=146	Group 4 n=144	p-value	Group 1 n=125	Group 2 n=117	Group 3 n=116	Group 4 n=117	p-value
Residence (%)										
Sanjay Camp	45.3	37.2	45.2	36.1	0.6	36.8	29.1	43.1	40.2	0.5
Subhash Camp	42.6	50.3	41.1	46.5		54.4	57.3	46.6	47.9	
Mini Subhash Camp	6.1	5.5	4.8	6.3		4.8	4.3	5.2	4.3	
Shaheed Camp	6.1	6.9	8.9	11.1		4.0	9.4	5.2	7.7	
Age, mean years (SD)	17.1 (1.40)	16.8 (1.53)	16.8 (1.43)	16.8 (1.48)	0.7	16.2 (1.47)	16.1 (1.29)	16.1 (1.32)	16.5 (1.39)	0.5
Education, mean years, (SD)	4.4 (2.30)	4.9 (2.23)	4.5 (1.99)	4.5 (2.14)	0.3	4.1 (2.22)	4.3 (2.27)	4.2 (2.12)	4.2 (2.26)	0.9
Ever Worked (%)	72.3	77.9	70.6	71.5	0.5	57.6	57.3	51.7	48.7	0.4
Family Income (%) (in Rupees)										
< 2500	21.6	22.8	17.1	21.5	0.9	25.0	23.4	26.6	25.0	0.6
2500-5000	52.0	51.7	53.4	52.8		30.0	25.1	20.3	25.6	
> 5000	26.4	25.5	29.5	25.7		22.5	26.3	30.0	21.3	
Religion (%)										
Hindus	69.6	77.9	74.7	69.4	0.3	77.6	70.9	75.9	73.5	0.7
Others	30.4	22.1	25.3	30.6		22.4	29.1	24.1	26.5	

Note: p-values reported from chi square test
Group1: Face-to face interview followed by interview using interactive methodology
Group 2: Interview using interactive methodology followed by face-to face interview
Group 3: Face to face interview followed by audio-CASI
Group 4: Audio- CASI followed by face to face interview

Table 2: Boys reporting behaviors by study methodology

Behaviors	Face to Face Interviews n (%)	Interactive Interviews n (%)	p-value	Face to Face Interviews n (%)	ACASI n (%)	p-value
	n=293			n=290		
Interacted with opposite sex	122 (41.6)	129 (44.0)	0.4	116 (40.0)	114 (39.3)	0.9
Ever had a friend from the opposite sex[1]						
Yes	152 (51.9)	171 (58.4)	0.003	145 (50.0)	156 (53.8)	0.2
No	141 (48.1)	122 (41.6)		145 (50.0)	133 (45.9)	
Did not respond	---	---		---	1 (0.3)	
Ever especially liked someone from the opposite sex	161 (54.9)	179 (61.1)	0.005	158 (54.5)	185 (63.8)	0.0005
Casual relationship	35 (11.9)	29 (9.9)	0.5	22 (7.6)	22 (7.6)	1.0
Emotionally attached to someone from the opposite sex	89 (30.4)	86 (29.4)	0.8	82 (28.3)	51 (17.6)	0.0004
Ever touched someone from the opposite sex	67 (22.9)	65 (22.2)	0.8	63 (21.7)	31 (10.7)	0.0000
Ever had sex[1]						
Yes	57 (19.5)	83 (28.4)	0.0002	62 (21.4)	78 (26.9)	0.03
No	232 (79.5)	209 (71.6)	n=292	226 (77.9)	212 (73.1)	
Did not respond	3 (1.0)	---		2 (0.01)	---	
Someone ever tried to touch forcibly	64 (21.8)	78 (26.6)	0.04	62 (21.4)	76 (26.2)	0.09
Someone ever tried to force having sex	25 (8.5)	36 (12.3)	0.03	23 (7.9)	33 (11.4)	0.10
Acknowledge homosexual behavior is possible[2]						
Yes	175 (59.7)	205 (70.0)	0.001	167 (57.6)	145 (50.0)	0.02
No	111 (37.9)	73 (24.9)		106 (36.6)	85 (29.3)	
Do not know	7 (2.4)	15 (5.1)		17 (5.9)	60 (20.7)	
Ever had sex with someone from the same sex[1]						
	20 (6.8)	23 (7.8)	0.6	19 (6.6)	18 (6.2)	1.0
Yes	273 (93.2)	269 (91.8)		271 (93.5)	269 (92.8)	
No	---	1 (0.3)		---	3 (1.0)	
Did not respond						

Note: p-values are exact McNemar's significance probabilities from matched case-control analyses
[1] 'No' and 'did not respond' responses have been collapsed to determine p-values
[2] 'No' and 'do not know' responses have been collapsed to determine p-values

