

The Safer Sex Intervention (SSI): Impact Findings From the Teen Pregnancy Prevention Replication Study

| RESEARCH BRIEF |

This research brief highlights findings from the evaluation of the *Safer Sex Intervention (SSI)*, a program originally designed to prevent sexually transmitted infections in young women who are sexually active.

The findings are based on two follow-up surveys administered to study participants nine and 18 months after they enrolled in the study. The study is designed to examine the impact of *SSI* on adolescent sexual behavior as well as on cognitive and psychological aspects of adolescent functioning that might influence that behavior. It includes data from three different replications of *SSI*.

Summary of Findings

After 9 months *SSI* had a statistically significant impact on young women's use of birth control when they engaged in sexual intercourse. Almost six percent fewer program participants had unprotected sex, compared with non-participants. A smaller, though no longer statistically significant, difference in the use of protection persisted through the longer-term follow-up (almost three percent fewer program participants than non-participants).

At the longer-term follow-up, *SSI* had a promising effect (p=.07) on the proportion of program participants who became pregnant over the 18-month period (16% vs. 19.4%). The program had no effect on other sexual behaviors or their consequences at either time-point.

In the short-term, *SSI* demonstrated positive effects on some intermediate outcomes, namely attitudes towards use of protection and intention to use a condom during sexual intercourse, as well as perceived refusal skills. Some of these effects were sustained through the longer-term follow-up, although in most cases the difference was no longer significant. Two additional impacts emerged at the longer-term follow-up: young women in the program group were significantly more likely to reject risky sexual behavior, and to believe that they could successfully negotiate condom use with a partner.

- *SSI was effective in decreasing the incidence of unprotected sexual intercourse, although the impact was significant in the short-term only.*
- *The program had an impact on pregnancy that, while not statistically significant, was promising.*
- *SSI participants demonstrated more positive attitudes towards the use of condoms and more confidence in their refusal and negotiation skills.*

Background

The federal Teen Pregnancy Prevention (TPP) Program, administered by the Office of Adolescent Health (OAH), includes funding for interventions that address the issue of teenage pregnancy and STIs by replicating program models that have shown some evidence of effectiveness in reducing these outcomes and related behaviors.

The Teen Pregnancy Prevention (TPP) Replication Study

The purpose of the Teen Pregnancy Prevention (TPP) Replication Study, funded and overseen jointly by OAH and the Office of the Assistant Secretary for Planning and Evaluation (ASPE), is to test whether three program models, each previously shown to be effective in a single study, continue to demonstrate effectiveness when implemented with fidelity (that is, adherence to the core components of the program) across different settings and populations.

The study evaluated three replications of each of three evidence-based program models. The three program models tested are: *the Safer Sex Intervention (SSI)*, *¡Cuidate!*, and *Reducing the Risk (RtR)*. Nine grantees funded under the TPP Program were selected to participate in rigorous experimental tests of the evidence-based programs they were implementing.

This brief, and the report it summarizes, focus on the impacts of *SSI*[1].

1 The report that accompanies this research brief is one in a series of reports that present findings from the TPP Replication Study. Two additional reports present findings from the evaluations of the other two program models (*RtR and ¡Cuídate!*). A companion set of three reports presents findings on the implementation of the program models. Three earlier reports describe findings from the short-term follow-up survey.

What is *SSI*?

SSI is a clinic-based program intended to reduce the incidence of sexually-transmitted infections and increase condom use among high-risk, sexually-active adolescent females.

The program is delivered in one-on-one, face-to-face sessions with a female health educator. The initial hour-long session is followed by three shorter booster sessions delivered over a six-month period. During the initial session, the health educator helps the adolescent identify her needs, motivation and intentions, identify obstacles to behavior change and make plans to overcome them. Subsequent booster sessions reinforce the participant's plan for behavior change.

SSI's strategy uses motivational interviewing to personalize the sessions, guide rather than teach, and take into account individual needs and challenges.

The Evaluation of *SSI*

From the grants awarded in 2010, three grantees were selected to provide a strong test of the program model. In each replication site, the program was delivered by female health educators. These staff were trained through a train-the-trainer approach, in which grantee supervisory staff were first trained by the program developer and subsequently trained their health educators.

