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**GENDER, RELATIONSHIP TYPE AND
CONTRACEPTIVE USE AT FIRST INTERCOURSE**

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Abstract

Context: Studies indicate that condom use is more prevalent among casual sexual partners than more committed partners because casual partners present greater risks for contracting sexually transmitted infections. This study presents updated information on teens' sexual relationship by examining the association between relationship type and contraceptive use at first intercourse.

Methods: Data from the recent cycle (2006-2008) of the National Survey of Family Growth (n = 1,379 females; n = 938 males) were used to examine association between relationship types at first intercourse and contraceptive use at first intercourse among adolescents. This association between relationship types (committed, going steady and casual) and contraceptive use (any method and none) was identified and measured using logistic regression models.

Results: Relationship type at first intercourse was related to the odds of using any contraception at first intercourse for males and females. Females in committed relationships at first intercourse had marginally lower odds using a method of contraception than females in going-steady relationships (0.540), but among those who used a method, females in committed relationships more often used condoms than females in going-steady or casual relationship. Males in both committed and casual relationships at first intercourse, compared to those going steady had lower odds of using any method at first intercourse (0.260, 0.640). Males in committed relationships had lower odds of condom use than their counterparts who were going steady or in casual relationships at first intercourse.

Conclusion: The timing of teenage sexual experiences and the relationship context in which they occur predicts contraceptive use. Sexual and reproductive health programs must recognize the variations in sexual relationships and develop both gender and method specific approaches.

Keywords: Contraception, condoms, relationship type

Sexual activity in adolescence is characterized as normative behavior in terms of attitudes and prevalence rates, the majority of Americans had first sexual intercourse by age 17 (Abma et al. 2005; Finer, 2007; Alan Guttmacher Institute, 2010). Adolescence has therefore been described as a period in which heightened sexual exploration and activity takes place (Halpern, 2010). Teens are more likely than adults to not use contraception and/or are inconsistent contraceptive users which results in negative outcomes such as contracting of sexually transmitted infections (STIs) and having unintended pregnancies (Isley et al. 2010). These poor health outcomes have resulted in adolescent sexuality becoming an important public health concern (Advocates for Youth, 2006) with research focusing on patterns of contraceptive use, especially condom use. The research emphasis has been on demographic correlates, types of methods, characteristics of sexual partners and sexual histories (Katz et al. 2002; Doherty et al. 2009; Senn et al. 2009). Contraceptive use at first sexual intercourse is important because it sets the trajectory for later contraceptive use (Shafii et al. 2007). However, few recent studies have explicitly focused on how relationship context influences contraceptive use at first intercourse (for exceptions see Manning et al. 2000; Manlove et al. 2003).

The relationship context in which teenagers become sexually involved is important because it provides a social context for all sexual negotiations among partners (Kaestle and Halpern, 2005). Not all teens have sex in committed relationships and as such growing attention has now been directed toward understanding new relationship contexts such as the ‘hook-up’, ‘friends with benefits’ and ‘casual sex’ experiences among teens (Grello et al. 2009; Bisson et al. 2009). The fundamental concern with these types of relationships is whether they are sexually ‘safe’ relationships which involve negotiation and use of contraception to protect against STIs and unintended pregnancies.

Drawing on data from the 2006-2008 National Survey of Family Growth (NSFG) this study examines the influence of relationship context on contraceptive use at first intercourse among teenagers. This study improves on work on relationship type and contraceptive use in four key ways. First, relying on recently collected national data allows assessments of contraceptive use in the contemporary climate. Second, rather than rely on just one method (condom vs. others or any contraception vs. none) I take into account condom use, chemical methods and non-use simultaneously because different methods are expected to be used in distinct types of relationships which subsequently improves our understanding of fertility and STI transmission among this teenagers. Third, instead of using a dichotomous measure of relationship context I consider three types of relationships namely committed, going steady and casual thereby allowing variability in relationship experiences that might have implications for contraceptive method at first intercourse. Fourth, this paper examines the relationship context among both men and women which allows an assessment of whether the relationship context at first sex is differentially associated with contraceptive use. The findings from this project will contribute to our understanding of the sexual lives of adolescents and the implications for adolescent well-being. These findings will not only speak to policies and sex education programs, but also emphasize negotiation and communications skills among teenagers even before they become sexually active and enter sexual relationships.

