



Published in final edited form as:

*J Sex Res.* 2012 November ; 49(6): 558–569. doi:10.1080/00224499.2011.589101.

## Short-term Positive and Negative Consequences of Sex Based on Daily Reports among College Students

Sara A. Vasilenko<sup>1</sup>, Eva S. Lefkowitz<sup>2</sup>, and Jennifer L. Maggs<sup>3</sup>

<sup>1</sup>Department of Human Development and Family Studies, Pennsylvania State University, 110 South Henderson Building, University Park, PA 16801. svasilenko@psu.edu

<sup>2</sup>Department of Human Development and Family Studies, Pennsylvania State University. EXL20@psu.edu

<sup>3</sup>Department of Human Development and Family Studies and Prevention Research Center, Pennsylvania State University. jmaggs@psu.edu

### Abstract

Because sexual behavior may be associated with a broader range of outcomes than physical consequences like sexually transmitted infections and pregnancy, it is important to understand consequences of sex that may influence mental and social well-being in emerging adulthood. This article describes the short-term intrapersonal and interpersonal consequences reported by college students on days they engage in vaginal sex and what factors predict experiencing particular consequences. Data are from first-year college students who reported vaginal sex on at least 1 of 28 sampled days (*M* age=18.5 years; 53% female; 30% Hispanic/Latino (HL); of non-HL, 30% African American, 22% Asian American, 35% European American and 12% Multiracial; *N*=209 people; *N*=679 person days). Participants reported positive consequences more frequently than negative consequences. Non-use of contraception and sex with a non-dating partner were associated with greater odds of reporting negative consequences. These findings have implications for messages about casual sex and use of contraception in sex education and sexual health programming.

### Keywords

sexual behavior; gender differences; condom use; romantic relationships; daily diary data

## Short-term Positive and Negative Consequences of Sex Based on Daily Reports Among College Students

Although much of the research on emerging adult sexuality has focused on prevention of sexually transmitted infections (STIs) and unwanted pregnancy, sexual behavior can have broader implications for well-being. Since its inception, the World Health Organization has defined health as involving physical, mental and social well-being (World Health Organization, 1946), and consequences of sex may play a role in each of these three dimensions. Although research on sexual behavior has focused on physical well-being, mental and social well-being may also be affected. Research has shown that early (prior to age 16) sexual behavior in adolescence is associated with depression under some circumstances (Meier, 2007; Spriggs & Halpern, 2008), and individuals' perceptions of the intrapersonal consequences of sex (such as satisfaction or guilt) may explain the process by which sexual behavior is associated with mental health. In addition, sexual behavior has consequences for social well-being, particularly relationships with sexual partners; perceived interpersonal consequences of sex (such as feeling close to or pressured into

sexual behavior by a partner) could promote or impede the establishment of intimacy, an important component of healthy sexual relationships (Firestone, Firestone, & Catlett, 2006). Thus, in this article we examined emerging adults' perceived short-term consequences of sex, focusing on intrapersonal and interpersonal consequences.

Although the majority of emerging adults (age 18–25; Arnett, 2000) have engaged in sexual intercourse, little is known about the consequences of sex they experience, other than STIs and pregnancy. Research on adolescents' perceived consequences of sex has focused on intrapersonal consequences of first intercourse, particularly the negative consequences for adolescent girls (Higgins, Trussell, Moore, & Davidson, 2010; Sprecher, Barbee, & Schwartz, 1995). In contrast, research with adults has focused on how sexual behavior within marriage is associated with positive interpersonal consequences, such as relationship satisfaction (Edwards & Booth, 1994). However, little research has examined subjective experiences of sex in emerging adulthood, a period which may be important for sexual development. Emerging adults, particularly those who are transitioning to college, experience increased freedom from parental oversight and increased time in mixed-sex settings, which can provide opportunities for exploration and experimentation with sexual behavior (Arnett, 2000; Lefkowitz, 2005). In addition, emerging adults' sexual behavior may be influenced by exploration in other domains, such as in romantic relationships (Lefkowitz, 2005). Emerging adults may engage in sexual behavior in a variety of relationships, including close dating relationships and with casual or non-dating partners. Thus, it is important to understand the subjective experience of sexual behavior in emerging adulthood, as well as factors, such as relationship with a partner, that may be associated with more positive or negative outcomes.

In the current article we examined the short-term perceived consequences of sex reported by first-year college students on days they engaged in vaginal sex, as well as what situational factors of the sexual experience were associated with more positive or negative consequences.

### Short-Term Consequences of Sex

Many of the studies on the consequences of sex for adolescents or emerging adults have focused on consequences of first sexual intercourse, with fewer investigations of later occurrences of sexual behavior. These studies have often found gender differences, with women reporting less positive experiences than men. However, diary and experience sampling studies of clinical samples of adolescents have found that occurrences of sex after first intercourse are associated with more positive affect or less negative affect in both male and female adolescents (Fortenberry, Temkit, Tu, Graham, Katz, & Orr, 2005; Shrier, Shih, Hacker, & de Moor, 2007). Although assessing affective states and not perceived consequences *per se*, this literature suggests that sexual behaviors after first intercourse may be experienced as more positive than early sexual experiences, and thus may be associated with more positive and fewer negative consequences. Thus, we reviewed the extant literature on consequences of sex, keeping in mind that experiences may differ for college students compared to adolescents and for later occurrences of sexual behavior compared to first intercourse.

