Sexual Risk Attitudes and Intentions of Youth Aged 12–14 Years: Survey Comparisons of Parent-Teen Prevention and Control Groups

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In this study, the authors compared differences in sexual risk attitudes and intentions for three groups of youth (experimental program, n = *90; attention control,* n = *80; and nonparticipant control,* n = *634) aged 12–14 years. Two student groups participated with their parents in programs focused on strengthening family interaction and prevention of sexual risks, HIV, and adolescent pregnancy. Surveys assessed students' attitudes and intentions regarding early sexual and other health-risk behaviors, family interactions, and perceived parental disapproval of risk behaviors. The authors used general linear modeling to compare results. The experimental prevention program differentiated the total scores of the 3 groups* ($p < .05$). *A similar result was obtained for student intentions to avoid sex* ($p < .01$). *Pairwise comparisons showed the experimental program group scored higher than the nonparticipant group on total scores* ($p < .01$) *and on students' intention to avoid sex* ($p < .01$). *The results suggest this novel educational program involving both parents and students offers a promising approach to HIV and teen pregnancy prevention.*
Index Terms: *adolescent pregnancy prevention, HIV/STD prevention*

Decreasing adolescent sexual behavior and its associated risks for unintended pregnancies and infection with Human Immunodeficiency Virus (HIV) and other sexually transmitted diseases (STDs) is a top priority in the national health objectives of the United States for 2010.[1] In 1998, the U.S. birth rate of 52.1 per 1,000 women aged 15–19 years was 4 times higher than the average rate among nations in the Organization for Economic Cooperation and Development. In 2001, 42.9% of high school women in the United States and 48.5% of high school men had ever had sexual intercourse.[2] One third (33.4%) of both male and female high school students reported being currently sexually active. Only 51.3% of sexually active female students and 65.1% of sexually active male students reported using a condom during their last sexual intercourse. Although there is a systematic increase by grade level in youth indicating they are currently sexually active (from 22.7% in grade 9 to 47.9% in grade 12), the percentage of sexually active youth reporting using a condom at last sexual intercourse shows decreases by grade level (from 67.5% in grade 9 to 49.3% in grade 12). Black students are more likely than Hispanic or White students to be sexually experienced, to have had more than 4 sexual partners during their teen years, and to be currently sexually active (45.6%, 35.9%, and 31.3%, respectively). Although Hispanic and White youth are less likely to be currently sexually active, they also are less likely to report use of a condom during last sexual intercourse (67.1%, 53.5%, and 56.8% for Black, Hispanic, and White youth, respectively).

These high rates of risk behavior actually represent important and statistically reliable improvements since

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1991. The percentage of high school youth reporting that they are currently sexually active is down from 37.4% in 1991 to 33.4% in 2001. And the percentage reporting they have ever had sexual intercourse is down from 54.1% in 1991 to 45.6% in 2001. Although applauding these improvements, the authors of the report from which the current data are taken[2] note that efforts to prevent sexual risk behaviors will need to be intensified to reach the targets set in the 2010 national health objectives[1] for reducing HIV infections, reducing other STD infections, and sustaining the encouraging decrease in pregnancy and birth rates among adolescents.

In the current article, we present results of a multisession prevention program for middle school youth together with their parents. We compared sexual risk intentions and attitudes of 3 groups of middle school youth: those who participated in the experimental social learning intervention for parents and children together (n = 92); those who participated with their parents in an attention control program that provided the same content as the experimental program but in traditional, didactic format (n = 83); and other students who did not participate in either of the prevention education programs (n = 674).

The experimental intervention had 5 key features:

Targeting youth in 6th, 7th, and 8th grades to increase the likelihood that prevention messages are reaching youth who have not yet made a sexual debut. It is not possible to demonstrate the program effects on postponing sexual involvement if participating youth already are sexually active. There also is some evidence to suggest that in the longterm, prevention messages may be more effective when they are delivered to younger, less sexually experienced youth.[3]

Providing comprehensive content on risks and protective measures for HIV, STDs, and unplanned pregnancy to address youth perceptions of differential risks for these events.[4] Evaluations of programs that emphasize abstinence, but also cover condom use and other contraceptive methods, have produced a large body of evidence indicating that the inclusion of information about birth control may increase condom use among sexually active youth, but does not increase the onset of sexual initiation, frequency of sexual intercourse, or the number of sexual partners.[5]