Background

There have been reductions in the percentage of teens who ever had sex and teens are waiting longer to engage in sexual intercourse (Abma et al. 2010). However, half of teens still have had sex prior to age 18, the median age at first sex in 2002 was age 17 (Alan Guttmacher Institute, 2010). Examining trends from 1988 to 2006-2008, Abma et al. (2010) found that the percentage

of never-married teenage females (ages 15-19 years) who ever had sexual intercourse declined from 51% to 42%, and the percentage for never-married teenage males declined from 60% to 43%.

Understanding the implications of first sexual intercourse is very important. In terms of negative health outcomes early sexual initiation is associated with certain long-term negative sexual health outcomes, including increased sexual risk behaviors and problems in sexual functioning (Sandfort et al. 2008). Further, early sexual initiation is tied to increased risks of STIs partially because to biological predispositions tied to the immature development of the cervix (Khan et al. 2002). Another negative outcome of age at first sexual intercourse is that the younger age at intercourse the more likely these individuals will have more sexual partners and participate in more risky activities (O'Donnell et al. 2001).

The use of any method of contraception at first sexual intercourse among teenagers has increased only slightly during the period from 2002 to 2006-2008, from 75.2 percent to 78.5 percent among females and from 82.3 percent to 87.0 percent among males (Abma et al. 2010). The methods of contraception used by teenagers have varied from 2002 to 2006-2008. In 2002 female teenagers' top three methods of contraceptive use at first sexual intercourse were condoms (67.5%), pills (16.6%) and dual methods (13.8%). These methods still remained the top choices during the period 2006-2008 with a slight percentage decline in pill use, (Abma et al. 2010). Among (ages 15-19) the contraceptive methods of choice at first sex were similar to females, but there was a significant increase in method use. For example, males reported condom use at first sex increased from 71 percent to 81.5 percent (Abma et al. 2010). Using recently collected national data this study builds on prior work by considering the use and non-use of

different types of contraception at first intercourse which include condoms and chemical forms of birth control (i.e. pills, injectable, emergency contraception, contraceptive patch).

Sexual relationships are defined differently across studies. Manlove et al. (2003) categorized relationships into three groups (romantic, liked, and non-romantic), Bauman and Berman (2005) also identified three major types of relationships ‘messing,’ ‘girlfriend/boyfriend,’ and ‘hubby-wifey’ while Fortenberry et al. (2002) had a dichotomous classification of new and established relationships. These different definitions of relationship context have proven challenging as the meanings vary across different research samples (Bauman and Berman, 2005). This study improves on previous research by trichotomizing relationship types into committed; going steady and casual. Using these categories allow for variability in relationship contexts that might have implications for contraceptive use at first sexual intercourse.

Previous studies examining relationship context and contraceptive use consider a wide array of time reference points. Manning et al. (2000) and Manlove et al. (2003) focused their research on teenagers’ relationships at first intercourse while other studies examined recent intercourse among teenagers and also fuller sexual histories (Manlove et al. 2004; 2007). This paper makes use of teenagers engaging in first sexual intercourse as its reference point. This is advantageous because teenagers’ risk of unintended pregnancies and contraction of STIs can be significantly reduced once contraceptive use at first sex is encouraged and established as opposed to encouraging consistent contraceptive use at later stages of sexual experience.

Most prior studies of relationship context and contraceptive use have focused exclusively on condoms or alternatively grouping all contraception methods into a single category (Fortneberry et al. 2002; Katz et al. 2002; Manlove et al. 2008). Fortenberry et al. (2002) found

that condoms were more likely to be used in a new relationship rather than an established one. Manning et al. (2000) found that the majority (52%) of teenage females who had just met their first sexual partner did not use a method of contraception while a large proportion of those who were engaged also did not use any method of contraception at first sexual intercourse. This study differentiates contraception use into three categories condoms, chemical methods, and non-use. Using this approach enables more refined analyses and a better understanding of contraceptive use by simultaneously taking into account a broader array of contraceptive methods.

