Sex Roles (2006) 54: 615–625
DOI 10.1007/s11199-006-9028-9

ORIGINAL ARTICLE

Personal Control, Self-Efficacy in Sexual Negotiation, and Contraceptive Risk among Adolescents: The Role of Gender

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Published online: 13 October 2006

Abstract Adolescents' sexual decision making is shaped by normative ideas about "appropriate" sexual roles for women and men; consequently, the motivation and ability to engage in safer sex may be different for adolescent girls and boys. The aim of this study was to explore how social–psychological resources influence the behavior of girls and boys within the highly gendered and inequitable domain of sexual relationships. I used data from the National Longitudinal Study of Adolescent Health (Add Health) to examine whether personal control and self-efficacy in sexual negotiation are associated with contraceptive risk (engaging in sexual intercourse or not using condoms) among adolescents and whether these associations differ for adolescent boys and girls. Results indicate that personal control and self-efficacy in sexual negotiation are significantly associated with safer sex behavior, and are often more important for girls than for boys in predicting contraceptive risk.

Keywords Adolescent sexual behavior · Gender · Condom use · Personal control · Self-efficacy

This research was funded by grants from the National Institute of Child Health and Human Development under grant R01 HD40428-02 to the Population Research Center, University of Texas at Austin, Chandra Muller (PI), and from the National Science Foundation under grant REC-0126167 to the Population Research Center, University of Texas at Austin, Chandra Muller (PI). This research is based on data from the Add Health project, a program project designed by J. Richard Udry (PI) and Peter Bearman, and funded by grant P01-HD31921 from the National Institute of Child Health and Human Development to the Carolina Population Center, University of North Carolina at Chapel Hill. Persons interested in obtaining data files from Add Health should contact Add Health, Carolina Population Center, 123 W. Franklin Street, Chapel Hill, NC 27516-2524 (addhealth@unc.edu). Opinions reflect those of the author and do not necessarily reflect those of the granting agencies.

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Introduction

Sexual choices faced during adolescence can shape young people's well-being, as well as their future experiences, and this sexual decision making is shaped by gender socialization and norms of "appropriate" femininity and masculinity. As normative ideas about suitable sexual roles for men and women shape the power distribution within sexual relationships, adolescent girls may find it especially difficult to voice their own concerns and demands (Martin, 1996; Tolman, 1994). They may feel unable to assert power within sexual relationships or to initiate discussions about safer sex with their partners. In addition, they may feel pressure to take a passive role and to submit to their partners' wishes to engage in sex or not to use condoms. This is especially problematic as women have a higher stake in the outcome of sexual intercourse: if pregnancy occurs, they bear the heavier burden. Therefore, the ability and motivation to engage in safer sex may be different for girls and for boys.

A sense of personal control may be an important means of empowerment for young people in making sexual choices. Personal control is the sense that outcomes are the results of one's actions rather than the consequences of luck or chance. People who have a high sense of personal control believe that they can master and shape their own lives. Adolescents who believe in the efficacy of their own

actions may be more likely than those who do not to abstain from sex or to use condoms. Previous research suggests a link between personal control and sexual decision making (Brien & Thombs, 1994; Goh, Primavera, & Bartalini, 1996; Gomez & Marin, 1996; Levinson, 1986, 1995; Levinson, Wan, & Beamer, 1998; Lewis, Ross, & Mirowsky, 1999; Soler et al., 2000), but researchers have tended to ignore how young people's sexual choices are shaped by normative beliefs about men's and women's sexuality and the fact that there is an unequal power distribution within sexual relationships.

The impact of personal control on contraceptive risk taking may differ for adolescent girls and boys. Girls with a high sense of personal control may be more likely than other girls to negotiate effectively within sexual relationships. Boys, on the other hand, generally experience more control in sexual situations as well as feel the ability to make demands and express wishes (Gutierrez, Oh, & Gillmore, 2000; Tschann, Adler, Millstein, Gurvey, & Ellen, 2002), so a sense of self-efficacy may not always be necessary for them to take an active role in determining contraceptive risk. Furthermore, pregnancy does not have as high a cost for boys as it does for girls, and some adolescent boys may in fact see pregnancy as enhancing their masculinity (Marsiglio, 1993; Pleck, Sonenstein, & Ku, 1993). Accordingly, boys may not consider contraceptive use an important health behavior. In the present study, I employed data from the National Longitudinal Study of Adolescent Health (Udry, 2003) to examine whether overall personal control and self-efficacy in sexual negotiation are associated with contraceptive risk (engaging in sexual intercourse or not using condoms) and whether these associations differ for adolescent boys and girls.

Sex, Contraception, and Gender

Recent research has shown that male and female adolescents are becoming more similar in their sexual behavior (including timing of sexual debut and recency of sex) (De Gaston, Weed, & Jensen, 1996; Santelli, Lindberg, Abma, McNeely, & Resnick, 2000; Terry & Manlove, 2000). However, the meaning of sexual intercourse may not be the same for boys and girls. Adolescent girls report significantly less satisfaction with their first sexual experience than do boys (Thomson & Holland, 1998), and they are more likely to regret initiating sexual intercourse (De Gaston, Jensen, & Weed, 1995). What is the source of the regret and dissatisfaction often experienced by adolescent girls? Individual sexual experiences and relationships are shaped by larger cultural beliefs about gender and sexuality. Normative ideas about masculinity and femininity as well as wider gender inequality shape the roles and power distribution within sexual relationships (Amaro, 1995). This impacts the ability of girls to voice their sexual desires, to make demands within sexual relationships, and even to refuse unwanted sexual contact (Bowleg, Belgrave, & Reisen, 2000; Kaplan, 1997; Luker, 1996; Moore & Rosenthal, 1993; Phillips, 2000; Thomson & Holland, 1998; Tolman, 1994).