Grantees Selected

- ***Hennepin County Human Services and Public Health Department, based in Minneapolis MN and providing services county-wide.***
- ***Knox County Health Department, the local public health agency based in Knoxville TN and providing services to the City of Knoxville and Knox County.***
- ***Planned Parenthood of Greater Orlando, a community-based non-profit organization that provides reproductive health and education services in four central Florida counties.***

The replications of *SSI* differed in scale, ranging from two clinics in Orlando to nineteen clinics in Hennepin County. Although in all three sites, *SSI* was implemented in clinic settings, there was variation in the types of clinic and the extent to which the program was integrated into the standard set of clinic services. In Orlando, two clinics both operated under the auspices of Planned Parenthood. By contrast, Hennepin County contracted with provider agencies to offer the program in seven school-based clinics, one STI/public health clinic, five community-based clinics, four teen health clinics, one hospital-based pediatric clinic and one clinic for homeless youth.

Research Design

Experimental design:

- *Random assignment of individuals within clinics*

Data collected at:

- *Baseline*
- *9 months after baseline*
- *18 months after baseline*

Outcome Measures

Non-Behavioral Intermediate Outcomes:

- ***Knowledge of pregnancy and STI risk***
- ***Attitudes towards protection and risky sexual behaviors***
- ***Motivation and intention to avoid risk***
- ***Negotiation skills***

Behavioral Outcomes and Consequences:

- ***Sexual activity (intercourse, oral, anal sex)***
- ***Unprotected sexual behavior***
- ***Pregnancy and/or STI***

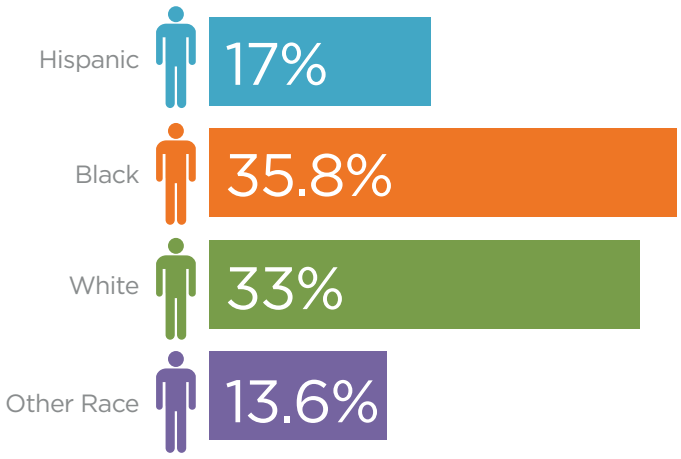
Analytic Strategy

- ***Use of pooled data for greater generalizability, improved power to detect impacts, and ability to explore effects on important subgroups***
- ***Pre-specification of limited number (five) of behavioral outcomes of greatest interest***
- ***Wide-ranging exploratory analyses of additional behavioral outcomes and effects by site and on subgroups***

Youth in the Study

All of the adolescents in the study were female. When the study began, they were, on average, 17.2 years old. More than one-third were non-Hispanic Black, almost one-third were White, and the remaining third were nearly equally divided among Hispanic (17.7%) and Other (13.6%) (Figure 1).

FIGURE 1. RACE/ETHNICITY OF STUDY PARTICIPANTS AT BASELINE

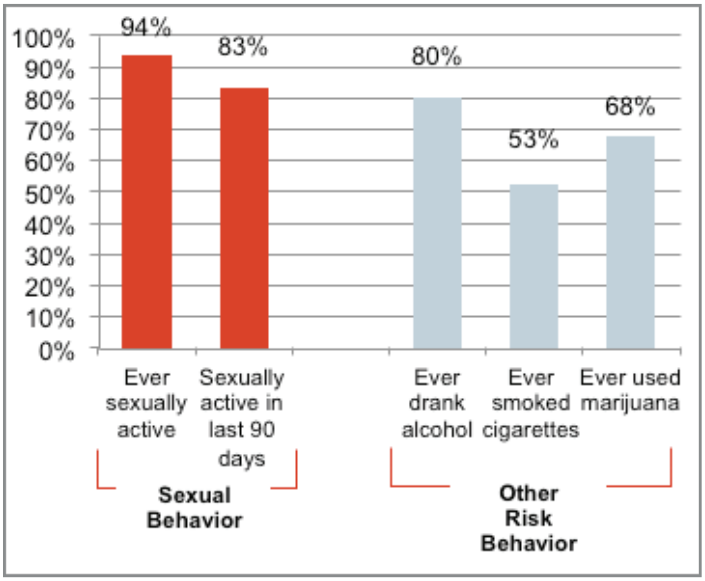


Source: Baseline survey completed prior to random assignment.