Contraceptive use patterns and relationships contexts vary according to gender. Some work has focused on females exclusively (Manning et al. 2000) while in other cases both males and females are evaluated (Carver et al. 2003, Manlove et al. 2004, Ott et al. 2002). Manlove et al. (2004) found that among teenagers in romantic or “liked” relationships, the odds of ever-use and of consistent use were elevated among females who had discussed contraception with the partner before their first sex together (2.9 and 2.1, respectively), and the odds increased among males as the number of pre-sexual couple-like activities increased (1.2 for each). Contraceptive use has traditionally focused on women; however, studies have now turned attention to males (Forste, 2002; Gillmore et al. 2003; Anderson, 2003; Manlove et al. 2008; Yarger et al. 2010). Results have indicated that men hold both positive and negative beliefs about the outcomes of using different contraceptive methods and reported that their partners had opinions about whether they should use each method of contraception (Gillmore et al. 2003). Although focus on a female exclusive sample is important as they still experience the most direct consequences of sexual activity (Manning et al. 2006), it is equally important to understand contraceptive use and relationship context from the perspective of males. Therefore, analyzing both genders

concurrently allow a broader understanding of relationship context and contraceptive use at first sex. These findings may be useful for gender specific policy recommendations.

Although the patterns of contraceptive use among male and female adolescents in the United States have received much research attention, several key questions are yet to be answered to provide a clear understanding of the dynamics between relationship context, contraceptive use and first sexual intercourse. I propose three major hypotheses. First, I expect that relationship type at first intercourse will be associated with contraceptive use at first intercourse. Second, I expect that less stable (casual) relationship types at first sex should be associated with greater contraceptive use among males (particularly condoms) and females (specifically chemicals). Third, I expect females and males in committed relationships will have higher odds of non-use of contraceptive methods compared to their counterparts in casual or going steady relationships.

This study includes control variables found in the literature to be related to contraceptive use. Hispanics compared to Whites have lower condom use (Abma et al. 2004; Afaible-Munsuz and Brindis, 2006) while African-American males compared to white males tend to have greater odds of condom use and consistency (Abma et al. 2004; Everett et al. 2000; Manlove et al. 2008). Similarly foreign-born Hispanic females were also more likely than white females to be inconsistent contraceptive users (Frost and Darroch, 2008). Age homogamy influences contraceptive use, respondents with older sexual partners were less likely to use contraception (DiClemente et al. 2002; Ford and Lepokowski, 2004). Higher parental education as well as stable family structure (two parent households), also serve as a protective factor against early sexual initiation and increase the likelihood of contraceptive use (Manlove et al. 2009; Manning et al. 2009). The findings on the relationship between religiosity and contraceptive have been

mixed with studies finding indirect effects (Manlove et al. 2008) while others found no effect of religiosity on sexual activity and contraceptive use (Leonard and Scott-Jones, 2010).

Methods

Sample

This study relies on the 2006-2008 National Survey of Family Growth (NSFG). The NSFG is a national area probability survey of a cross-sectional sample of 6,140 non-institutionalized males and 7,356 females aged 15-44 residing in households in the United States (Abma et al. 2010).

The NSFG is particularly appropriate for this research because it was recently collected and includes data on female's as well as male's contraceptive use and relationship context at first sex. Data on use of contraception is available for both men and women. Second, information about key factors that may influence contraceptive use at first sex is included in the NSFG. Caution should be taken when using analyzing data based on retrospective life histories (Groves, 1989), however, our sample is limited to men and women under age 25 and relationships are likely to be salient to individuals and recalling them may not seem to be a highly complex task (Teachman and Tedrow, 1998; Teitler et al. 2006).