Phillips (2000) and Gavey, McPhillips, and Doherty (2001) argued that dominant discourses about women's and men's sexuality shape the sexual experiences and behaviors of individual women. Some of the young women in those studies described "giving in" to sexual advances, even when those advances were unwanted and not pleasurable. Some of the young women thought that if they allowed any sexual contact with a young man, they were obligated to "go all the way." A belief in the strong and uncontrollable nature of men's sexual desires may create feelings of powerlessness among young women in sexual encounters (Phillips, 2000). Indeed, many adolescent girls report that their first intercourse was unwanted (Alan Guttmacher Institute, 1999).

It is important to keep in mind that young women do experience sexual desire and pleasurable sexual experiences, but cultural beliefs about women's sexuality deny them sexual subjectivity, and this influences their individual encounters. Norms of "appropriate femininity" limit women's sexual desire and agency, thus hindering their ability to initiate discussions about sex or contraception with their partners (Luker, 1996). Women and girls may feel uncomfortable expressing their sexual wishes or taking initiative in sexual situations (Moore & Rosenthal, 1993). There is tremendous pressure for female adolescents to be "nice girls"—passive, modest, and sexually inexperienced (Kaplan, 1997; Luker, 1996; Phillips, 2000). A girl who has contraception available has anticipated sexual activity, and is presumed to be "looking for sex." Consequently, spontaneous sex may seem especially attractive to girls as it removes the need for discussions about sex and therefore the admission of sexual agency (Thomson & Holland, 1998). However, spontaneous sex implies the absence of planning, which may lead to unprotected intercourse. Unsafe sex can, of course, have significant long-term consequences for adolescent girls.

Gender ideology also shapes the sexual behavior and encounters of young men. Engaging in sexual behavior reinforces masculinity, and adolescent boys generally gain status and affirmation from sexual experience (Martin, 1996; Thomson & Holland, 1998). The "appropriate" sexual role for men is that of the aggressor and active partner (Campbell, 1995; Martin, 1996), thus men experience greater power within sexual relationships. Furthermore, dominant beliefs about men's sexuality in many ways discourage safer sex practices by connecting masculinity with sexual performance and virility. Condoms are believed to interfere with pleasure and performance (Campbell, 1995; Thomson &

Holland, 1998), so young men may not be motivated to use them. Indeed, adolescent boys who hold traditional attitudes about men's roles are more likely to see girls as responsible for contraception, as well as more likely to believe that pregnancy validates masculinity (Pleck et al., 1993). Furthermore, these beliefs are associated with reduced intent to use condoms (Pleck, Sonenstein, & Ku, 1990) and with lower, and less consistent, condom use (Pleck et al., 1993). These beliefs make it more difficult for girls to protect themselves against unwanted pregnancy and sexually transmitted infections.

Personal Control

A sense of personal control may be an important resource for young people in their sexual decision making. This generalized expectation about one's causal agency is learned through experience and social interaction, and is modified slowly over time (Gecas, 1989; Mirowsky & Ross, 2003a; Ross & Sastry, 1999; Wheaton, 1980). Self-efficacy is a concept similar to personal control that refers to people's assessment of their ability to achieve a desired effect through their actions (Bandura, 2001) or their "effectiveness, competence, and causal agency" (Gecas, 1989, p. 292). The concepts of personal control and self-efficacy have many variations, including analogous concepts of internal locus of control, personal mastery, and instrumentalism (Ross & Sastry, 1999; Umberson, 1993). Throughout this article, I use the term personal or perceived control to refer to the concept described by all of these terms—a generalized expectation about one's causal agency and mastery. I use the term self-efficacy in sexual negotiation or sexual self-efficacy to refer to a sense of efficaciousness specific to the sexual domain.

Previous research has shown that women feel significantly less personal control and self-efficacy than men do (Lewis et al., 1999; Mirowsky & Ross, 1983; Thoits, 1987; Umberson, 1993; Umberson, Anderson, Glick, & Shapiro, 1998), but we do not know whether personal control impacts men's and women's behavior in similar ways. Such knowledge is especially relevant for the sexual realm where, despite greater equality in other domains, women's roles remain considerably constrained. The present study concerns how a sense of control influences behavior within situations that are powerfully gendered.

Personal Control and Contraceptive Risk

People who believe in the efficacy of their own actions are more likely to engage in health-promoting behaviors (Bandura, 2004; Mirowsky & Ross, 2003b; Seeman & Seeman, 1983); therefore, it follows that personal control should also be related to contraceptive use and the practice of safer sex. Several studies have indeed demonstrated a connection between contraceptive use and personal control or contraceptive self-efficacy among adults (Gomez & Marin, 1996; Soler et al., 2000), adolescents, and college students (Brien & Thombs, 1994; Goh et al., 1996; Levinson, 1986; Levinson et al., 1998). Lewis and colleagues (1999) found that young women who experienced a nonmarital pregnancy had lower levels of personal control, but the experience of this pregnancy did not seem to suppress their later development of a sense of control in adulthood. This suggests that nonmarital pregnancy was the result, rather than the cause, of a low sense of personal control. In addition, Levinson (1986, 1998) observed that various measures of contraceptive self-efficacy were related to contraceptive use by adolescent girls. In a study of a small sample of New York adolescents, Goh and colleagues (1996) found that a sense of self-efficacy in AIDS prevention was significantly correlated with condom use and number of sexual partners. Self-efficacy was also positively related to these young people's intentions to engage in AIDS preventive behaviors, including abstaining from sex, using condoms during intercourse, and avoiding intravenous drug use. Gomez and Marin (1996) and Soler and colleagues (2000) also found that adult women's condom-related self-efficacy was positively associated with their use of condoms.