Focusing on family interaction to foster positive attitudes and increase youth access to on-going dialogue and guidance regarding responsible sexual behavior. Close, warm parent–child relationships are associated with postponement of sexual intercourse and with more consistent contraceptive use by sexually active teens.[6] Studies have shown that frequency of talking about a particular dimension of behavior, such as sexual behavior, is related to consistency of attitudes for that dimension.[7] Parental supervision and monitoring of children are other factors associated with delaying sexual involvement and with having fewer sexual partners.[8,9]

Engaging youth with their parents in small group settings to strengthen youth perceptions of social norms favoring responsible sexual behavior. In the current study, the involvement of parents was central to the prevention program. Interventions to involve parents often are offered as a voluntary addendum to programs for youth—for instance, offering special evening sessions to introduce parents to school-based programs, providing a video on sex education for parents to view at home, or giving youth homework assignments to complete with their parents.[3] In contrast, the current program provided equal amounts of engaged time for parents and students.

Providing "booster" sessions to reinforce prevention messages to maintain positive attitudes, intentions, and behaviors that reduce risk for adolescent pregnancy and exposure to HIV and other STDs. Although one of the programs identified in the CDC's Division of HIV/AIDS Prevention compendium of programs with evidence of effectiveness is a single 5-hour session, reviews of the research literature indicate that short-term curricula generally do not have a measurable impact on the behavior of teens.[5] Recommendations at the national level regarding effective practices for prevention of adolescent health risk behaviors indicate that the adequate dosage for school-based programs intended to prevent substance abuse is 10 to 15 hours of engaged time in Year 1 followed by another 10 to 15 hours of "booster" sessions in subsequent years.[10]

Expected outcomes during the first 12 months after youth participated with their parents in the experimental intervention were that youth would show more positive attitudes toward responsible sexual behavior, increase or maintain a high level of discourse with their parents about sexual and other risk behaviors, and express more definite intentions to postpone sexual involvement.

METHODS

Research Design

We compared outcomes for 6th, 7th, and 8th grade students whose attitudes and intentions were measured approximately 3 to 6 months after initiation of a joint parent–child prevention education program. The groups were 90 middle school male and female students who participated with their parents in an innovative social learning and teaching program (ie, the experimental program or EP group); 80

who were presented the same information but in a traditional, didactic format (ie, the attention control or AC group); and 634 other students who attended the same schools but did not participate in the experimental or attention control programs (ie, nonparticipant or NP group). The protocol was approved by the Institutional Review Board for the University of Texas Medical Branch at Galveston. We obtained active consent from parents and students.

A written survey provided measures of outcomes including: (1) expectancies regarding consequences; (2) attitudes about engaging in sexual risk behavior; (3) perceptions of parents' disapproval of the youth's involvement in sexual and other health risk behaviors; (4) intentions with regard to having sex; and (5) frequency of discourse with parents about sexual health topics. We compared outcomes for the 3 groups using general linear modeling, controlling for the students' preprogram scores and their age, race, gender, academic grades, and academic aspirations.

Experimental Procedure

We recruited parent–child dyads from 5 middle schools in 2 school districts in southeast Texas. The parents and teens participated in a 4-week series of prevention education sessions with each session spanning approximately 2.5 hours. Parents and students were in separate classes during the first half of the session and then met together for the second half of the session. We conducted maintenance or "booster" sessions once each school semester for the next 3 semesters. Approximately half of the 170 parent–child dyads were randomly assigned to participate in sessions implemented in accord with a curriculum that leverages social learning approaches for involving parents as teachers (EP). We assigned the remaining half of the parent–child dyads to condition AC (ie, they participated in sessions of the same length, on the same schedule, and covering the same information about adolescent health but in a traditional, didactic format). Approximately 4 to 8 parent–child dyads attended each session in the EP and the AC conditions. During the first 4 sessions, male students met separately from female students. The booster sessions included boys and girls together. All sessions were conducted on the school campuses and were facilitated by professionally trained counselors and health educators. Parents and children received small incentives (eg, gift certificates) and telephone and mail correspondence to encourage their full and continued participation.

Data Collection

Annually, beginning the year before the intervention was initiated, we asked all of the students at all 5 of the participating middle schools to complete a written survey administered during a special assembly at the school. Adapted from the National Youth Survey[11] and a survey developed by ETR Associates,[12] the 9-page, 94-item survey was divided into sections asking: What do your parents think? What do you think? What do you do? Do you talk with your parents? Students typically completed the survey in 30 to 45 minutes. We marked unique identifying codes on the survey forms so that records could be matched from year to year without disclosing individual identifying information.