The demographic profiles of study participants differed significantly across the replication sites. The racial and ethnic composition of study participants in Hennepin County was significantly more diverse than in the other two sites.

Not surprisingly, almost all of the study participants had been sexually active, although a smaller percentage (83.2%) were sexually active in the period 90 days before they entered the study. Almost two-thirds had sexual intercourse without using a condom in the 90 days before the baseline survey; almost one-third had sex without using birth control in the same period. Almost one quarter had sexual intercourse with more than five partners. More than 80 percent had ever used alcohol; two-thirds had ever used marijuana and just over half had ever smoked cigarettes (Figure 2).

FIGURE 2. ENGAGEMENT IN RISK BEHAVIORS AT BASELINE



Program Impacts on Behavioral Outcomes

Did SSI have impacts on sexual activity, sexual risk behavior, and/or consequences of sexual risk behavior?

SSI had a statistically significant impact on one of five key behavioral outcomes and a marginally significant impact on one other outcome.

- *After 9 months, SSI significantly reduced the incidence of unprotected sexual intercourse.*
- *After 18 months, there was a promising program effect on pregnancy. Program participants had fewer pregnancies than their counterparts in the control group. The difference was marginally significant (p = .07).*

Yes, after 9 months, *SSI* had a favorable and significant impact on unprotected sex. Young women in the program group were significantly more likely to use birth control when they engaged in sexual intercourse. At the longer-term follow-up (after 18 months), the difference was no longer statistically significant. There were no impacts on current sexual activity at either the short-term or at the longer-term. After 18 months, *SSI* had a favorable, though only marginally significant impact on pregnancy: 16 percent of youth in the treatment group and 19.4 percent of youth in the control group reported getting pregnant since they entered the study (Appendix Table 1).

Were there site-level differences in the effect of SSI on behavioral outcomes?

In the short term, there was a significant difference in the effect of *SSI* on one aspect of sexual behavior. In Hennepin County, young women in the program group were significantly less likely to engage in oral sex. After 18 months, there were no significant site-level differences in behavioral outcomes (See Appendix Tables 2 and 3).

There were few site-level differences in the effect of SSI on behavioral outcomes

- *After 9 months, program participants in Hennepin County were less likely to report engaging in oral sex than youth in the control group.*

Were there subgroup differences in the effect of SSI on behavioral outcomes?

There were a small number of differences in effects for some subgroups after nine months, but none persisted at the longer-term follow-up.

After nine months, SSI had favorable effects on sexual behavior for some subgroups:

- *Program youth who were sexually inexperienced at baseline were significantly less likely to report having had more than one partner for sexual intercourse.*
- *Fewer treatment group members who were 18 or older reported having oral sex without using a condom, compared with older youth in the control group.*

Effects of the Program on Non-Behavioral Outcomes after 9 and 18 Months

Did SSI have positive effects on non-behavioral outcomes?

Yes, the program had a positive effect on the attitudes, intentions and skills of youth after nine months and on slightly different aspects of these outcomes after 18 months (See Appendix Tables 4 and 5).

SSI improved attitudes towards using protection and risky sexual behaviors

- *After nine months, compared with young women in the control group, those in the program group had significantly more positive attitudes towards the use of birth control and condoms.*
- *Although most young women in both groups viewed risky sexual behavior as unacceptable, after 18 months significantly more program participants rejected these behaviors.*

SSI increased intentions to use protection

- *After nine months, significantly more SSI participants reported their intention to use condoms during sexual intercourse.*
- *After 18 months, the difference persisted (80.3% vs. 77.2%) but was no longer statistically significant.*

SSI had no effect on adolescents' motivation or intentions to engage in sexual behaviors in the following year. Youth in both the treatment and control groups were highly motivated to avoid childbearing at baseline and later. Similarly, almost all expressed a belief in the importance of delaying childbearing until personal goals were achieved.