These studies demonstrate that a sense of personal control and sexual self-efficacy influence young people's sexual choices; however, these researchers do not explore how these resources might differently influence men's and women's sexual decision making. Furthermore, many of these studies neglect how young people's sexual choices are shaped by gender. Amaro (1995) argued that gender roles, cultural values, and social norms impact women's and men's sexual behaviors and relationships and that existing models of sexual decision making fail to consider the social context of sexuality. Young women continue to experience their expression of sexual agency as constrained, and the sexual realm remains highly gendered and inequitable; therefore, the motivation and ability to engage in safer sex is likely very different for adolescent girls and boys. In order to understand more fully how a sense of personal control empowers young people to avoid contraceptive risk, we must examine whether the impact of personal control and self-efficacy in sexual negotiation on contraceptive risk differs for girls and boys.

The Current Study

In this study, I explore the role gender plays in the links between personal control, self-efficacy, and contraceptive risk. Adolescent girls who have a high sense of personal control and self-efficacy in sexual negotiation may feel

more comfortable taking an active, rather than a passive, role in sexual situations. These girls may feel a greater ability to refuse unwanted sex or to initiate discussions about safer sex and to negotiate with their partners to protect themselves from pregnancy and sexually transmitted diseases. In addition, because adolescent boys, in general, feel a greater sense of personal control and experience greater power within sexual situations, personal control and self-efficacy in sexual negotiation may be especially important for girls in determining their ability to assert control within sexual situations and to negotiate effectively for safer sex.

Most of the studies of personal control and sexual behavior examined the effect of a domain-specific form of self-efficacy, rather than a generalized expectation of personal control. In the current study, I used both a general measure of personal control and a domain-specific measure of self-efficacy particular to contraception. In addition, with the exception of that done by Lewis and colleagues (1999), previous studies were based on small convenience or clinical samples. Gomez and Marin (1996) used a larger random sample, but their analysis was restricted to Latina and non-Latina White women. Thus, we do not know if the results of previous studies are generalizable.

The above review of related research led me to two primary research questions and related hypotheses. First, do adolescents with a greater sense of personal control and self-efficacy in sexual negotiation engage in less contraceptive risk than adolescents who lack these social–psychological resources? I predicted that adolescents with an increased sense of general personal control and self-efficacy in sexual negotiation would be less likely to have sexual intercourse and, if they did have sex, more likely to use a condom. Second, I examined whether these resources are more important for girls in predicting contraceptive risk. I expected that personal control and self-efficacy in sexual negotiation would be more important for girls than for boys in determining contraceptive risk.

Method

Sample

This study employs data from the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative, school-based study of 20,745 seventh to twelfth grade students from 80 high schools and their feeder middle schools that includes data on adolescents' health-related behaviors. Students were selected from these schools to participate in in-home interviews that were conducted in 1995 (Wave I) and 1996 (Wave II). Interviews of students' parents, preferably the resident mothers, were also completed during the Wave I data collection effort (n = 17,700).

The present analysis was confined to those students who completed Wave I and Wave II in-home interviews and those who reported the month and year of their most recent sexual intercourse (or reported that they had never had sex). This sample, therefore, included both nonvirgins as well as respondents who indicated that they were virgins at Wave I. In addition, in order to retain national representativeness, this sample only included respondents with a valid sampling weight. Younger adolescents were also excluded from the analysis as questions that dealt with sexual self-efficacy were only asked of those adolescents who were age 15 or older. The final number of respondents in the first stage of analysis was n = 8,589. In the second stage of analysis, I examined only those adolescents who reported having had sex between Wave I and Wave II and who reported contraceptive use at their most recent intercourse. The final number of cases in that analysis was n = 3,572. Descriptive statistics for the entire Add Health sample and for the two samples used in this study are presented in the Appendix.

The Add Health data set is appropriate for this study for several reasons. It includes extensive data on adolescents' sexual and contraceptive behaviors as well as information about adolescents' feelings of personal control and self-efficacy in sexual negotiation. For questions on sexual activity and contraception, a unique interview technique was employed in which respondents listened through earphones to pre-recorded questions and entered the questions directly onto a laptop computer, thus minimizing interviewer and parental influence and increasing confidence in the responses. In addition, the Add Health data are nationally representative and longitudinal; therefore, this study can bolster and corroborate previous research that examined personal control with small samples of adolescents.

Measures

Outcome variables—contraceptive risk The first outcome variable measured whether a respondent engaged in sexual intercourse between Waves I and II. The respondent was asked at Wave II to report the month and year of the most recent time he or she had had sexual intercourse. The month and year in which the Wave I interview took place was also reported. If the most recent intercourse occurred after the Wave I interview, sexual intercourse was coded as 1 (otherwise, intercourse = 0).

The second outcome variable was the condom use of those respondents who did engage in sexual intercourse between Waves I and II. As I was interested in negotiation within sexual encounters, I looked at condom use only rather than at all forms of birth control. Oral contraceptives and similar forms of birth control (Norplant, Depo Provera) do not require cooperation from a girl's male partner or

Table 1 Descriptive statistics for the total sample (weighted).

	Mean or Proportion (Standard Deviation)		
	Total sample	Boys	Girls
Dependent variables			
Had sex between Waves I and II†	0.504	0.490	0.518
Used condom at last intercourse† (N = 3,572)	0.676	0.704	0.647
Independent variables			
Sex/gender			
Boys	0.501		
Girls	0.499		
Racial/ethnic identity †			
Non-Latino/a White	0.645	0.641	0.649
Non-Latino/a Black	0.158	0.151	0.165
Latino/a	0.125	0.132	0.119
Asian	0.042	0.043	0.041
Other	0.029	0.033	0.026
Age*	16.629 (1.051)	16.691 (1.096)	16.566 (1.004)
Time between interviews	10.928 (1.716)	10.903 (1.774)	10.952 (1.659)
Socioeconomic status			
Family income	46.732 (45.797)	47.094 (48.668)	46.368 (42.887)
Parent's education	2.799 (1.254)	2.822 (1.265)	2.777 (1.243)
Perception of risk*	3.465 (1.058)	3.329 (1.082)	3.601 (1.018)
Personal control*	3.888 (.869)	3.925 (.851)	3.851 (.883)
Self-efficacy in sexual negotiation*	4.203 (1.146)	3.961 (1.238)	4.447 (.995)
N	8,589	4,190	4,399