The analytic sample consists of males and females ages 15-24 who have engaged in sexual intercourse at least once and have non-missing responses to the questionnaire items relating to relationship type at first intercourse and contraceptive method used at first intercourse. The final analytic sample is based on 1,379 females and 938 males.

Measures

Dependent variable

The dependent variable of interest for both female and male samples is contraceptive method used at first sexual intercourse. To measure contraceptive use at first sex, female and male respondents were asked to select "contraceptive method used at first sex." This particular

variable was only for contraceptive methods first mentioned and allowed respondents to list all possible contraceptives. This item is recoded into a dichotomous variable - any method versus no method. No method used at first sexual intercourse includes withdrawals. A second indicator is explained which distinguishes type of method and divide respondents into those who use condoms and non-condoms. It should be noted that condoms are the most common while the non-condom category is comprised of all other methods of contraceptive use which mainly are chemical methods such as the pill.

Independent variable

The main independent variable for this study is relationship type at first intercourse. For the female sample, they were asked: “At the time you first had sexual intercourse with [name of partner], how would you describe your relationship with him?” The response categories include “married; engaged; living together in a sexual relationship but not engaged; going steady with him; going out once in a while; just friends; had just met; and something else.” These categories are recoded into three groups: committed (married, engaged, and living together in a sexual relationship but not engaged); going steady; and casual (going out once in a while, just friends, had just met and something else). For the male sample, respondents were asked to describe the relationship with first sexual partner at time of first sex. The categories are nearly identical to that of the female sample except for one addition. Being engaged is dichotomized into living or not living with female partner and I categorize all males who are engaged into the committed category. The variables are coded in a similar manner for males and females.

Control variables

Prior literature includes several family background and socio-economic indicators. These variables are included in the analyses as controls because of their potential confounding associations between the explanatory covariate (relationship context) and contraceptive use at first sex. Race/ethnicity is categorized into Hispanic, non-Hispanic Black and non-Hispanic White (reference category). Nativity is a dichotomous variable used to examine respondents born in and outside of the United States. Age at first sexual intercourse and is coded as a continuous variable ranging from 15 to 24. The age difference between respondent and partner is the difference between the respondent's and their partners reported age at first intercourse. When age differences are negative, sex partners are older than the respondent and positive age differences indicate respondents are older than their first sexual partner. Family structure is based on the question "did respondents live in an intact family (both biological and/or adoptive parents) up to age 18?" and respondents are divided intact and non-intact family structures. Mother's education is categorized into less than high school, high school graduate (reference category), some college education, and college degree or greater. The final control variable used was importance of religion. This is based on the question "Currently, how important is religion in your daily life? Would you say it is very important, somewhat important, or not important?" Religious importance is recoded into three dummy variables with 'very important' classified as the reference category. Missing values observed in each control variable were coded into the modal group for categorical variables and for continuous control variables missing data were assigned the mean value. No more than 5% of responses were missing for any covariate. To avoid collinearity and for ease of interpretation, age at first intercourse is centered in the models.

Analysis

Logistic regression models are used for this research predicting first whether contraception was used and a second series of models predicting type of contraception among users. This analytic approach is appropriate as it allows for the determination of statistical relationships between explanatory variables and the dichotomous dependent variable (Hosmer and Lemeshow, 1989). The odds ratios used in the logistic regression models measure the association between the relationship type at first intercourse and the probability of being in each outcome categories (any versus no method) and a second set of models predicting whether or not condoms were used. The odds ratios based on the logistic regression models are interpreted to mean that less than one is a negative relationship between the independent variables and the dependent variable and an odds ratio greater than one suggests a positive relationship. To account for the complex sampling strategies the models are weighted.

Models are presented separately for males and females to highlight the different variation in relationship types based on contraceptive use at first intercourse. First, a zero-order model estimating the association between the focal independent variable and contraceptive use at first intercourse is conducted. This is followed by a more complete model including all the control variables.