SSI improved negotiation and refusal skills

- *After nine months, program participants reported significantly improved ability to refuse unwanted sex but did not feel better equipped to negotiate condom use with a partner compared with control group members.*
- *After 18 months, SSI participants remained significantly more confident in their refusal skills and were also more confident that they could negotiate condom use with a partner.*

Discussion

This study was designed to address important research and policy questions about the effectiveness of the evidence-based program, the *Safer Sex Intervention (SSI)*. Prior to this study, the evidence for *SSI* was based on one study done many years ago with a small and very specific population of young women. This study provided an opportunity to understand whether the model is effective in more contemporary settings, in different locations, and with a broader range of populations.

We found evidence that *SSI* was successful in reducing risky sexual behavior in sexually-active young women.

Nine months after the program began, significantly fewer young women who were assigned to the program reported having unprotected sex (that is, sexual intercourse without using some form of birth control). Though the impact diminished over time, this early impact is reflected in the lower pregnancy rates reported by program participants at the longer-term follow-up. The three percentage point reduction in pregnancies, while not statistically significant, is practically meaningful because of the long-term consequences and costs associated with unplanned births to teen moms.

The strong implementation of *SSI* in a variety of settings and at different levels of scale is unusual and noteworthy.

Across all three replications, *SSI* was delivered with fidelity to its key elements and managed to retain the majority of program participants over the six-month period when booster sessions were delivered. Each of the sites was able to successfully integrate the program model into clinic settings. The strength and uniformity of implementation was especially noteworthy in Hennepin County, given the number of clinics involved and the variation in clinic sponsorship and focus.

This successful effort to take the program to scale without dilution suggests that the program is sufficiently robust for large-scale replication. Nevertheless, its success required considerable and sustained effort on the part of grantee staff. There are important lessons to be learned from the experiences of each of the replication sites – in terms of the level of training and retraining required, the amount and type of monitoring and supervision needed, and the kind of prior experience that helped staff implement motivational interviewing in this new context.

Appendix Tables

TABLE 1. SHORT-TERM AND LONGER-TERM IMPACTS OF *SSI* ON SEXUAL ACTIVITY, SEXUAL RISK BEHAVIOR, AND CONSEQUENCES

Outcome	Short-term Impacts				Longer-term Impacts			
	Adjusted Treatment Mean [a]	Unadjusted Control Mean	Treatment Effect [b]	*p*-value	Adjusted Treatment Mean [a]	Unadjusted Control Mean	Treatment Effect [b]	*p*-value
Sexual Behavior								
Sexual activity (percentage responding affirmatively)								
Currently sexually active (last 90 days)[c]	74.84	74.96	-0.11	.954	75.12	76.11	-0.99	.624
Sexual intercourse in the last 90 days	71.29	72.18	-0.89	.661	71.84	72.49	-0.64	.755
Oral sex in the last 90 days	59.32	60.39	-1.07	.626	60.60	61.29	-0.68	.759
Anal sex in the last 90 days[c]	9.13	6.13	2.99	.051	9.13	10.00	-0.87	.597
Sexual risk behavior (percentage responding affirmatively)								
Sexual intercourse without birth control (last 90 days)	22.05	27.82	-5.78** [d]	.005	23.84	26.69	-2.85	.179
Sexual intercourse without a condom (last 90 days)	53.66	57.45	-3.79	.087	55.45	58.98	-3.52	.128
Oral sex without a condom (last 90 days)	54.32	56.63	-2.31	.299	56.23	57.66	-1.43	.527
Anal sex without a condom (last 90 days)[c]	7.32	4.65	2.67	.056	6.81	8.48	-1.67	.260
Sexual intercourse with more than one partner (life-time)	70.07	71.82	-1.75	.332	74.30	73.67	0.63	.741
Sexual intercourse with more than five partners (lifetime)	26.35	28.86	-2.51	.163	32.66	31.33	1.33	.503
Consequences of sexual risk behavior (percentage responding affirmatively)								
Pregnant since baseline					16.00	19.41	-3.41	.070[e]
Diagnosed with STI in the last 12 months					9.65	11.02	-1.37	.354

Source: Follow–up surveys administered nine and 18 months after baseline.