Source: National Longitudinal Study of Adolescent Health.
* t-test indicates that the mean for girls is significantly different from the mean for boys ($p < 0.05$).
† Chi-square test indicates that the variable is significantly associated with gender ($p < 0.05$).

even his awareness that she is using them. In addition, adolescents have an especially high risk of sexually transmitted infections (National Center for HIV, 2001), and condoms are the only form of contraception that effectively protects against both pregnancy and STIs. Finally, the large majority (approximately 85%) of the adolescents in the sample who reported using contraception at most recent intercourse listed condoms as one of the methods used. For these reasons, I excluded respondents who reported using other reliable forms of birth control (all methods except rhythm or withdrawal) (n = 408). Excluding these adolescents from analyses had no substantial impact on results.

Respondents were asked to indicate whether or not they (or their partner) used any method of birth control during their last intercourse, and were then asked to identify which method(s) was(were) used. Respondents who reported using a condom during their last intercourse were coded as 1. Those who reported using no method (or who used an unreliable method such as withdrawal or rhythm method) were coded as 0.

Personal control The measure of personal control used in this analysis was based on the degree to which a respondent agreed or disagreed with the following statement: "When you get what you want, it's usually because you worked hard for it." Responses were coded from 1 (strongly disagree) to 5 (strongly agree).

Self-efficacy in sexual negotiation Self-efficacy in sexual negotiation was measured using a question from Wave I that asked the respondent: "How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?" Responses were coded from 1 (very unsure) to 5 (very sure).

Control variables As previous research has shown that people of different racial and ethnic identities have different levels of personal control (Gecas, 1989; Lewis et al., 1999; Ross & Mirowsky, 1989; Ross & Sastry, 1999; Umberson, 1993; Umberson et al., 1998), as well as different rates of condom use (Kahn, Rindfuss, & Guilkey, 1990), I controlled for the respondent's reported racial and ethnic identity (non-Latino/a White, non-Latino/a Black, Latino/a, Asian or Pacific Islander, and other). Socioeconomic status has also been linked to a person's perceived control (Mirowsky & Ross, 2003a, b; Umberson, 1993; Umberson et al., 1998; Wheaton, 1980); therefore, I controlled for the respondents'

family income and the highest education level of their parents. Family income was measured in thousands of dollars, and ranged from 0 to 999 thousand. Parents' highest level of education was taken from the parent questionnaire and indicates the highest level of education of both parents in the household. In the present study, I used the report from the resident parent with the higher education level. If the parent questionnaire was not administered (or if this variable was missing) I substituted the parent's education level given by the adolescent. Responses were coded: (1) less than high school; (2) high school graduation or equivalent; (3) some college; (4) college degree; and (5) professional training after college. Time between interviews was measured in months.

Finally, I also controlled for the adolescents' perceptions of their susceptibility to pregnancy and HIV. Young people's perceptions of risk may be related to the likelihood that they will have sex, or if they do, that they will use contraception (Steers, Elliott, Nemiro, Ditman, & Oskamp, 1996). The measure of risk perception in the present study was based on two questions that asked the respondent to indicate the probability of becoming pregnant if they were to have unprotected intercourse once and the probability of contracting the AIDS virus if they were to have unprotected intercourse for a month. These two questions were coded from 1 (almost no chance) to 5 (almost certain) and were averaged to form a single measure.

Analytic Plan

First, I performed bivariate analysis to examine whether there are significant gender differences in contraceptive risk, personal control, and self-efficacy in sexual negotiation. I then estimated multivariate logistic regression models in order to gauge the effects of personal control and self-efficacy in sexual negotiation on each dependent variable (sexual intercourse between Waves I and II and condom use at most recent sexual intercourse). The first model for each outcome included personal control, self-efficacy in sexual negotiation, and the control variables. In order to examine gender differences in the effects of personal control and self-efficacy in sexual negotiation on contraceptive risk, the second model for each dependent variable also included interactions between gender and the independent variables of interest. I used mean and mode substitution for missing cases on all independent variables, and included indicators of this substitution in the models. All analyses were weighted and took into account the clustered design of the sample.

Table 2 Coefficients from weighted logistic regression of having sex on personal control, self-efficacy in sexual negotiation, and gender.

	Model 1		Model 2	
	Coefficient	Odds ratio	Coefficient	Odds ratio
Girl	0.225	1.253**	0.899	2.456*
Racial/ethnic identity				
Non-Latino/a Black	0.504	1.655***	0.504	1.656***
Latino/a	−0.270	0.763	−0.271	0.762
Asian	−1.154	0.315***	−1.153	0.316***
Other	0.309	1.362	0.300	1.350
Age	0.403	1.497***	0.402	1.495***
Time between interviews	0.048	1.049*	0.049	1.050*
Socioeconomic status				
Family income	−0.003	0.997***	−0.003	0.997**
Parent's education	−0.167	0.846***	−0.167	0.846***
Perception of risk	−0.181	0.834***	−0.181	0.834***
Personal control	−0.146	0.864***	−0.025	0.975
Self-efficacy in sexual negotiation	−0.064	0.938*	−0.085	0.918*
Control*girl			−0.232	0.793***
Efficacy*girl			0.055	1.056
Intercept	−5.276		−5.665	
-2 LL	10,993.3220		10,973.1548	
F	$F(16, 112) = 28.85$		$F(18, 110) = 25.82$	
N		8,589		8,589

Source: National Longitudinal Study of Adolescent Health.
*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$.