Results

Sample characteristics

Descriptive statistics for the data used in this study are shown in Table 1. Sharp gender discrepancies are illustrated for both the focal independent and dependent variables. The contraceptive method used by most females at first intercourse is chemical methods (57%) while for males condoms are the most commonly used method (75.6%). A minority of 23% of females and 16.3% males used no method at first intercourse. In terms of relationship type, most females,

67.4%, are going steady with their first sexual partner in contrast to almost half (48.3%) of males. A little over one-fifth (22.6%) of females are in casual relationships while twice as many males (44.6%) reported being in casual relationships at first sex.

The distribution of the control variables illustrates that the majority of the sample is non-Hispanic white (62.7% of females and 59.4% of males). The vast majority of the overall sample is native born (88.9% of females and 87.4% of males). The mean age of respondents at first intercourse across samples is 16.4 years. Males as well as females report engaging in first sexual intercourse with older partners. Female's first sexual partners are on average 4 years older compared to just about 6 months for males' first sexual partners. The majority of female (58.2%) and male (57.8%) respondents lived in intact families before the age of 18. Gender similarities are evidenced by mother's education level with 31% of females' mothers attaining at least high school education compared to 33.6% of males' mothers. Across samples religion is considered important in the daily lives of respondents. The larger proportion of both samples report religion being somewhat important with 50% and 44.1% for females and males, respectively.

[Insert Table 1 here]

Table 2 presents the zero order model predicting whether contraception was used at first intercourse among females (n=1,379). The results indicate that among females there is no statistical association between relationship type and any method used. Females in committed relationships are as likely to use a method of contraception as females going steady and females who are in casual relationships share similar odds of contraceptive use as females who are going steady. Model 2 adds control variables and indicates significant association between relationship type and contraceptive use at first intercourse. Females in committed relationships at first intercourse have lower odds of using any form of contraception (0.540) than those who were going steady. Supplementary analyses reveal that mean age at first intercourse is driving the

association between relationship type and contraceptive use. Females' mean age at first intercourse for those in committed relationships is 18.9 years compared to 16.4 and 15.9 years for those in going steady and casual relationships, respectively (results not shown). Therefore, this result indicates that females in committed relationships are engaging in first intercourse at older ages and are less likely to use any form of contraception. Being Hispanic (0.591) and having a mother with less than a high school diploma (0.553) is associated with lower odds of contraceptive use at first intercourse. With each additional year increase at age at first sexual intercourse females odds of using any form of contraception increases, (1.188) by 19%. Females who report religion being 'somewhat' or 'not at all important' have greater odds of contraceptive use at first intercourse (1.572, 2.675) than females who report religion is 'very important.'

The next two models in Table 2 present the odds ratio of contraceptive use among males (n = 938). At the zero-order (model 3), males in casual relationships at first intercourse have significantly lower odds of using any form of contraception (0.558) than males who are going steady with their first sexual partner. Most males (88%) in going steady relationships used a method of contraception while 80% of males in casual relationships used a method at first intercourse (results not shown). Males in committed relationships have similar odds of using a method as males who are going steady. Model 4 tests whether the association between relationship type and contraceptive use at first intercourse changes with the inclusion of other explanatory variables. In this model, males who were in casual relationships continue to have significantly lower odds of using contraception at first intercourse (0.640) than males who were going steady. In this model males in committed relationships now have significantly lower odds of using any form of contraception (0.260) than males going steady. Supplementary analyses indicate that mean age at first sex accounts for the greater effect in the association between males

in committed relationships and contraceptive use. Similar to the results from the female sample, males in committed relationships engage in first sexual intercourse at older ages, mean age 20.4, compared to males in going steady (16.0) and casual relationships (15.4) (results not shown). Therefore, the significantly low odds of contraceptive use among males in committed relationships may be attributed in part to their developmental stage. Other results from model 4 illustrate that foreign born respondents have significantly lower odds of using any form of contraception (0.453) while each additional year increase in the age at first intercourse increases the odds of contraceptive use among males (1.243).