Data Analysis

We constructed measures of variables that reflect theoretical underpinnings of the experimental curriculum from the survey responses in a series of item analyses. We recoded and combined items with similar response alternatives (eg, questions to which youth were asked to respond "high," "medium" or "low") within content domains (eg, youths' expectations regarding consequences of sexual health risk behavior) into a domain scale and tested for internal consistency. We accomplished recoding by setting a "cut point" for each item to separate desired from undesired outcomes. We scored desired outcomes as 1 and all other responses to the item as 0. Then, we calculated domain scores by averaging the item responses. These procedures produced 6 measures with Cronbach's alpha of .70 or greater on the pre- or postprogram survey. We conducted the preprogram survey 3 to 6 months before the intervention, and the postprogram survey was conducted 3 to 6 months after the intervention. The measures, description of characteristics of the items that make up each measure, and Cronbach's alpha coefficients for reliability are presented in Table 1.

We submitted each domain measure to separate regression analyses comparing the EP, AC, and NP groups. Covariates specified in the analyses were: preprogram score, age, race, gender, grades in school, and academic aspirations. We measured grades in school with a self-report multiple-choice item asking youths to indicate if they usually get mostly As and Bs or not. We measured academic aspiration with an item inquiring if the youth expects to attend college or not. We conducted analyses using software from the SAS Institute.[13]

RESULTS

Demographic Characteristics and Academic Aspirations of the Students

The sample of youth participating in this study included approximately equal numbers aged 11 to 12 years (46%) and 13 to 15 years (54%) when they completed the preprogram questionnaire. Approximately half (45%) were boys

TABLE 1. Cronbach's Alpha Coefficients for Reliability of the Domain Measures

Domain measure	Item characteristics	Test alpha Pre-	Test alpha Post-
Expectancies regarding consequences of sexual risk behaviors	2 items asking if chances are high, medium, or low of getting pregnant or getting HIV/AIDS if no condom is used during sexual intercourse	.74	.74
Attitudes about engaging in sexual risk behavior	14 Likert-type items asking about conditions under which it is acceptable to have sex	.76	.75
Perception of parents' disapproval of risk behaviors	6 items asking youth if parent(s) would approve/disapprove of youth having sex, failing in school, or using alcohol or other drugs	.65	.70
Discourse with parents about sexual health topics	5 items asking youth to indicate how often they talk with their parents about menstruation, pregnancy, teen parenting, birth control, and sexually transmitted diseases	.73	.78
Intentions with regard to having sex	2 true-false items asking if the youth would have sex now to feel accepted or to satisfy sexual feelings	.72	.68
Total score	77 items (94 total items minus 17 demographic and control items)	.82	.81

and half (55%) were girls. The majority (64%) were youth of color with 26% describing themselves as Black or African American, 38% as Hispanic/Latino/Mexican, 26% as White non-Hispanic, and 10% as other, including Vietnamese and mixed heritage. All of the youth were in grades 6, 7, or 8 at the time they completed the preprogram survey. The majority (57%) reported their grades in school were mostly As and Bs. The vast majority (86%) indicated they expect to attend college. The characteristics of the youth in the EP, AC, and NP groups were generally comparable, as is illustrated in Table 2.

Domain Intercorrelations

We inspected the results of the regression analyses of the postprogram outcome measures constructed from the students' survey responses to evaluate a priori hypotheses about how parents may influence youth risk behavior. From the theory of reasoned action and/or planned behavior,[14,15] we hypothesized that students' attitudes toward risk behavior and their expectancies regarding consequences of risk behavior would be correlated with expressed intentions to have sex. Results displayed in Table 3 show that attitudes had a robust correlation with the intentions domain (r = .59). Contrary to expectation, the correlation of expectancies and intentions was negligible (r = .02), as was the correlation of expectancies and attitudes (r = .02).