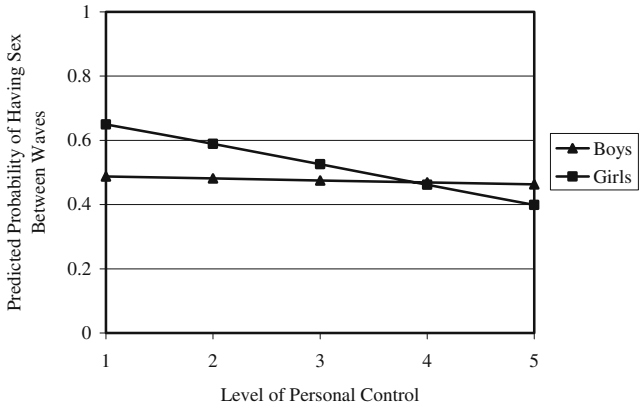

Fig. 1 Predicted probability of having sex by personal control and gender.

Results

Descriptive Analysis

Bivariate analyses revealed a number of gender differences in contraceptive risk, personal control, and self-efficacy in sexual negotiation. Table 1 indicates that girls engaged in higher levels of contraceptive risk than boys did. Girls were more likely to have had sex between Waves I and II and were less likely to have used a condom at their most recent intercourse. In addition, findings indicate that girls had lower levels of personal control than boys did; however, they also reported higher levels of self-efficacy in sexual negotiation and perceptions of risk of pregnancy and HIV.

Personal Control, Self-Efficacy in Sexual Negotiation, and Sexual Intercourse

I first examined whether adolescents with greater personal control and self-efficacy in sexual negotiation were less likely to engage in sexual intercourse. Model 1 of Table 2 indicates that personal control was significantly and negatively related to having had sexual intercourse between waves. An adolescent who reported a personal control level 1 point higher than another adolescent was approximately 14% less likely to have had sex between waves. A 1 point increase in reported self-efficacy decreased the odds that an adolescent would have sexual intercourse between Wave I and Wave II by about 6%.

Next I considered whether the impact of personal control and self-efficacy in sexual negotiation differed for girls and boys. Model 2 of Table 2 presents the estimated effects of the independent variables on the odds of having had sex when the two gender interactions were introduced. There was a significant and negative interaction between gender and personal control, which suggests that the negative relationship between personal control and sexual intercourse is stronger for female than for male adolescents. This interaction is represented in Fig. 1, which illustrates

Table 3 Coefficients from weighted logistic regression of condom use on personal control, self-efficacy in sexual negotiation, and gender.

	Model 1		Model 2	
	Coefficient	Odds ratio	Coefficient	Odds ratio
Girl	−0.336	0.715**	−0.281	0.755
Racial/ethnic identity				
Non-Latino/a Black	0.319	1.376*	0.322	1.380*
Latino/a	−0.283	0.754	−0.283	0.754
Asian	−0.906	0.404**	−0.913	0.401**
Other	0.171	1.187	0.157	1.170
Age	−0.058	0.944	−0.060	0.942
Time between interviews	−0.016	0.985	−0.017	0.983
Socioeconomic status				
Family income	0.005	1.005	0.005	1.005
Parent's education	0.035	1.035	0.034	1.035
Perception of risk	0.112	1.119	0.110	1.116
Personal control	0.125	1.133*	0.216	1.242**
Self-efficacy in sexual negotiation	0.061	1.063	0.002	1.002
Control*girl			−0.171	0.843
Efficacy*girl			0.144	1.154*
Intercept	0.714		0.639	
-2 LL	4,379.1544		4,369.7088	
F	$F(16, 97) = 3.31$		$F(18, 95) = 3.35$	
N		3,572		3,572

Source: National Longitudinal Study of Adolescent Health.
*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$.

the predicted probabilities of having had sex between waves across levels of personal control separately for girls and boys. As seen in Fig. 1, personal control was not a predictor of sexual intercourse for adolescent boys. For girls, however, the probability of having had sex decreased from 0.65 for those with the lowest level of personal control to 0.40 for those with the highest level. The interaction between gender and self-efficacy in sexual negotiation was not significant, which suggests that feeling able to resist sex with a partner who does not want to use birth control is similarly associated with having had sex for both girls and boys.

Condom Use at Last Intercourse

Because a sense of control is also likely to be important in negotiating within a sexual encounter to protect oneself from unwanted outcomes, I next considered the use of condoms by those adolescents who did engage in sexual intercourse between Waves I and II. As indicated by Model 1 of Table 3, personal control was significantly and positively related to condom use at the time the adolescent most recently had had sexual intercourse. Adolescents with an increase in personal control of 1 point were approximately 13% more likely to use condoms than were those with a lower level of personal control. In addition, a 1 point increase in self-efficacy in sexual negotiation increased the odds that an adolescent would use condoms by about 6%, though this association was not statistically significant.

As shown in Model 2, there was a significant and positive interaction between self-efficacy in sexual negotiation and gender, which suggests that self-efficacy is positively associated with condom use for adolescent girls, but unrelated to adolescent boys' condom use. As seen in Fig. 2, girls with the highest level of self-efficacy in sexual negotiation had a 0.81 probability of using condoms, compared to a 0.70 probability for those with the lowest self-efficacy. Boys with high self-efficacy, however, were no more likely to use condoms than boys with low self-efficacy in sexual negotiation.