**Gender differences in intrapersonal consequences**—Much of the research on short-term consequences of sex has focused on intrapersonal consequences, such as physical satisfaction or guilt. This research has found that, overall, adolescents and emerging adults evaluated sexual behavior positively (O'Sullivan & Hearn, 2008; Smiler, Ward, Caruthers, & Merriweather, 2005; Tsui & Nicoladis, 2004). However, male adolescents were more likely to report specific positive consequences such as physical satisfaction and were less

likely to report negative consequences such as guilt, pain, and lack of pleasure than female adolescents (Darling, Davidson, & Passerello, 1992; Higgins et al., 2010; Sprecher et al., 1995; Tsui & Nicoladis, 2004). Middle adolescent boys were also more likely to feel happy and less likely to feel bad or “used” as a result of their most recent sexual experience than adolescent girls (Dickson, Paul, Herbison, & Silva, 1998; Donald, Lucke, Dunne, & Raphael, 1994). These differences are consistent with the theory of the sexual double standard, which suggests that sex outside of marriage is more acceptable for men than for women (Crawford & Popp, 2003). Adolescent boys and young men may also feel more positive about their sexual experience due to men’s greater likelihood of experiencing orgasm (Sprecher et al., 1995). Less research has examined consequences of sex in emerging adulthood, but extant research that it may be a more similar experience for men and women than first intercourse in adolescence. Although male college students reported fewer negative consequences of their *first* intercourse than female students, male and female students did not differ in their likelihood of experiencing physical and psychological satisfaction as a result of their *most recent* intercourse, and female college students generally reported high levels of satisfaction from intercourse (Bay-Cheng, Robinson, & Zucker, 2009; Darling et al., 1992). On the whole, this research suggests that emerging adult men and women perceive their sexual experiences to be largely positive, but men may be more likely to experience some specific intrapersonal positive consequences, and women more likely to experience some intrapersonal negative consequences.

**Gender differences in interpersonal consequences of sex**—Less research has focused on interpersonal consequences of sex in adolescence and emerging adulthood, although the partnered nature of intercourse makes it likely that engaging in such behavior has implications for the relationship with a sexual partner. Such consequences may differ by gender, as sexual double standards portray men as primarily engaging in sex to experience intrapersonal consequences like physical pleasure, and women as primarily engaging in sexual behavior for relational reasons (Crawford & Popp, 2003). Research on college students has found that male college students reported less love for their partner as a result of first intercourse, although this difference in experiencing love may be more strongly related to feminine personality traits than gender *per se* (Smiler et al., 2005). Adult men were less likely than women to report complying to unwanted sexual activity initiated by a partner, suggesting that female adolescents may be more likely than male adolescents to report avoidance of a negative reaction from a partner as a result of sex (Impett & Peplau, 2003). This research suggests that because male emerging adults may be less oriented toward romantic relationships, they may experience fewer interpersonal consequences of sex, both positive and negative, compared to female emerging adults.

**Relationship with sexual partner**—Although the majority of sexually active college students reported having vaginal intercourse with only one sexual partner in the past year, many reported multiple partners, and the majority have had sex with at least one non-dating partner in their lifetime (Critelli & Suire, 1998; Paul, McManus, & Hayes, 2000). Sex with a non-dating partner may be experienced more negatively than sex with a partner with whom an adolescent is in a dating relationship. For example, sex with a non-dating partner was associated with depressive symptoms and lower self-esteem in adolescents and college students (Grello, Welsh, Harper, & Dickson, 2003; Paul et al., 2000). However, there may be gender differences in this association, due to the greater social acceptability of non-dating sexual behavior for men (Crawford & Popp, 2003). Greater sexual intimacy with a stable dating partner was associated with fewer depressive symptoms in both male and female high school students (Shulman, Walsh, Weisman, & Schelyer, 2009), whereas sex with a non-dating or short-term partner was associated with higher levels of depressive symptoms in female adolescents and college students (Grello, Welsh & Harper, 2006; Shulman et al.,

2009). Male college students who engaged in sex with a non-dating partner had fewer depressive symptoms than those who never had casual sex (Grello et al., 2006), although qualitative research has suggested that college men do feel regret about their “hooking up” experiences and express a preference for a stronger relational connection (Epstein, Calzo, Smiler, & Ward, 2009). Thus, it is possible that men experience short-term negative feelings about non-dating sex, although they may be less negative than women’s experiences and may not lead to longer-term psychological distress.

**Non-use of contraception**—Although use of contraception is a major area of research, only a few studies have examined how use of contraception may influence adolescents’ or emerging adults’ subjective experience of sex. College students frequently listed not using contraception as a reason for regretting a sexual experience (Oswalt, Cameron, & Koob, 2005). College students who did not use contraception at first sex reported a more negative experience (Smiler et al., 2005), and middle adolescent girls who did not use contraception at last intercourse were more likely to feel bad about their sexual experience than girls who used contraception (Donald et al., 1994). Given the function of contraception, it is likely that individuals who do not use contraception are more likely to experience other negative short-term consequences, such as greater worry about pregnancy or STIs, than those who use contraception. Emerging adults who do not use contraception may also report fewer positive consequences, as concern about health consequences may interfere with their enjoyment of, and subsequently their retrospective evaluation of, their experience.