Because parents' attitudes and behaviors are key variables in social norms that influence children's behaviors, we hypothesized from the theory of reasoned action and/or planned behavior, that students who have more discourse with their parents about sexual health and who perceive their parents to be disapproving of their involvement in risky behaviors would be more likely to plan to avoid sexual risk behavior. We obtained a moderate intercorrelation for parental disapproval and youth attitudes (r = .29). The intercorrelation of parent disapproval of the youth's involvement in risk behavior and youth intentions to engage in sexual risk behavior was low, but notable (r = .19). Contrary to expectation, however, intercorrelations of parent discourse with youth attitudes, expectancies, and intentions domains were low (ie, correlation coefficients were less than .11).

Effects of the Intervention on Youths' Attitudes and Intentions Regarding Risk Behavior

We modeled age, race, gender, academic success, academic aspirations, and experimental condition (entered as class variables) along with preprogram scores to predict the postprogram total score. The results are presented in Table 4. The experimental condition made a significant contribution in the prediction of the postprogram total score. Youth that participated in the parent-involved social learning curriculum (EP) had a higher postprogram total score.

TABLE 2. Characteristics of the Three Groups of Youth at Pretest

Characteristic	Experimental program (n = 90, %)	Attention control (n = 80, %)	Nonparticipant control (n = 634, %)
Age, y			
11–12	48	51	45
13–15	52	49	55
Gender			
Female	55	58	54
Male	45	42	46
Heritage			
African American	27	31	26
Hispanic	43	28	38
Caucasian	17	31	26
Other	11	10	10
Aspiration			
Expect to attend college	83	88	87
Do NOT expect to attend college	17	13	13
Grades			
Mostly As and Bs	53	60	57
Mostly lower than As and Bs	47	40	43

TABLE 3. Domain Intercorrelations Measured in the Postprogram Survey

Domain measure	Intentions with regard to having sex	Expectancies regarding consequences of sexual risk behaviors	Attitudes about engaging in sexual risk behaviors	Perceptions of parent(s)'s disapproval of risk behaviors
Discourse with parents about sexual health topics	.10	.04	.10	.04
Perception of parent(s)'s disapproval of risk behaviors	.19	.08	.29	
Attitudes about engaging in sexual risk behavior	.59	.02		
Expectancies regarding consequences of sexual risk behaviors	.02			

Note. Because of missing values, these analyses used records for 632 to 649 youth.

Gender and academic aspirations also made significant contributions to the linear model for predicting the postprogram survey total score. Higher scores were associated with having high aspirations and with being a female participant. Neither age nor race and/or heritage made significant contributions in the prediction of the total score.

We also modeled age, race, gender, academic success, academic aspirations, and experimental condition (entered as class variables) along with preprogram scores to predict postprogram domain scores. Table 5 displays the significant F values obtained in these sets of analyses. As indicated in Table 5, age and gender made significant contributions in the prediction of attitudes. Youth aged 11–12 years obtained higher post-program scores in this domain than youth aged 13–14 years, and female subjects obtained higher scores than male subjects. Gender also made a significant contribution in the prediction of postprogram scores in discourse and intentions domains: male subjects talked less with their parents about sexual health topics, and male subjects expressed less definite intentions to postpone sexual involvement.

Table 5 also shows that race or heritage made a significant contribution in the prediction of postprogram domain

TABLE 4. Results of Linear Model With Postprogram Survey Total Score as the Dependent Variable

Predictor	β weight	*SE*	*t*	*p*
Preprogram score	.52	.04	13.95	< .001
Age 11–12	.03	.02	1.34	NS
Age 13–14	0			
Nonparticipants	–.03	.01	–2.79	< .01
Attention-control (AC)	–.02	.02	–1.06	NS
Experimental program (EP)	0			
Male	–.05	.01	–6.04	< .001
Female	0			
African American	.01	.02	.36	NS
Hispanic/Latino(a)	.02	.01	1.40	NS
White, non-Hispanic	.01	.02	.91	NS
Other	0			
Grades lower than As and Bs	–.02	.00	–1.85	NS
Grades mostly As and Bs	0			
Does not expect to go to college	–.08	.03	–2.99	< .01
Expects to go to college	0			
$R^2 = 0.37$, $F(10, 570) = 32.83$				< .001

Note. Because of missing values, the general linear modeling procedure used records for 571 youth for this analysis.