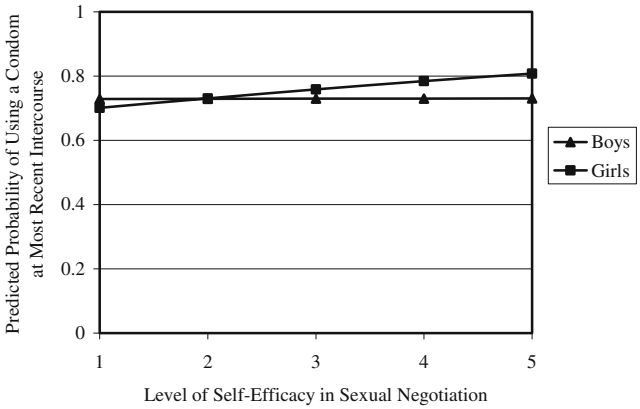

Fig. 2 Predicted probability of condom use by self-efficacy in sexual negotiation and gender.

Discussion

The purpose of the present study was to examine how social–psychological resources, such as personal control and self-efficacy in sexual negotiation, impact behavior in a highly gendered and inequitable domain: sexual relationships. Consistent with previous research (Brien & Thombs, 1994; Goh et al., 1996; Gomez & Marin, 1996; Levinson, 1986; Levinson et al., 1998; Lewis et al., 1999; Soler et al., 2000) and in support of the first hypothesis, findings indicate that personal control and self-efficacy in sexual negotiation are significantly related to safer sex behavior. Adolescents who felt a sense of control over their lives, both in general and in sexual situations, were more likely to abstain from sex or to use condoms if they did engage in sexual intercourse. A possible interpretation of this finding is that young people who believe that pregnancy or sexually transmitted infections are not the result of luck or chance but can be prevented by their own actions may make a greater effort to take precautions against them.

This study also demonstrates that these social–psychological resources impact girls' and boys' contraceptive risk behavior in different ways. Consistent with the second hypothesis, findings reveal that a sense of personal control and self-efficacy in sexual negotiation were more strongly related to contraceptive risk for adolescent girls than for boys. Strong cultural norms about "appropriate" sexual behavior for women may restrict girls' ability to express sexual agency and power. Pressures to be a "nice girl" may be especially strong during adolescence, and girls may find it difficult to take the initiative in sexual situations or to make necessary plans to protect themselves. In addition, dominant beliefs about men's sexuality may leave adolescent girls feeling powerless in sexual encounters and compel them to "give in" to unwanted sexual advances. For these reasons, a sense of personal control and self-efficacy in sexual negotiation is central in determining which girls will take an active role in protecting themselves from unwanted pregnancy and infection. On the other hand, engaging in sexual intercourse reaffirms masculinity, and, unlike girls, adolescent boys generally obtain status from sexual experience. Men also generally experience more control in sexual situations and feel able to make demands and express wishes. Accordingly, boys may be less likely to want to avoid sexual experiences than girls, and a sense of control may not distinguish boys who engage in sexual intercourse from those who do not.

Although a sense of self-efficacy in sexual negotiation may be more closely linked to condom use for girls than for

boys, personal control was equally predictive of condom use for both adolescent boys and girls. This may suggest that boys do in fact see condoms as important for protecting their health, which perhaps indicates that, for them, a sense of personal control impacts condom use as it does any other preventive health behavior. As condom use is in some ways inconsistent with dominant beliefs about men's sexuality, this finding may suggest that adolescent boys with a high sense of personal control may be more likely to engage in healthy behaviors even when they conflict with cultural messages about masculinity. For adolescent girls, however, condom use is a unique health behavior because it takes place within a domain in which girls are at a special disadvantage. Therefore, girls are better able to engage in safer sex when feelings of efficacy extend to the sexual domain. Self-efficacy in sexual negotiation is especially important because it implies a sense of agency and confidence within sexual situations.

An examination of whether the relationships investigated here differ across racial/ethnic groups is important for several reasons. Researchers have found a link between racial and ethnic identity and personal control (Ross & Mirowsky, 1989; Umberson, 1993; Umberson et al., 1998). In addition, incentives to avoid unwanted pregnancy may differ for young people of different race or class statuses (Luker, 1996), as may the pressure to conform to sexual norms (Phillips, 2000). Finally, it is possible that gendered sexual norms themselves may differ across groups. Although the study of racial/ethnic differences in gendered experiences is an important topic that deserves more attention than can be devoted here, I tested three-way interactions between race, gender, and personal control (analyses not shown). With few exceptions, these interactions were not significant, which suggests that, for the most part, the processes described in this study may work similarly across racial/ethnic groups.

Consistent with those of other researchers who have used the Add Health data (Santelli et al., 2000), results indicate that female adolescents were significantly more likely to engage in contraceptive risk than were male adolescents. Findings suggest that girls were slightly more likely than boys to have had sex between waves. Although these results support recent findings that boys and girls tend to be similar in their sexual behavior (De Gaston et al., 1996; Santelli et al., 2000; Terry & Manlove, 2000), earlier research showed that girls were less likely than boys to have sex during adolescence (Furstenberg, Morgan, Moore, & Peterson, 1987). This may indicate that boys and girls are just recently beginning to display similar sexual behavior. Another possible explanation is that the unique survey method employed in Add Health (computer assisted interviews) may allow adolescents to believe that their answers are confidential. Adolescent girls, therefore, may feel more comfortable admitting to sexual experience. However, it is impossible to assess whether this finding results from actual differences in behavior or whether it is the result of differences in the reporting of this behavior.