Note: Short–term results are based on 1,801 respondents who provided valid survey responses to relevant items, except for the items measuring number of partners (n = 1,735) and anal sex (n = 1,389). Longer-term results are based on 1,806–1,808 respondents who provided valid survey responses to relevant items except for the items measuring anal sex (n = 1,379), number of partners (n = 1,788), and pregnancy (n = 1,700).

a The treatment group mean is regression-adjusted, calculated as the sum of the unadjusted control group mean and the regression-adjusted impact estimate (treatment effect).

b The treatment effect was estimated in a one-level fixed-effects regression model that controls for randomization blocks and other covariates. The treatment effect is expressed as a difference in percentage points. Due to rounding, reported treatment effects may differ from differences reported between reported means for the treatment and control groups.

c Sexual activity is defined differently across grantees. In Hennepin County and Planned Parenthood of Greater Orlando, sexual activity refers to sexual intercourse, oral sex, and anal sex. Youth were not asked about anal sex in Knox County.

d Indicates statistical significance after application of Benjamini-Hochberg (1995) correction for two tests within this outcome domain. The criterion for statistical significance is p < .05 if both tests have p-values less than .05, and is .025 if only one of the two tests has a p-value less than .05.

e Criterion for statistical significance is p < .05.

TABLE 2. SHORT-TERM EFFECTS OF *SSI* ON SEXUAL ACTIVITY AND SEXUAL RISK BEHAVIOR BY SITE

Outcome	Hennepin County (n=963)				Knox County (n=412)				Planned Parenthood of Greater Orlando (n=426)				*p*-value for the Test of Differences Across Sites[a]
	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	
Sexual Behavior													
Sexual activity (percentage responding affirmatively)[d]													
Recently sexually active (in last 90 days)	76.19	78.66	−2.47	.361	74.03	68.61	5.42	.188	72.41	72.60	−0.19	.963	.277
Sexual intercourse in the last 90 days	72.92	76.22	−3.30	.236	70.74	66.42	4.32	.308	67.93	68.49	−0.56	.893	.322
Oral sex in the last 90 days	57.97	64.02	−6.05 *	.044	61.22	55.47	5.75	.209	60.30	56.85	3.45	.439	.050*
Anal sex in the last 90 days	9.59	5.50	4.09 *	.027	n/a	n/a	n/a	n/a	8.10	7.53	0.57	.835	.287
Sexual risk behavior (percentage responding affirmatively)													
Sexual intercourse without birth control (in last 90 days)	21.43	29.27	−7.84 **	.005	17.58	23.36	−5.78	.173	27.57	28.77	−1.20	.772	.412
Sexual intercourse without a condom (in last 90 days)	57.43	62.80	−5.37	.077	49.94	53.28	−3.34	.470	48.60	49.32	−0.72	.873	.689
Oral sex without a condom (in last 90 days)	53.20	60.06	−6.86 *	.024	57.63	54.74	2.89	.533	53.49	50.68	2.81	.535	.092
Anal sex without a condom (in last 90 days)	7.75	4.59	3.16	.060	n/a	n/a	n/a	n/a	6.38	4.79	1.59	.524	.601
Sexual intercourse with more than one partner (lifetime)	68.69	71.16	−2.47	.316	69.98	70.31	−0.33	.931	73.17	74.65	−1.48	.688	.891
Sexual intercourse with more than five partners (lifetime)	25.85	30.09	−4.24	.085	29.55	29.69	−0.14	.971	24.49	25.35	−0.86	.814	.581

Source: Follow-up survey administered nine months after baseline.

Note: n/a is not asked.

a This column shows the results for statistical tests of whether the treatment effect varies among the three sites.

b The treatment group mean is regression-adjusted, calculated as the sum of the unadjusted control group mean and the regression-adjusted impact estimate (treatment effect).

c The treatment effect was estimated in a regression model that controls for randomization blocks and other covariates. The treatment effect is expressed as a difference in percentage points. Due to rounding, reported treatment effects may differ from differences between reported means for the treatment and control groups.

d Sexual activity is defined differently across grantees. In Hennepin County and Planned Parenthood of Greater Orlando, sexual activity refers to sexual intercourse, oral sex, and/or anal sex. Youth were not asked about anal sex in Knox County.