TABLE 5. Significant *F* Values for Linear Models With Postprogram Domain Scores as Dependent Variables

Variable	Expectancies regarding consequences of sexual risk behaviors (536)	Attitudes about engaging in sexual risk behaviors (786)	Perceptions of parent(s)'s disapproval of risk behaviors (560)	Discourse with parents about sexual health topics (557)	Intentions with regard to having sex (553)	Total score (560)
Age (1)		188.85***				
Gender (1)		9.92*		7.91**	19.09**	36.46***
Heritage (3)	4.41**			4.21**		
Grades (1)			4.28*			
Aspiration (1)			31.23***	5.68*		8.95**
Program (2)					4.94**	4.34*

Note. Numbers in parentheses are degrees of freedom.
*$p < .05$. **$p < .01$. ***$p < .001$.

scores for expectancies and for discourse. Black and Hispanic youth expected less negative consequences as a result of having sex. Hispanic youth and youth with higher academic aspirations talked more with their parent(s) about sex and other risky behaviors. Academic aspirations and academic success made significant contributions in the prediction of perception of parental disapproval of risky behaviors. Youth with better grades and higher academic aspirations perceived more parental disapproval of risky behaviors.

The experimental condition made significant contributions in prediction of the postprogram domain score for intentions with regard to having sex, as shown in Table 6. Youth that participated in the parent-involved social learning

TABLE 6. Results of Linear Model With Postprogram Survey Domain Score for Intentions in Regard to Having Sex as the Dependent Variable

Predictor	β weight	*SE*	*t*	*p*
Preprogram score	.52	.04	12.51	< .001
Aged 11–12	.04	.06	.62	NS
Aged 13–14	0			
Nonparticipants	−.12	.04	−3.09	< .01
Attention-control (AC)	−.08	.05	−1.57	NS
Experimental program (EP)	0			
Male	−.11	.03	−4.37	< .001
Female	0			
African American	.04	.05	.92	NS
Hispanic/Latino(a)	.07	.05	1.49	NS
White, non-Hispanic	.06	.05	1.20	NS
Other	0			
Grades lower than As and Bs	−.05	.03	−1.78	NS
Grades mostly As and Bs	0			
Does not expect to go to college	−.09	.09	−1.06	NS
Expects to go to college	0			
$R^2 = 0.30$, $F(10, 563) = 35.21$				< .001

Note. Because of missing values, the general linear modeling procedure used 564 records in this analysis.

curriculum (EP) expressed more definite intentions to postpone sexual involvement.

COMMENT

In this study we tested the hypothesis that, compared with AC and NP groups, young adolescents in the EP group would express more positive attitudes toward responsible sexual behavior and more definite intentions to postpone sexual involvement. The analyses controlled for preprogram scores, age, gender, race and/or heritage, and academic success and aspirations. The results provided support for the hypothesis. Measured approximately 1 year after program initiation, we found that intentions to postpone sex were more firmly expressed by youth in the EP group than by those in the NP group. Although the experimental program did not show statistically significant differences for the other domain scores that were evaluated—expectancies regarding consequences of risky sexual behavior, attitudes toward risk behaviors, perceptions of parents' disapproval of the youth's involvement in risk behaviors, and discourse with parents about sexual and other risk behaviors—the total score calculated across domains indicated that the experimental program had the effect of helping young adolescents become less disposed to sexual risktaking.

The current set of analyses also provided an opportunity to explore the usefulness of a program based on the theory of reasoned action and/or planned behavior. The results demonstrated a robust correlation of youths' attitudes about sexual risk behaviors and their intentions with regard to having sex. Similarly, there was substantial correlation of youths' perceptions of their parents' disapproval of the youth's involvement in risk behaviors and youths' own attitudes toward risk behaviors. Contrary to expectations, based on the theory of reasoned action and/or planned behavior, scores indicative of how often and how broadly youth talked with their parents about risk behaviors were not related to youths' attitudes about risk behaviors, their intentions regarding sex, or their perceptions of parental disapproval of their involvement in risk behavior. Nor did the program demonstrate a measurable effect on the extent to which youth talked with their parents. These results are notable because the experimental intervention (1) was designed to focus on family interaction, (2) actually brought parents and children together in the learning and teaching sessions, and (3) showed positive effects on youths' intentions and their overall disposition toward sexual risk taking.