This article expanded research on emerging adults’ perceived short-term positive and negative consequences using daily data from first-year college students. We advanced research on this topic in three ways. First, whereas most studies have examined only a small number of consequences of sex, we focused on nine categories of consequences assessed with 19 items. Second, because retrospective reports may be influenced by length of time and changes in relationship with a partner, such as subsequent dissolution of the relationship (Smiler et al., 2005; Sprecher et al., 1995), we asked participants about their experience on each sampled day that they reported engaging in vaginal sex, reducing retrospective reporting biases. Third, whereas most studies of subjective consequences of sex have ignored situational factors that may contribute to a more positive or negative experience, we examined how consequences of sex differ across two key situational factors: relationship with the sexual partner and use of contraception.

## Research Aims

This research had five aims. Because research on consequences of sex in emerging adulthood is limited, our first aim was to provide descriptive information about the frequency of positive and negative intrapersonal and interpersonal consequences of sex. Our second aim was to examine gender differences in the odds of reporting intrapersonal consequences of sex. Based on the theory of sexual double standards (Crawford & Popp, 2003) and past literature, we predicted that male students would have greater odds of reporting positive and lesser odds of reporting negative intrapersonal consequences than female students. Our third aim was to examine gender differences in the odds of experiencing interpersonal consequences of sex. Because women may be more oriented toward sex for the sake of their relationship with a partner, we predicted that male students would have lesser odds of experiencing positive interpersonal consequences than female students. However, because women might more often comply with their partners’ sexual requests and engage in unwanted sexual behavior, we predicted that male students would also have lesser odds of experiencing negative interpersonal consequences than female students.

The final two aims examined how consequences of sex may vary depending on situational factors. Due to limited past research, we made predictions for the odds of experiencing all positive and negative consequences, but did not distinguish between intrapersonal and interpersonal consequences. Our fourth aim was to compare the odds of experiencing positive and negative consequences of sex on days students had sex with dating, compared to non-dating, partners; we predicted lesser odds of experiencing positive and greater odds of experiencing negative consequences after sex with a non-dating partner, and expected that these associations would be stronger in female than male students. Our fifth aim was to compare the odds of reporting positive and negative consequences of sex on days students engaged in sex with and without using contraception; we predicted lesser odds of positive and greater odds of negative consequences on days they did not use contraception, and stronger associations in female than male students.

## Method

### Participants

Participants were part of the University Life Study (ULS), a web-based longitudinal study of college students at a large, Northeastern university. A stratified random sampling procedure with replacement was used to recruit a diverse sample of first-year college students. The university Registrar provided investigators with a list of first-year, first-time students meeting eligibility criteria (under 21 years of age, U.S. citizens or permanent residents, residing within 25 miles of campus) in four racial/ethnic groups (Black-, Asian-, White- and Hispanic-American). Each racial/ethnic group was divided by gender to create eight sampling units, and random samples of students in each sampling unit were invited to participate. Selected students received an email with a personal, secure link to the study, ensuring that only invited students could participate and that they could complete the survey only once. In total, 746 students participated in the initial first semester baseline survey (65.6% response rate), followed by 14 daily surveys, as well as a semester survey and 14 additional daily surveys in their second semester of college. Because this article focused on daily consequences of sexual behavior, only participants who responded yes to the item “Did you have vaginal sex yesterday?” on at least one of these 28 days of daily data collection during the first two semesters were included in the present analyses. Vaginal sex was defined for participants as “sex in which the penis penetrates the vagina.” Of the total study participants, 28% reported vaginal sex on at least one sampled day ( $N=209$ ; Mean age=18.5; range 17.3–20.3; 53% female). The analytic sample was 30% Hispanic/Latino [HL], and of non-HL, participants, 30% of the sample was African American, 22% Asian American, 35% European American and 12% Multiracial. The vast majority (97%) reported a heterosexual orientation at the start of the study (1% homosexual, 2% bisexual). Because individuals’ sexual identity may differ from their actual sexual behaviors (Diamond, 2002) and some sexual minority students in our sample reported engaging in vaginal sex in the daily surveys, we retained all participants who engaged in vaginal sex, regardless of sexual orientation.

### Procedures

Participants completed daily web-based surveys during their first and second semesters of college. Participants were asked to report on 14 consecutive days after their completion of a baseline semester survey, during September–November in Semester 1 and March–April in Semester 2. Students received up to \$75 each semester for completing all surveys, specifically \$5 as a pre-incentive, \$20 for the semester baseline survey, \$3 for each daily survey, and an \$8 bonus for completing all 14 daily surveys. This study was approved by the University’s Institutional Review Board, and a certificate of confidentiality was obtained from the United States federal government to protect participant confidentiality. Nearly all

baseline participants (97.3%) completed at least one daily survey during Semesters 1 and 2, and the majority of these (86% each semester) completed at least 12 of the 14 daily surveys. Across the first two semesters, the 746 students in the ULS provided 17,622 days of data, with the 209 participants in our analytic sample providing 5,287 days. Across these days participants reported vaginal sex on 679 days (3.9% of total study days; 12.9% of analytic sample days); 452 of these days (66.6%) were reported by females, and 227 days (33.4%) were reported by males.