[Insert Table 2 here]

Table 3 presents the type of method used for both females (n = 1,042) and males (n = 763) who report using a method of contraception at first intercourse. Results from model 1 show that females in committed relationships more often use condoms than females in going steady relationships (6.216). The odds of condom use are similar among females in casual and going steady relationships. In supplementary analysis, not shown, findings reveal that 23% of females used a condom in casual relationships in contrast to 23% in going steady and 64% in committed relationships. Model 2 indicates that the association between relationship type and contraceptive method persist with the inclusion of the control variables. Each additional year increase in age at first intercourse is tied to higher odds of using condoms (1.179). Females who view religion as not important have lower odds of using condoms (0.424).

The last two columns of Table 3 present the odds of using condoms rather than chemicals methods among males who report using a method at first intercourse. Males in a committed relationship have significantly lower odds of using condoms than males in going steady relationships (0.067). Males in casual relationships use the same types of contraception as males

who are going steady. Ninety-five percent of males in casual relationships used condoms, 39% in committed and 94% in going steady (results not shown). This association persists with the inclusion of control variables (Model 4). None of the socio- demographic indicators are tied to method type in the multivariate model.

[Insert Table 3 here]

Discussion

The most common relationship context for teenagers to have first sexual intercourse was going steady, but there is wide variation in the experiences of teenage females and males.

Approximately two thirds of females and about a half of males were going steady with their first sexual partner. More females were in committed relationships (10%) compared to males (7.1%).

We find two times as many males were in casual relationships (44.6%) at time of first intercourse than females (22.6%). These patterns may be indicative of how definitions of relationships differ according to gender.

Males and females not only have different types of relationship with their sexual partners but the association between relationship type and contraceptive use at first intercourse also vary for males and females. Among females being in a committed relationship at first intercourse is tied to marginally lower odds of contraceptive use. While males in casual relationships have lower contraceptive use compared to males in going steady relationships, females in casual relationships share similar odds of contraceptive use as peers who were going steady. This finding suggests that females in casual relationships experience similar protection as females in more serious relationships. However, males who have the greatest sexual risk (casual relationships) are the least likely to protect themselves.

Males and females differ in how relationship types are tied to type of contraceptive used in their first sexual relationships. Although the majority of female respondents used non-condoms (primarily the pill) at first intercourse, those in committed relationships had higher odds of using condoms. It could be inferred that females in committed relationships may have more autonomy in their relationships and may be able to negotiate condom use more effectively than females in casual and going steady relationships. The results also suggest that young women in casual relationships, who face the greatest risk and not protecting themselves, are not statistically different from women in going steady relationships. In contrast, males in committed relationship report lower odds of using condoms. Men in committed relationships may have reached a level of trust and openness in the relationship and as such preferred not to use any method of contraception but when they do it is not a condom.

The current investigation adds to prior research that focused on relationship type and contraceptive use (e.g., Manlove et al. 2003; Bauman and Berman, 2005). A critical challenge underlying these previous studies is that the categorization of relationships allowed for a wide variation in meaning and therefore relationship types can overlap. This study improved on prior research by focusing on three relationship types at first intercourse which allowed less ambiguity in meaning and mutual exclusivity. While previous research has traditionally focused on contraceptive use among women (e.g. Manning et al. 2006) or just men (Yarger et al. 2010) this paper showcases very unique patterns according to gender and relationship type. Research indicates that casual sexual partners (compared to romantic or steady partners) are associated with reduced contraceptive use at first sex (Manning et al. 2000; Ford et al. 2001). Others studies find that contraceptive use and consistency is lower among individuals in romantic relationships compared to individuals in less stable relationships (Noar et al. 2004). By dichotomizing serious

relationships into committed and going steady the results reflected in all models show gender differences in contraceptive use and contraceptive method used. These significant findings suggest that previous studies classifying all non-casual relationships into one category as stable, steady, serious or committed may have produced misleading results when examining contraceptive use among teenagers and adults alike.