In 1997, when The National Campaign to Prevent Teen Pregnancy published *No Easy Answers: Research Findings on Programs to Reduce Teen Pregnancy,*[16] most studies assessing the impact of programs to reduce sexual risktaking among adolescents were described as either failing to measure or to find a sustained long-term impact on behavior. The

development of reliable recommendations for reducing risk and promoting responsible sexual behavior among adolescents was further complicated by the plethora of factors shown to be associated with sexual risk taking. A review of 250 studies conducted prior to 1997 identified more than 100 precursors or "antecedents" to early teen sexual intercourse, poor contraceptive use, pregnancy, and childbearing.[16] In the face of this complexity and in the absence of compelling evidence regarding what constitutes an effective intervention protocol, the National Campaign[17] and the US Department of Health and Human Services[18] recommended additional research regarding "promising approaches" that included sexuality education for teens and the provision of resources for parents to support their efforts in educating their children about sexuality, abstinence, contraception, HIV/AIDS, other sexually transmitted diseases, and how alcohol and drug use can affect responsible decision making.

Another more recent review of research findings on programs to reduce teen pregnancy indicated more positive results.[5] The reviewer noted that, "rigorous studies of some sex and HIV education programs have found sustained positive effects on behavior for as long as three years . . .[and that] there is emerging evidence that some shorter, more modest clinic interventions involving educational materials coupled with one-to-one counseling may increase contraceptive use."[5(pvi)] But the documented evidence base for prevention protocols remains scarce. Another reviewer of programs to prevent adolescent pregnancy, for example, identified 30 "promising" programs, but offered the caveat that "effects of these programs have, for the most part, been modest and have been demonstrated on . . . a single site with . . . a single group of teens."[19(p279)]

The Centers for Disease Control (CDC) Guide to Community Preventive Services[20] indicates that, as of April 2003, systematic review of evidence of effectiveness regarding selected population-based interventions for prevention of HIV, STD, and unintended pregnancy is "in progress." The compendium of programs listed by the CDC Division of HIV/AIDS Prevention[21] identifies 6 interventions with evidence of effectiveness for school-aged youth. One is a small-group counseling program for incarcerated male adolescent drug users.[22] Another is a multisession program for runaway and homeless youth.[23] *Be Proud! Be Responsible!* is a single, 5-hour Saturday morning session for Black high school–age adolescents.[24] *Becoming a Responsible Teen* is a multisession small group program for Black high school-age youth designed for presentation in local health centers or other community-based settings.[25] Two of the interventions—*Reducing the Risk*[26] and *Get Real About AIDS*[27]—are multisession school-based programs for high school youth.

Results of the current research suggest that additional studies to help expand this list of programs "that work" should investigate the extent to which results of prevention programs are improved when the program is targeted to parent–child dyads. Previous research suggests that there is no simple, robust relationship between parent–adolescent communication about sexuality and delay in the onset of intercourse—studies have had conflicting results.[8] A hypothesis for exploration in future research is the possibility that young adolescents talk with their parents about risk behavior only when the youth's behavior has gotten them into some predicament that forces discussion between parent and child. Another possibility is that more talk about risks and protections may have a normalizing effect in the youths' perceptions of risk behavior. This possibility is suggested in results of the current study showing Hispanic youth talking more with their parents about risk behavior, but expressing less expectation of negative consequences of engaging in sexual risk behavior. This result is similar to findings reported in a recent study of perceived positive consequences of teenage childbearing in an urban sample of female adolescents.[28] Higher scores on the perceived positive consequences scale were associated with increased risk of sexual intercourse and unprotected sexual intercourse; higher scores also were found among girls who were Latino, who had low parental monitoring, and who had good communication with their parents.

Additional concerns about the nature of parent–child communication regarding risk behavior is indicated in other research showing that strong prohibitions against sex outside of marriage can have protective effects in preventing HIV, STD, and unplanned pregnancy during adolescence,[29,30] but parental control also can be associated with negative effects if it is excessive or coercive.[31] Heavy emphasis on sexual restraint and modesty also can inhibit family discussion about sexuality and perhaps contribute to adolescent reluctance to seek sexual and reproductive health care.[8] Some studies have found no relationships between parental control and/or regulation and adolescent risk behaviors, but others indicate that parental monitoring and supervision of adolescents' social activities is associated with delayed sexual initiation or less risky sexual behavior.[8] There clearly is a need for additional research to identify ways to marshall, nurture, and work in concert with parental influences to reduce adolescent health risks.

In summary, results of the current study suggest that a highly interactive, social learning and teaching program that engages parent–child dyads in prevention education during the child's early adolescence offers a promising approach for reducing risks for HIV, STDs, and unplanned

teen pregnancy. The current results also suggest additional hypotheses to be explored in future studies.

NOTE

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