## Measures

Predictors were gender, relationship with sexual partner, and use of contraception, and the outcomes were nine categories of consequences of sex. Gender was collected by self-report at baseline (0=female, 1=male), and all other measures were obtained from the daily web surveys. On each sampled day, participants were asked a series of questions about sexual behavior. If participants reported engaging in vaginal sex on a given day, they were asked a series of questions about their sexual experience. Due to our focus on immediate consequences of sex, only days in which participants reported having vaginal sex were included in these analyses.

**Relationship with sexual partner**—On each day participants engaged in sexual behavior they were asked “How would you describe this partner?” Responses to seven options were recoded into a dichotomous variable where 0=dating partner (engaged or married, living with, regular dating partner, casual dating partner; 89.8% of days of vaginal sex) and 1=non-dating partner (stranger or friend; 10.2%).

**Use of contraception:** Participants were asked “Did you use any method to prevent pregnancy or disease?” (0=contraception used, 1=no contraception used). Participants used contraception on 86.6% of vaginal sex days.

**Perceived consequences of sex:** Participants reported whether or not (no=0, yes=1) they experienced each of 19 consequences of sex on the prior day. The specific consequences included were selected based upon past research on motives for and against sex (Cooper, Shapiro, & Powers, 1998; Patrick, Maggs, Cooper & Lee, 2010; Sprecher & Regan, 1996). This past research examined how individuals may be motivated to have sex to experience a particular consequence, whereas our measure assessed whether these consequences were actually experienced. We assessed 7 positive consequences and 12 negative consequences, each reflecting both intrapersonal and interpersonal domains. We further grouped these consequences into nine categories, based on past literature on motivations for sex and consequences of sexual behavior. The categories upon which these groupings of consequences are based have been empirically validated (Cooper et al., 1998; Patrick et al., 2010). Categories are listed in Table 1 and Table 2, with individual items from each category in italics. For each category, we created a dichotomous variable, with 1 indicating experiencing at least one of the consequences in the category, and 0 indicating experiencing none of the consequences. Coefficient alpha was not calculated, as participants who experience one type of consequence during a sexual encounter would not necessarily be expected to experience other types of consequences. Correlations between categories are presented in Table 3.

**Positive intrapersonal consequences:** We examined three categories of positive intrapersonal consequences of sex. *Satisfaction* (two items) paralleled enhancement motives (Cooper et al., 1998) and research on physical satisfaction or pleasure as a consequence of sex (Darling et al., 1992; Tsui & Nicoladis, 2004; see Table 1 for intrapersonal items). *Coping* (1 item) assessed whether an individual felt better or cheered up, and paralleled

coping motives for sex (Cooper et al., 1998). *Self-affirmation* (1 item) assessed whether a participant felt attractive or better about themselves, and paralleled self-affirmation motives for sex (Cooper et al., 1998).

**Negative intrapersonal consequences:** We measured three categories of negative intrapersonal consequences of sex. Worrying about *health* paralleled health motives to abstain from sexual behavior (Patrick et al., 2010; Sprecher & Regan, 1996) and consisted of three items, assessing whether participants were worried about AIDS, other STDs, and pregnancy. *Guilt* (3 items) focused on feelings of guilt and regret identified in research on first intercourse (Darling et al., 1992; Donald et al., 1994; Sprecher et al., 1995) and assessed going against morals or ethics, worrying parents would find out, and experiencing regret. *Dissatisfaction* (2 items) corresponded with the experience of pain or lack of satisfaction reported in studies of first sexual intercourse (Darling et al., 1992; Tsui & Nicoladis, 2004).

**Positive interpersonal consequences:** We measured two categories of positive interpersonal consequences. *Intimacy* (1 item; see Table 2 for interpersonal items) paralleled intimacy motives for sex (Cooper et al., 1998), and reflected prior research on feeling more in love with a partner or having a romantic sexual experience (Smiler et al., 2005). *Partner approval* (1 item) assessed whether a participant felt they had avoided angering their partner by having sex, and paralleled partner approval motives (Cooper et al., 1998).

**Negative interpersonal consequences:** We measured one category of negative interpersonal consequences, *not ready* (2 items), which assessed whether a participant worried a partner wanted more commitment or felt things moved too fast. This category paralleled not ready motives for abstaining from sex (Patrick et al., 2010; Sprecher & Regan, 1996).

## Results

**Aim 1: Descriptive information on short-term consequences of sex:** Our first exploratory aim examined the frequency of experiencing specific short-term consequences of sexual behavior. On days participants reported engaging in vaginal sex, reporting one or more positive consequences of sex was nearly universal (96% of vaginal sex days; not shown). In contrast, students reported a negative consequence of sex on a minority of days (42%). Table 1 and Table 2 show frequencies of reporting categories of consequences and specific items for intrapersonal and interpersonal consequences. In the intrapersonal domain, the most commonly reported positive consequence was feeling physically satisfied (81% of vaginal sex days), whereas the most commonly reported negative consequence was worry about pregnancy (17% of days). A positive intrapersonal consequence was reported on 89% of days, whereas a negative intrapersonal consequence was reported on 34% of days. In the interpersonal domain, the most commonly reported positive consequence was feeling closer to partner (89%), and the most common negative consequence was worrying a partner wanted more commitment (7%). Participants reported at least one positive interpersonal consequence on 91% of days, whereas they reported at least one negative interpersonal consequence on 15% of days.