Table 3: Girls reporting behaviors by study methodology

Behaviors	Face to Face Interviews n (%)	Interactive Interviews n (%)	p-value	Face to Face Interviews n (%)	ACASI n (%)	p-value
	n=242			n=233		
Interact with opposite sex	132 (54.5)	123 (50.8)	0.2	117 (50.2)	36 (15.5)	0.00001
Ever had a friend from the opposite sex	75 (31.0)	65 (26.9)	0.09	86 (36.9)	70 (30.0)	0.04
Ever especially liked someone from the opposite sex	86 (35.5)	102 (42.2)	0.04	89 (38.2)	72 (30.9)	0.02
Casual relationship	15 (6.2)	6 (2.5)	0.05	8 (3.4)	9 (3.9)	1.0
Emotionally attached to someone from the opposite sex	36 (14.9)	61 (25.2)	0.0002	40 (17.2)	14 (6.0)	0.00001
Ever touched someone from the opposite sex	14 (5.8)	10 (4.1)	0.4	14 (6.0)	3 (1.3)	0.003
Ever had sex with someone from the opposite sex						
Yes	4 (1.7)	17 (7.1)	0.002	3 (1.3)	8 (3.4)	0.2
No	23 (98.3)	222 (92.9)	n=239	216 (98.7)	216 (92.7)	
Did not respond	-	-		-	9 (3.9)	
Someone ever tried to forcibly touch	82 (33.9)	87 (36.0)	0.5	89 (38.4)	33 (14.2)	0.00001 n=232
Someone ever tried to force having sex	4 (1.6)	4 (1.6)	1.0	3 (1.3)	6 (2.6)	0.5
Acknowledge homosexual behavior is possible[1]						
Yes	48 (19.8)	53 (21.9)	0.6	36 (15.5)	38 (16.4)	0.9
No	174 (71.9)	172 (71.1)		179 (77.2)	120 (51.7)	n=232
Do not know	20 (8.3)	17 (7.0)		17 (7.3)	74 (31.9)	
Ever had sex with someone from the same sex[2]						
Yes	-	5 (2.1)	0.06	1 (0.4)	3 (1.4)	0.5
No	5 (100.0)	237 (97.9)		232 (99.6)	230 (98.7)	
Did not respond	-	-		-	-	

Note: p-values are exact McNemar's significance probabilities from matched case-control analyses
[1] 'No' and 'do not know' responses have been collapsed to determine p-values
[2] 'No' and 'did not respond' responses have been collapsed to determine p-values

Table 4: Percentage of Boys and Girls Reporting Sexual Behaviors: Comparison between Interactive Interviews and ACASI

Behaviors	Boys			Girls		
	n=583			n=475		
	Interactive Interviews n (%)	ACASI n (%)	p-value	Interactive Interviews n (%)	ACASI n (%)	p-value
Interact with opposite sex	129 (44.0)	114 (39.3)	0.3	123 (50.8)	36 (15.5)	0.0001
Ever had a friend from the opposite sex	171 (58.4)	156 (53.8)	0.3	65 (26.9)	70 (30.0)	0.5
Ever especially liked someone from the opposite sex	179 (61.1)	185 (63.8)	0.5	102 (42.2)	72 (30.9)	0.01
Casual relationship	29 (9.9)	22 (7.6)	0.4	6 (2.5)	9 (3.9)	0.4
Emotionally attached to someone from the opposite sex	86 (29.3)	51 (17.6)	0.001	61 (25.2)	14 (6.0)	0.0001
Ever touched someone from the opposite sex	65 (22.2)	31 (10.7)	0.0001	10 (4.1)	3 (1.3)	0.09
Ever had sex with someone from the opposite sex	84 (28.7)	78 (26.9)	0.6	17 (7.1)	8 (3.4)	0.001 n=472
Someone ever tried to forcibly touch	78 (26.6)	76 (26.2)	0.9	87 (36.0)	33 (14.2)	0.0001 n=474
Someone ever tried to forcibly have sex	36 (12.3)	33 (11.4)	0.8	4 (1.7)	6 (2.6)	0.538
Acknowledge homosexual behavior is possible						
Yes	205 (70.0)	145 (50.0)	0.0001	53 (21.9)	38 (16.4)	0.0001
No	73 (24.9)	85 (29.3)		172 (71.1)	120 (51.7)	n=474
Do not know	15 (5.1)	60 (20.7)		17 (7.0)	74 (31.9)	
Ever had sex with someone from the same sex	23 (7.9)	18 (6.2)	0.5	5 (2.1)	3 (1.3)	0.7

Note: p-values reported from Fisher's exact test

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