There are some limitations to this study that should be addressed. First, as noted above, adolescents under the age of 15 were necessarily excluded from these analyses, and I cannot assess how their exclusion might have impacted my results. On the one hand, as unwanted pregnancy has higher costs for younger adolescents, a sense of personal control and self-efficacy in sexual negotiation may be particularly important and may have a greater impact on contraceptive risk for this group. On the other hand, the relationships between contraceptive risk and these social–psychological resources may differ altogether. Second, the Add Health dataset did not allow me to differentiate between wanted and unwanted sexual encounters. A sense of personal control may be especially important for girls in helping them to avoid unwanted or unpleasurable sexual contact, but may not deter them from engaging in other, more desirable, sexual experiences. In addition, the present study focused on heterosexual issues of vaginal intercourse and birth control use. Same-sex sexual relationships are likely to entail different experiences and concerns, and sexual decision making within these relationships is likely to be influenced differently by gendered norms and expectations. Finally, in the present study I have attempted to describe complicated and dynamic processes with discrete and concrete measures, and I therefore risk oversimplifying young people's sense of agency and their sexual relationships or experiences. Furthermore, I relied on one-item measures of personal control and self-efficacy in sexual negotiation, as they are the only ones available in Add Health, but these are complicated concepts that are difficult to tap with one question. However, the results do shed light on an important link between perceived effectiveness and sexual behavior and can inform further research on power and agency within sexual relationships.

The present study contributes to the existing literature on efficacy and contraceptive use in several ways by supporting previous findings of a relationship between personal control, self-efficacy, and contraceptive use found in small, non-representative samples and in samples of young women because it was based on a nationally representative sample of both male and female adolescents. In addition, my study demonstrates that both a generalized sense of personal control and domain-specific contraceptive self-efficacy are important and independent factors in sexual decision making. However, perhaps the most important contribution of the study is that it emphasizes the importance of gender to any research that considers the role of social–psychological resources in sexual decision making.

Finally, the results of the study have revealed a way in which adolescent girls are enabled to express agency within sexual situations. The ability to assert agency and power within sexual relationships influences the ability to make demands within a sexual encounter, including demands regarding contraception. As girls have a higher stake in the outcome of sexual intercourse, it is vital that they feel able to negotiate contraceptive decisions with their partners or to refuse unwanted sexual advances. However, it is equally important not to reinforce the idea that safer sex is primarily the concern and responsibility of women. Heterosexual men are frequently excluded from research and discussions about contraception (Campbell, 1995), but the present study has shown that a sense of personal control is important for adolescent boys' contraceptive behavior, even when this behavior conflicts with normative beliefs about men's sexuality. Future researchers should examine other ways to balance power within sexual relationships by empowering girls to assert agency and by encouraging boys to take an equal role in protecting their own and their partners' sexual health.

Acknowledgments The author would like to thank Chandra Muller and Debra Umberson for their comments on previous drafts of this article. The author would also like to thank the members of the Adolescent Health and Academic Achievement project for their comments and suggestions. The author accepts full responsibility for any shortcomings of this research.

Appendix

Descriptive Statistics for the Full Add Health Sample and Analytical Samples (Unweighted)

	Mean or Proportion (Standard Deviation)		
	Full Add Health sample	Sexual intercourse sample	Condom use sample
Sex/gender			
Boys	0.495	0.488	0.500
Girls	0.505	0.512	0.500
Racial/ethnic identity			
Non-Latino/a White	0.504	0.506	0.481
Non-Latino/a Black	0.225	0.201	0.259
Latino/a	0.170	0.187	0.184
Asian	0.071	0.079	0.047
Other	0.030	0.027	0.030
Age	16.165 (1.723)	16.679 (1.023)	16.870 (1.023)
Time between interviews	10.950 (1.757)	10.981 (1.693)	11.071 (1.661)
Socioeconomic status			
Family income	45.926 (44.403)	46.982 (49.128)	43.341 (34.709)
Parent's education	2.835 (1.258)	2.840 (1.278)	2.711 (1.208)
N	20,745	8,589	3,572

Source: National Longitudinal Study of Adolescent Health.

References

Alan Guttmacher Institute (1999). *Facts in brief: Teen sex and pregnancy*. Retrieved July 13, 2005, from http://www.agi-usa.org/pubs/fb_teen_sex.

Amaro, H. (1995). Love, sex, and power: Considering women's realities in HIV prevention. *American Psychologist, 30*, 437–447.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26.

Bandura, A. (2004). Health promotion by social cognitive means. *Health Education & Behavior, 31*, 143–164.

Bowleg, L., Belgrave, F. Z., & Reisen, C. A. (2000). Gender roles, power strategies, and precautionary sexual self-efficacy: Implications for Black and Latina women's HIV/AIDS protective behaviors. *Sex Roles, 42*, 613–635.

Brien, T. M., & Thombs, D. L. (1994). Dimensions of self-efficacy among three distinct groups of condom users. *Journal of American College Health, 42*, 167–174.

Campbell, C. A. (1995). Male gender roles and sexuality: Implications for women's AIDS risk and prevention. *Social Science and Medicine, 41*, 197–210.

De Gaston, J. F., Jensen, L., & Weed, S. (1995). A closer look at adolescent sexual activity. *Journal of Youth and Adolescence, 24*, 465–479.

De Gaston, J. F., Weed, S., & Jensen, L. (1996). Understanding gender differences in adolescent sexuality. *Adolescence, 31*, 217–231.

Furstenberg, F. F. Jr., Morgan, S. P., Moore, K. A., & Peterson, J. L. (1987). Race differences in the timing of adolescent intercourse. *American Sociological Review, 52*, 511–518.

Gavey, N., McPhillips, K., & Doherty, M. (2001). "If it's not on, it's not on"—Or is it? Discursive constraints on women's condom use. *Gender & Society, 15*, 917–934.

Gecas, V. (1989). The social psychology of self-efficacy. *Annual Review of Sociology, 15*, 291–316.

Goh, D. S., Primavera, C., & Bartalini, G. (1996). Risk behaviors, self-efficacy, and AIDS prevention among adolescents. *Journal of Psychology, 130*, 537–546.

Gomez, C. A., & Marin, B. V. (1996). Gender, culture, and power: Barriers to HIV-prevention strategies for women. *Journal of Sex Research, 33*, 355–362.

Gutierrez, L., Oh, H. J., & Gillmore, M. R. (2000). Toward an understanding of (em)power(ment) for HIV/AIDS prevention with adolescent women. *Sex Roles, 42*, 581–611.