## **Aims 2 through 5: Predicting consequences of sex**

**Analytic plan:** To test aims 2 through 5 we used logistic multilevel modeling (Raudenbush & Bryk, 2002) to examine whether gender, relationship with sexual partner and use of contraception predicted nine categories of consequences. Models estimated consequences as a function of situational factors of sex (Level 1) nested within individuals (Level 2). In the Level 1 model (within-person), we used the following equations:

$$\text{Prob}(\text{Consequence} \mid \pi) = \phi$$

$$[\phi / (1 - \phi)] = \pi_0 + \pi_1(\text{Non-dating partner}) + \pi_2(\text{Non-Use of Contraception}) + e$$

The odds of experiencing a particular consequence of sex ( $\phi / (1 - \phi)$ ) were estimated as a function of an individual intercept ( $\pi_0$ ), the effect of sex with a non-dating partner ( $\pi_1$ ; reference group=dating partner) and the effect of non-use of contraception ( $\pi_2$ ; reference group=contraception used). The Level 2 model (between-persons) used the following equations:

$$\begin{aligned}\pi_0 &= \beta_{00} + \beta_{01}(\text{Male}) + r_0 \\ \pi_1 &= \beta_{10} + \beta_{11}(\text{Male}) \\ \pi_2 &= \beta_{20} + \beta_{21}(\text{Male})\end{aligned}$$

An individual's average odds of experiencing a consequence ( $\pi_0$ ) was calculated as a function of the average odds for female students ( $\beta_{00}$ ), the difference for male students ( $\beta_{01}$ ), and an error term ( $r_0$ ).  $\beta_{00}$  represents the intercept for female students who had sex with a dating partner and used contraception (the reference group) and  $\beta_{01}$  represents the difference in the intercept for male students who had sex with a dating partner and used contraception. Individual slopes for differences in odds of experiencing consequences of sex as a function of sex with a non-dating partner ( $\pi_1$ ) were calculated as the effect of a non-dating relationship for female students ( $\beta_{10}$ ) and how this slope differed for male students ( $\beta_{11}$ ). Similarly, individual slopes for non-use of contraception ( $\pi_2$ ) were calculated as the effect of not using contraception for female students ( $\beta_{20}$ ) plus the effect of being male on the slope for non-use of contraception ( $\beta_{21}$ ). Results are presented in Table 4 (intrapersonal consequences) and Table 5 (interpersonal consequences).

**Aim 2: Gender differences in intrapersonal consequences:** We predicted that male students would have greater odds of experiencing positive and lesser odds of experiencing negative intrapersonal consequences of sex than female students (Table 4;  $\beta_{01}$ ). We found no gender differences in positive intrapersonal consequences, but found differences in two negative consequences: worry about health and dissatisfaction. Male students had greater odds of worrying about a health consequence than female students, although this association differed depending on relationship status (see Aim 4). Male students also had 60% lesser odds of experiencing dissatisfaction. Thus, our predictions were partially supported for negative, but not positive, intrapersonal consequences.

**Aim 3: Gender differences in interpersonal consequences:** We predicted that male students would have lesser odds of experiencing positive and negative interpersonal consequences than female students (Table 5;  $\beta_{01}$ ). Gender differences in interpersonal consequences were non-significant, with one exception, in the opposite direction of our hypothesis. Male students had two times greater odds of reporting partner approval. Therefore, we found no support for our predictions in Aim 3.

**Aim 4: Relationship status:** We predicted that students would have lesser odds of reporting positive and greater odds of reporting negative consequences on days they had sex with a non-dating as opposed to a dating partner (Tables 4 and 5;  $\beta_{10}$ ), and that this association would be stronger for female students compared to male students ( $\beta_{11}$ ). Students were not less likely to report any positive consequences when they had sex with a non-dating, as opposed to dating, partner. However, we found two differences in reporting negative consequences. Students had nearly three times greater odds of reporting feeling guilty on



days they had sex with a non-dating, compared to a dating, partner. Students also had almost eight times greater odds of feeling they had not been ready for sex on days they had sex with a non-dating partner. With regard to gender differences in the effect of relationship with sexual partner, we found two significant differences. Male students were about 60% less likely to experience the intrapersonal consequence of self-affirmation after sex with a non-dating, as compared to a dating, partner (the product of odds for females and the gender interaction,  $\beta_{10} \times \beta_{11}$ ), whereas this association was not significant for female students. In addition, female students had almost three times greater odds of worrying about their health when they had sex with a non-dating, as opposed to a dating, partner; in contrast, male students had about 50% lesser odds of worrying about health after sex with a non-dating partner compared to sex with a dating partner. In sum, results supported predictions of Aim 4 for some negative, but no positive, consequences.