** p < .05, ** p < .01, *** p < .001 (two-tailed tests).*

TABLE 3. LONGER-TERM EFFECTS OF *SSI* ON SEXUAL ACTIVITY, SEXUAL RISK BEHAVIOR, AND SEXUAL CONSEQUENCES BY SITE

Outcome	Hennepin County (n= 952)				Knox County (n= 428)				Planned Parenthood of Greater Orlando (n= 428)				p-value for the Test of Differences Across Sites[a]
	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	Adj. T Mean[b]	Unadj. C Mean	T Effect[c]	*p*-value	
Sexual Behavior													
Sexual activity (percentage responding affirmatively)[d]													
Currently sexually active (in last 90 days)	75.28	79.11	−3.83	.171	78.76	74.15	4.61	.259	71.03	71.53	−0.50	.904	.231
Sexual intercourse in the last 90 days	72.35	75.63	−3.28	.252	76.35	73.47	2.88	.492	66.09	64.58	1.51	.720	.402
Oral sex in the last 90 days	61.49	63.29	−1.80	.560	64.74	59.86	4.88	.280	54.43	58.33	−3.90	.390	.341
Anal sex in the last 90 days	9.29	10.44	−1.15	.560	n/a	n/a	n/a	n/a	8.78	9.03	−0.25	.932	.796
Sexual risk behavior (percentage responding affirmatively)													
Sexual intercourse without birth control (last 90 days)	22.65	23.73	−1.08	.712	27.24	32.65	−5.41	.208	22.98	27.08	−4.10	.342	.669
Sexual intercourse without a condom (last 90 days)	58.54	63.61	−5.07	.114	55.94	61.90	−5.96	.203	48.12	45.83	2.29	.626	.361
Oral sex without a condom (last 90 days)	57.55	59.49	−1.94	.535	61.78	58.50	3.28	.473	47.70	52.78	−5.08	.268	.422
Anal sex without a condom (last 90 days)	6.98	9.81	−2.83	.114	n/a	n/a	n/a	n/a	6.39	5.56	0.83	.751	.248
Sexual intercourse with more than one partner (lifetime)	73.36	75.00	−1.64	.535	76.14	71.53	4.61	.235	74.46	72.92	1.54	.690	.397
Sexual intercourse with more than five partners (lifetime)	33.79	33.65	0.14	0.961	35.82	31.25	4.57	.256	27.03	26.39	0.64	.872	.647
Sexual consequences (percentage responding affirmatively)													
Pregnant since baseline	14.53	19.27	−4.74	.070	19.69	25.35	−5.66	.133	15.30	13.43	1.87	.629	.287
Diagnosed with STI in the last 12 months	10.69	14.51	−3.82	.063	7.50	7.48	0.02	.995	9.44	6.94	2.50	.406	.191

Source: Follow-up survey administered 18 months after baseline.

Note: n/a is not asked.

a This column shows the results for statistical tests of whether the treatment effect varies among the three sites.

b The treatment group mean is regression-adjusted, calculated as the sum of the unadjusted control group mean and the regression-adjusted impact estimate (treatment effect).

c The treatment effect was estimated in a regression model that controls for randomization blocks and other covariates. The treatment effect is expressed as a difference in percentage points.

d Sexual activity is defined differently across grantees. In Hennepin County and Planned Parenthood of Greater Orlando, sexual activity refers to sexual intercourse, oral sex, and anal sex. Youth were not asked about anal sex in Knox County.

** p < .05, ** p < .01, *** p < .001 (two-tailed tests).*

TABLE 4. SHORT-TERM IMPACTS OF *SSI* ON NON-BEHAVIORAL INTERMEDIATE OUTCOMES

Outcome	Adjusted Treatment Mean[a]	Unadjusted Control Mean	Treatment Effect[b]	SES[c]	*p*-value
Knowledge[d]					
Knowledge of pregnancy risk	78.53	78.26	0.27		.817
Knowledge of STI risk	75.91	74.80	1.11		.183
Attitudes					
Attitudes toward protection[e]	3.36	3.32	0.03*	0.09	.050
Attitudes toward risky behavior[f]	4.12	5.42	-1.30		.061
Motivation[e]					
Motivation to delay childbearing	3.76	3.73	0.03	0.05	.309
Intentions (to engage in the following behaviors in the next 12 months) [g]					
Sexual intercourse	82.56	83.14	-0.58		.734
Oral sex	65.95	67.05	-1.10		.591
Use a condom if they were to have sexual intercourse	86.31	79.74	6.57***		.000
Use birth control if they were to have sexual intercourse	92.41	91.18	1.23		.357
Skills[e]					
Perceived refusal skills	3.45	3.34	0.10***	0.17	.001
Perceived condom negotiation skills	3.73	3.69	0.03	0.08	.126