The results from this study also support previous research relating to contraceptive use among teenagers. Consistent with prior work I find foreign born males and Hispanic females had lower odds of using any form of contraception (Afable-Munsuz and Brindis 2006; Eaton et al. 2006; Frost and Darroch, 2008). Also low parental education among females was related to lower odds of using any method of contraception (Manning et al. 2009). The religiosity findings runs counter to the works of Manlove et al (2003) and Bruckner and Bearman (2005) who report that religiosity decreases the likelihood of contraceptive use among sexually active adolescents.

There has been relatively little theoretical attention paid to the research surrounding relationship types and contraceptive use among teenagers, (for exceptions see Manlove et al. 2007 discussion on the life course theory). The life course perspective as developed by (Elder, 1975) and applied by Manlove et al (2007) is supported. As argued by Elder (1975) the early life course experiences inform the development process of the individual and will have important implications for later relationships and contraceptive use trajectories.

There are at least three important caveats that must be considered from this study. First, the data set was not longitudinal and as such casual inferences could not be made. Second, the retrospective nature of this survey may have influenced how males and females viewed their first sexual partner. Third, the data were not couple based and so sexual experiences were not symmetrical among respondents. However, our sample is limited to men and women under age

25 and relationships are likely to be salient to individuals and recalling the relationship context may not be a challenging task.

The findings of Isley et al (2010) support research that shows teens more than adults fail to use or are inconsistent users of contraceptive during first and subsequent sexual encounters and as such are at greater risk for contracting STIs and having unintended pregnancies. Based on the findings of this study, relationship type at first intercourse does matter when one considers contraceptive use among teenagers. Future research should include relationship type at later intercourse to better understand contraceptive use during early adulthood. An important next step will be to consider the inclusion of a measure of relationship quality which will better allow analysis of relationship influence on contraceptive use. In particular, among teenagers and adolescents relationship quality may have a mediating effect on the association between relationship type and contraceptive use at first or most recent sexual intercourse. Finally, further investigation into the association between relationship type and contraceptive use may improve significantly from examining contraceptive preference among teenagers prior to and after their first sexual experience.

As it relates to policy and program implications, sex education programs must not only focus on abstinence or improving teens' knowledge of contraceptive methods but also gear programs towards improving communication and negotiation skills within adolescent relationships. Some programs assume that sexual partners are able to communicate effectively with each other on all issues (e.g., El-Bassel, 2001). Making this assumption for teenagers poses a serious problem as individuals are still growing developmentally and need the requisite skills to confront general life issues, and more so, relationship and contraceptive issues. Second, key findings of this study illustrates that respondents in casual and going steady relationships are

equally at risk and those in committed relationships have lower odds of using any form of contraceptive. Most STIs prevention programs fail to attend to the relationship status of individuals and the need to promote safe sex practices within committed and casual relationships (e.g., Noar et al. 2004). Therefore, current programs which focus exclusively on the more vulnerable teenagers in casual relationships need to broaden its scope to include teenagers in all types of relationship. Finally, the findings of relationship type and contraceptive use at first intercourse overwhelmingly indicate that current and future programs related to adolescent sexual and reproductive health must consider a gendered approach when teaching adolescents about relationship types and dynamics and the importance of contraceptive use (e.g., Holland and French, 2011). Taken together, the meaning of relationships differs and has specific implications for contraceptive use.

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TABLE 1. Percent distribution and means (and standard deviations) of dependent, focal independent and socio-demographic variables for females and males at first intercourse

Characteristics	Percentages/Mean	
	Female (N=1,379)	Male (N=938)
Contraceptive Type at First Intercourse		
Condoms	21.0	75.6
Chemicals	57.0	8.1
No Method	23.0	16.3
Relationship Context		
Committed	10.0	7.1
Going Steady	67.4	48.3
Casual	22.6	44.6
Race/Ethnicity		
Hispanic	19.6	22.8
Black	17.7	17.8
Non Hispanic White	62.7	59.4
Born in U.S. (Nativity)		
Yes	88.9	87.4
No	11.1	12.6
Age at first sex		
Mean	16.6 (5.5)	16.1 (6.7)
Age difference between respondent and partner at first sex		
Mean	-4.3 (3.3)	-0.5 (2.8)
Intact Family		
Yes	58.2	57.8
No	41.8	42.2
Mother's Education Level		
< High School	19.3	17.3
High School/GED	31.0	33.6
Some College	28.7	24.0
Bachelor's Degree or higher	21.0	25.1
Importance of Religion		
Very important	42.0	43.2
Somewhat important	50.0	44.1
Not important	8.0	12.7