**Aim 5: Non-use of contraception:** We predicted that students would have lesser odds of experiencing positive consequences and greater odds of experiencing negative consequences on days they did not use contraception compared to days they did (Tables 4 and 5;  $\beta_{20}$ ), and that this association would be stronger for female, as compared to male, students ( $\beta_{21}$ ). We found differences for two negative intrapersonal consequences (health and guilt), but no differences in the odds of experiencing positive intrapersonal or any interpersonal consequences. Students who did not use contraception had nearly four times greater odds of worrying about health and two times greater odds of feeling guilty than students who used contraception. We found no significant gender differences in these associations. Thus, predictions of Aim 5 were partially supported, as non-use of contraception predicted some negative, but no positive, consequences.

## Discussion

This article examined the subjective experience of sexual behavior in first-year college students by describing the short-term consequences of sex they commonly reported, as well as how gender, relationship status and use of contraception were associated with these consequences. We found that college students reported at least one positive consequence on the vast majority of days they had sex. Negative consequences were reported far less frequently, even though fewer items assessed positive (7) than negative (12) consequences. However, students reported at least one negative consequence of sex on a sizable minority of days. We also found little evidence that more risky situational factors (sex with a non-dating partner and non-use of contraception) were associated with lesser odds of experiencing positive consequences of sex; consequences such as feeling closer to a partner and experiencing physical satisfaction were commonly reported across all sampled days of sex. However, consistent with past research (Donald et al., 1994; Grello et al., 2003; 2006; Oswalt et al., 2005; Smiler et al., 2005), we found that non-use of contraception and sex with a non-dating partner were associated with greater odds of some negative consequences. Specifically, students had greater odds of reporting intrapersonal consequences, such as guilt and worry about health, on days they did not use contraception. They also had greater odds of reporting the negative interpersonal consequence of feeling they were not ready for sex and the negative intrapersonal consequence of feeling guilty after sex with a non-dating, as opposed to a dating, partner. These findings suggest that non-use of contraception and sex with a non-dating partner predict greater odds of experiencing negative consequences, but may not make individuals less likely to experience positive consequences.

Contrary to past research showing more negative consequences of sex for adolescent girls compared to boys (Darling et al., 1992; Smiler et al., 2005; Sprecher et al., 1995) we found relatively little evidence to support gender differences in college students, suggesting that sexual behavior in emerging adulthood may be experienced more positively for female

college students than sexual behavior in early or middle adolescence. The only overall gender difference consistent with our predictions was that female students had greater odds of feeling dissatisfied than male students, which may be due to a lesser likelihood of experiencing orgasm (Sprecher et al., 1995). Similarly, we found only one gender difference consistent with past research that found more negative consequences of non-relationship sex and non-use of contraception for adolescent girls compared to boys (Donald et al., 1994; Grello et al., 2006; Shulman et al., 2009). Female students had lesser odds of worrying about their health after sex with a dating, as opposed to a non-dating, partner, whereas male students had greater odds of worrying about health after sex with a dating partner. Although we predicted that sex with a non-dating partner would be less negative for male, compared to female, students, it was somewhat surprising that effects for male students were not just smaller, but in the opposite direction. A possible explanation is the differential certainty for men and women about whether birth control was used. A female student using hormonal contraception knows whether she is protected from pregnancy; thus, her primary concern may be with STIs, which may be perceived as a greater risk with a male partner whose sexual history is not known. A male student, however, cannot be certain of whether his female partner consistently uses hormonal contraception. Because college students are more likely to use condoms with a non-dating partner and hormonal contraception with a dating partner (Civic, 1999), male students may be more likely to know if contraception was reliable and thus be less worried about health consequences with a non-dating partner.

However, apart from these two findings we did not find evidence to support predicted gender differences, and several findings were contrary to our predictions. Male students had greater odds of reporting partner approval than female students. This is surprising because men are typically found to be more desirous of frequent sex (Baumeister, Catanese, & Vohs, 2001) and women are more likely to comply with a partner's desire for sexual behavior (Impett & Peplau, 2003). Male students may overestimate their partners' approval of sex, perhaps because male students view sexual behavior as a more central component of intimacy, and subsequently may be more likely to see sex as a way to avoid angering a partner and preserve their relationship. In addition, although we predicted that the association between type of relationship partner and experiencing consequences would be stronger for female students, male (but not female) students had lesser odds of experiencing self-affirmation as a result of sex with a non-dating, compared to dating, partner. Because male college students place more value on physical attractiveness of their short-term and long-term sexual partners than female students do (Regan, Levin, Sprecher, Christopher, & Cate, 2000), female students may feel similarly body conscious, and thus equally likely to feel attractive or better about themselves, with both dating and non-dating partners. However, because college students see traits related to physical attractiveness as more important in short-term sexual partners (Castro & Lopes, 2010; Regan et al., 2000), sexual behavior with a non-dating partner may be a situation where male students feel body conscious, and thus less likely to feel attractive compared to days they have sex with a dating partner. Regardless of reasons for the differences, on the whole our findings suggest that relational aspects of sex are important to both male and female students. Future research should continue to examine how and why associations between relationship with partner and consequences of sexual behavior may or may not differ for male and female emerging adults.