Source: Follow-up survey administered 9 months after baseline.

Notes: Results in this table are based on 1,801-1,809 respondents who provided valid survey responses to relevant items.

aThe treatment group mean is regression-adjusted, calculated as the sum of the control group mean and the regression adjusted impact estimate (treatment effect).

bThe treatment effect was estimated in a one-level fixed-effects regression model that controls for randomization blocks and other covariates. For outcomes reported as percentages, the treatment effect is expressed in percentage points. For scale outcomes, the treatment effect is expressed in the original metric of the outcome variable. Due to rounding, reported treatment effects may differ from differences between reported means for the treatment and control groups.

cThe "SES" is the standardized effect size of the difference. For outcomes that are not dichotomous or measured on a 0 to 100 scale, the SES is the "Treatment Effect" divided by the pooled standard deviation of the treatment and control groups.

d Scores represent the average percent of items answered correctly.

e This construct averages responses ranging from 1 to 4.

f Score represents the average percent of items agreed with.

g Dichotomous variables, reported as percentage of respondents who responded affirmatively.

** p <.05, ** p < .01, *** p < .001 (two-tailed tests).*

TABLE 5. LONGER-TERM EFFECTS OF *SSI* ON NON-BEHAVIORAL INTERMEDIATE OUTCOMES

Outcome	Adjusted Treatment Mean[a]	Unadjusted Control Mean	Treatment Effect[b]	SES[c]	*p*-value
Knowledge[d]					
Knowledge of pregnancy risk	77.47	78.03	-0.56		.651
Knowledge of STI risk	75.40	75.75	-0.35		.691
Attitudes					
Attitudes toward protection[e]	3.32	3.29	0.03	0.07	0.13
Attitudes toward risky behavior[f]	4.99	6.63	-1.64*		.028
Motivation[e]					
Motivation to delay childbearing	3.73	3.70	0.03	0.5	.319
Intentions (to engage in the following behaviors in the next 12 months) [g]					
Sexual intercourse	81.36	80.62	0.73		.686
Oral sex	69.66	70.84	-1.18		.562
Use birth control if they were to have sexual intercourse	89.45	88.51	0.94		.542
Use a condom if they were to have sexual intercourse	80.30	77.21	3.09		.124
Skills[e]					
Perceived refusal skills	3.44	3.36	0.07*	0.12	.019
Perceived condom negotiation skills	3.69	3.64	0.05*	0.10	.041

Source: Follow-up survey administered 18 months after baseline.

Notes: Results in this table are based on 1,805-1,815 respondents who provided valid survey responses to relevant items.

aThe treatment group mean is regression-adjusted, calculated as the sum of the control group mean and the regression adjusted impact estimate (treatment effect).

bThe treatment effect was estimated in a one-level fixed-effects regression model that controls for randomization blocks and other covariates. For outcomes reported as percentages, the treatment effect is expressed in percentage points. For scale outcomes, the treatment effect is expressed in the original metric of the outcome variable. Due to rounding, reported treatment effects may differ from differences between reported means for the treatment and control groups.

cThe "SES" is the standardized effect size of the difference. For outcomes that are not dichotomous or measured on a 0 to 100 scale, the SES is the "Treatment Effect" divided by the pooled standard deviation of the treatment and control groups.

d Scores represent the average percent of items answered correctly.

e Scale score averages responses ranging from 1 to 4. Higher scores indicate higher levels of the outcome.

f Score represents the average percentage of items agreed with.

g Dichotomous variables, reported as percentage of respondents who responded affirmatively.

** p< .05, ** p< .01, *** p<.001 (two-tailed tests).*

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