Kahn, J. R., Rindfuss, R. R., & Guilkey, D. K. (1990). Adolescent contraceptive method choices. *Demography, 27*, 323–335.

Kaplan, E. B. (1997). *Not our kind of girl: Unraveling the myths of Black teenage motherhood*. Berkeley, California: University of California.

Levinson, R. A. (1986). Contraceptive self-efficacy: A perspective on teenage girls' contraceptive behavior. *Journal of Sex Research, 22*, 347–369.

Levinson, R. A. (1995). Reproductive and contraceptive knowledge, contraceptive self-efficacy, and contraceptive behavior among teenage women. *Adolescence, 30*, 65–85.

Levinson, R. A., Wan, C. K., & Beamer, L. J. (1998). The contraceptive self-efficacy scale: Analysis in four samples. *Journal of Youth and Adolescence, 27*, 773–793.

Lewis, S. K., Ross, C. E., & Mirowsky, J. (1999). Establishing a sense of personal control in the transition to adulthood. *Social Forces, 77*, 1559–1573.

Luker, K. (1996). *Dubious conceptions: The politics of teenage pregnancy*. Cambridge, Massachusetts: Harvard University Press.

Marsiglio, W. (1993). Adolescent males' orientation toward paternity and contraception. *Family Planning Perspectives, 25*, 22–31.

Martin, K. A. (1996). *Puberty, sexuality, and the self: Boys and girls at adolescence*. New York: Routledge.

Mirowsky, J., & Ross, C. E. (1983). Paranoia and the structure of powerlessness. *American Sociological Review, 48*, 228–239.

Mirowsky, J., & Ross, C. E. (2003a). *Social causes of psychological distress*. New York: Aldine De Gruyter.

Mirowsky, J., & Ross, C. E. (2003b). *Education, social status, and health*. New York: Aldine de Gruyter.

Moore, S., & Rosenthal, D. (1993). *Sexuality in adolescence*. London: Routledge.

National Center for HIV, STD, and TB Protection (2001). *Tracking the hidden epidemics: Trends in STDs in the United States 2000*. Retrieved July 13, 2005, from http://www.cdc.gov/nchstp/dstd/Stats_Trends/Trends2000.pdf.

Phillips, L. M. (2000). *Flirting with danger: Young women's reflections on sexuality and domination*. New York: New York University Press.

Pleck, J. H., Sonenstein, F. L., & Ku, L. C. (1990). Contraceptive attitudes and intention to use condoms in sexually experienced and inexperienced adolescent males. *Journal of Family Issues, 11*, 294–312.

Pleck, J. H., Sonenstein, F. L., & Ku, L. C. (1993). Masculinity ideology: Its impact on adolescent males' heterosexual relationships. *Journal of Social Issues, 49*, 11–29.

Ross, C. E., & Mirowsky, J. (1989). Explaining the social patterns of depression: Control and problem-solving or support and talking? *Journal of Health and Social Behavior, 30*, 206–219.

Ross, C. E., & Sastry, J. (1999). The sense of personal control: Social-structural causes and emotional consequences. In C. S. Aneshensel & J. C. Phelan (Eds.), *Handbook of the sociology of mental health* (pp. 369–394). New York: Kluwer.

Santelli, J. S., Lindberg, L. D., Abma, J., McNeely, C. S., & Resnick, M. (2000). Adolescent sexual behavior: Estimates and trends from four nationally representative surveys. *Family Planning Perspectives, 32*, 156–165,194.

Seeman, M., & Seeman, T. E. (1983). Health behavior and personal autonomy: A longitudinal study of the sense of control in illness. *Journal of Health and Social Behavior, 24*, 144–160.

Soler, H., Quadagno, D., Sly, D. F., Riehman, K. S., Eberstein, I. W., & Harrison, D. F. (2000). Relationship dynamics, ethnicity, and condom use among low-income women. *Family Planning Perspectives, 32*, 82–88,101.

Steers, W. N., Elliott, E., Nemiro, J., Ditman, D., & Oskamp, S. (1996). Health beliefs as predictors of HIV-preventive behavior and ethnic differences in prediction. *Journal of Social Psychology, 136*, 99–110.

Terry, E., & Manlove, J. (2000). *Trends in sexual activity and contraceptive use among teens*. Washington, District of Columbia: Child Trends.

Thoits, P. A. (1987). Gender and marital status differences in control and distress: Common stress versus unique stress explanations. *Journal of Health and Social Behavior, 28*, 7–22.

Thomson, R., & Holland, J. (1998). Sexual relationships, negotiation, and decision making. In J. Coleman & D. Roker (Eds.), *Teenage sexuality: Health, risk, and education* (pp. 59–80). Amsterdam: Harwood.

Tolman, D. L. (1994). Doing desire: Adolescent girls' struggles for/with sexuality. *Gender & Society, 8*, 324–342.

Tschann, J. M., Adler, N. E., Millstein, S. G., Gurvey, J. E., & Ellen, J. M. (2002). Relative power between sexual partners and condom use among adolescents. *Journal of Adolescent Health, 31*, 17–25.

Udry, J. R. (2003). *The national longitudinal study of adolescent health (Add Health), waves I & II, 1994–1996; wave III, 2001–2002* [machine-readable data file and documentation] Chapel Hill, North Carolina: Carolina Population Center, University of North Carolina at Chapel Hill.

Umberson, D. (1993). Sociodemographic position, world views, and psychological distress. *Social Science Quarterly, 74*, 575–589.

Umberson, D., Anderson, K., Glick, J., & Shapiro, A. (1998). Domestic violence, personal control, and gender. *Journal of Marriage and the Family, 60*, 442–452.

Wheaton, B. (1980). The sociogenesis of psychological disorder: An attributional theory. *Journal of Health and Social Behavior, 21*, 100–124.