Our findings provide insight into emerging adults' immediate perceptions of their sexual behavior, and these consequences may have implications for longer-term mental, social and physical well-being. Students reported primarily positive intrapersonal and interpersonal consequences of sex, which suggests that the effect of sexual behaviors on mental and social well-being may be largely positive. However, we did not directly evaluate how positively or negatively students viewed each consequence, and some consequences that may be positive

in the short-term could have different long-term effects, or could be indicative of other relationship problems. For example, research has shown that partner approval motivations may make an individual more likely to engage in sexual behavior, but can be associated with problematic outcomes, such as risky sexual behavior (Cooper et al., 1998). Similarly, experiencing partner approval may temporarily relieve relationship problems, but sex to avoid disagreements may be harmful to a relationship in the long-term or be associated with risky behavior. In addition, the large number of positive consequences emerging adults experience may cancel out negative feelings about a sexual experience and reinforce risky sexual behavior. In a related domain, college students report more positive than negative consequences of alcohol use, and positive consequences are more predictive of future drinking behavior than negative consequences (Park, 2004). Similar patterns may be found in risky sexual behavior, which may be reinforced by the positive consequences experienced (Brady & Halpern-Felsher, 1997; Kelly & Kalichman, 1998). Future research should examine the impact that positive and negative consequences have on future physical, mental and social well-being, such as mental health and relationship characteristics, in order to better understand both the developmental impact of sex in emerging adulthood and factors that are associated with risky behavior.

Our findings can inform sexuality education programs in several ways. Rotheram-Borus and colleagues (2009) discussed five elements of successful HIV prevention programs, and our research can help provide information for framing programs in two of these areas. First, effective programs provide specific content that is relevant to a population and the issues they face. Thus, programs may be better received by college students when they include information which accurately and realistically reflects the type of consequences they do experience. For example, our finding that sex with a non-dating partner was associated with greater odds of feeling not ready for sex suggests that a message focused on whether an individual feels ready to have sex with a particular partner may be more effective in reaching college students than a focus on avoiding sex altogether. Second, effective programs address barriers to implementing health behaviors (Rotheram-Borus et al., 2009). Our research describes potential barriers to healthy sexual behavior that could be addressed in prevention programs, in that college students often experience primarily positive consequences of risky sexual behaviors. In particular, this research could inform programs that involve motivational interviewing, as these programs focusing on addressing the specific reasons why individuals engage in risk behaviors. Such programs have been effective in reducing college student drinking (Larimer & Cronce, 2007), but have less frequently been applied to risky sexual behavior.

There are several limitations of this article that provide directions for future research. First, although we developed our items and categories based on past literature, our checklist-style measure did not permit the formal assessment of measurement reliability. Future research should address this weakness by expanding the measure, assessing reliability, and documenting validity in various populations of interest. In addition, future work might examine the positive and negative mental health and social outcomes associated with our consequence categories, to validate their positive and negative repercussions in these two domains. In addition, a qualitative or open-ended assessment might capture a fuller range of potential consequences, including a larger number of interpersonal consequences, as little research has examined the relationship context of sex (Lefkowitz, Gillen, & Vasilenko, 2011). Second, we only had information about the consequences of sex reported by first-year college students, and future research should endeavor to learn more about emerging adults who do not attend college, as well as individuals in the later years of college and beyond. In addition, it is unknown whether these findings would be similar in middle school or high school students. Consequences may differ depending upon whether sex occurs at a normative time in development (Meier, 2007; Spriggs & Halpern, 2008), and sexual

experiences may be perceived more negatively in adolescence, when fewer peers are sexually active and individuals may be less developmentally prepared to handle sexual behavior. Finally, using reports of daily sexual behavior limited both the number of individuals and days in our analysis. Sex is relatively infrequent for adolescents and emerging adults, with vaginal sex reported on only four percent of days sampled in this study. This relatively small sample may have limited our ability to detect small effects. Although daily surveys are useful for examining within-person variability, they may not capture the experiences of individuals who are sexually active, but engage in sex infrequently. Future studies should consider alternate methods, such as experience sampling with event reports of sexual behavior (Shrier et al., 2007), which may allow researchers to obtain more reports on sexual experiences without burdening participants.

In addition to improving on these limitations, future research on consequences of sexual behavior could be expanded in a number of ways. First, there are other situational factors that may influence consequences of sex. In addition to examining the type of relationship with a partner, future studies could examine how other relationship factors, such as relationship quality and communication with partner, influence perceptions of their sexual experiences. Future research could also examine other types of sexual behavior, such as testing whether consequences differ on days participants engage in only vaginal sex, only oral sex, or both types of sex, in order to give a fuller picture of emerging adults' sexual experiences. Finally, because sexual behavior is an accumulation of experiences rather than an isolated event, future research could examine associations across multiple days, such as how prior sexual experiences influence future ones.