Notes: Percentages are weighted; NSFG 2006-2008

TABLE 2. Logistic regression odds ratio estimating any contraceptive method use at first intercourse for females and males

	Female (N=1,379)		Male (N=938)	
	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
Characteristics				
Relationship Context				
Committed	0.629 (0.231)	0.540† (0.181)	0.592 (0.260)	0.260* (0.167)
Going Steady ^a	1.000	1.000	1.000	1.000
Casual	0.723 (0.160)	0.826 (0.186)	0.558* (0.144)	0.640† (0.154)
Race/Ethnicity				
Hispanic		0.591* (0.132)		1.193 (0.422)
Black		0.736 (0.175)		0.999 (0.320)
Non Hispanic White ^a		1.000		1.000
Born in US				
Yes ^a		1.000		1.000
No		0.964 (0.262)		0.453* (0.146)
Age at first sex ^b				
Mean		1.188*** (0.055)		1.243* (0.128)
Age difference between respondent and partner at first sex				
Mean		1.004 (0.001)		0.971 (0.074)
Intact Family				
Yes ^a		1.000		1.000
No		1.148 (0.217)		0.676 (0.179)
Mother's Education Level				
< High School		0.553* (0.165)		0.986 (0.406)
High School/GED ^a		1.000		1.000
Some College		0.845 (0.226)		0.707 (0.198)
Bachelor's Degree or higher		1.237 (0.525)		1.141 (0.274)
Importance of Religion				
Very Important ^a		1.000		1.000
Somewhat Important		1.572† (0.374)		1.531 (0.487)
Not Important		2.675* (1.223)		0.843 (0.463)

Notes: † p≤.10; *p≤.05, **≤.01, ***≤.001; NSFG 2006-2008

^aReference category

^bVariable is mean-centered

TABLE 3. Logistic regression odds ratio of condom versus chemical use at first intercourse for female and male contraceptive method users

Characteristics	Female (N=1,042)		Male (N=763)	
	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
Relationship Context				
Committed	6.216** (3.187)	4.586** (2.049)	0.042*** (0.023)	0.067*** (0.044)
Going Steady ^a	1.000	1.000	1.000	1.000
Casual	1.043 (0.355)	1.085 (0.379)	1.135 (0.394)	1.164 (0.459)
Race/Ethnicity				
Hispanic		0.877 (0.293)		1.025 (0.568)
Black		0.641 (0.223)		1.361 (0.788)
Non Hispanic White ^a		1.000		1.000
Born in US				
Yes ^a		1.000		1.000
No		0.526 (0.231)		1.706 (0.970)
Age at first sex^b				
Mean		1.179** (0.056)		0.883 (0.100)
Age difference between respondent and partner at first sex				
Mean		0.998 (0.001)		1.176 (0.122)
Intact Family				
Yes ^a		1.000		1.000
No		0.839 (0.207)		0.800 (0.257)
Mother's Education Level				
< High School		0.818 (0.393)		1.659 (1.177)
High School/GED ^a		1.000		1.000
Some College		1.439 (0.413)		0.549 (0.318)
Bachelor's Degree or higher		1.002 (0.291)		0.698 (0.414)
Importance of Religion				
Very Important ^a		1.000		1.000
Somewhat Important		0.911 (0.208)		1.126 (0.487)
Not Important		0.424* (0.169)		2.037 (1.199)

Notes: † p<.10; *p<.05, **≤.01, ***≤.001; NSFG 2006-2008

^aReference category

^bVariable is mean-centered