Despite the above limitations, this article contributes to research on consequences of sexual behavior in several important ways. First, we examined a broad range of both positive and negative consequences of sexual behavior, giving us a clearer understanding of the experience of sexual behavior in emerging adulthood. These findings suggest that sexual behavior in emerging adulthood is associated with many positive consequences. Second, the use of daily surveys shortly after an occurrence of sex limited the influence of time or changes in relationship with partner, providing less biased information about emerging adults' experience of their sexual behavior. Finally, this article looked beyond documenting the consequences of merely being sexually active by examining situational factors that may play a role in outcomes of sexual behavior. We found that non-use of contraception and sex with a non-dating partner were more likely to be associated with negative consequences of sex, but were not associated with decreased odds of positive consequences. Examining these factors gives us a better understanding of what circumstances predict more positive and negative outcomes, and provides information on consequences of risky behaviors that could have implications for prevention programs.

## Acknowledgments

This study was funded by a grant from the National Institute of Alcohol Abuse and Alcoholism (R01 AA 016016) to Jennifer Maggs. We would like to thank Nicole Morgan, Wayne Osgood, Meg Small and the rest of the University Life Study team for their help with data collection, preparation and analysis.

## References

- Arnett JJ. Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*. 2000; 55:469–480. [PubMed: 10842426]
- Baumeister RF, Catanese KR, Vohs KD. Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of relevant evidence. *Personality and Social Psychology Review*. 2001; 5:242–273.

- Bay-Cheng LY, Robinson AD, Zucker AN. Behavioral and relational contexts of adolescent desire, wanting, and pleasure: Undergraduate women's retrospective accounts. *The Journal of Sex Research*. 2009; 46:511–24.
- Brady SS, Halpern-Felsher BL. Adolescents' reported consequences of having oral sex versus vaginal sex. *Pediatrics*. 2007; 119:229–236. [PubMed: 17272611]
- Castro F, de AraújoLopes F. Romantic preferences in Brazilian undergraduate students: From the short term to the long term. *The Journal of Sex Research*. 2010; 47:1–7. Advance Online Publication. doi: 10.1080/00224499.2010.506680.
- Civic D. The association between characteristics of dating relationships and condom use among heterosexual young adults. *AIDS Education and Prevention*. 1999; 11:343–352. [PubMed: 10494358]
- Cooper ML, Shapiro CM, Powers AM. Motivations for sex and risky sexual behavior among adolescents and young adults: A functional perspective. *Journal of Personality and Social Psychology*. 1998; 75:1528–1558. [PubMed: 9914665]
- Crawford M, Popp D. Sexual double standards: A review and methodological critique of two decades of research. *The Journal of Sex Research*. 2003; 40:13–26.
- Critelli JW, Suire DM. Obstacles to condom use: The combination of other forms of birth control and short-term monogamy. *Journal of American College Health*. 1998; 46:215–222. [PubMed: 9558820]
- Darling CA, Davidson JK, Passerello LC. The mystique of first intercourse among college youth: The role of partners, contraceptive practices, and psychological reactions. *Journal of Youth and Adolescence*. 1992; 21:97–117. [PubMed: 12343905]
- Diamond LM. Sexual identity, attractions, and behavior among young sexual-minority women over a 2-year period. *Developmental Psychology*. 2002; 36:241–250. [PubMed: 10749081]
- Dickson N, Paul C, Herbison P, Silva PA. First sexual intercourse: Age, coercion and later regrets reported by a birth cohort. *British Medical Journal*. 1998; 316:29–33. [PubMed: 9451263]
- Donald M, Lucke J, Dunne M, Raphael B. Gender differences associated with young people's emotional reactions to sexual intercourse. *Journal of Youth and Adolescence*. 1994; 24:453–464.
- Edwards, JN.; Booth, A. Sexuality, marriage, and well-being: The middle years. In: Rossi, AS., editor. *Sexuality across the life course*. Chicago: University of Chicago Press; 1994. p. 233–259.
- Epstein M, Calzo JP, Smiler AP, Ward LM. "Anything from making out to having sex": Men's negotiations of hooking up and friends with benefits scripts. *The Journal of Sex Research*. 2009; 46:414–24.
- Firestone, RW.; Firestone, LA.; Catlett, J. *Sex and love*. Washington D.C.: American Psychological Association; 2006.
- Fortenberry JD, Temkit M, Tu W, Graham CA, Katz BP, Orr DP, et al. Daily mood, partner support, sexual interest, and sexual activity among adolescent women. *Health Psychology*. 2005; 24:252–257. [PubMed: 15898860]
- Grello CM, Welsh DP, Harper MS. No strings attached: The nature of casual sex in college students. *The Journal of Sex Research*. 2006; 43:255–267.
- Grello CM, Welsh DP, Harper MS, Dickson JW. Dating and sexual relationship trajectories and adolescent functioning. *Adolescent & Family Health*. 2003; 3:103–112.
- Higgins JA, Trussell J, Moore NB, Davidson JK. Virginity lost, satisfaction gained? Physiological and psychological sexual satisfaction at heterosexual debut. *The Journal of Sex Research*. 2010; 47:384–394.
- Impett EA, Peplau LA. Sexual compliance: Gender, motivational, and relationship perspectives. *The Journal of Sex Research*. 2003; 40:87–100.
- Kelly JA, Kalichman SC. Reinforcement value of unsafe sex as a predictor of condom use and continued HIV/AIDS risk behavior among gay and bisexual men. *Health Psychology*. 1998; 17:328–335. [PubMed: 9697942]
- Larimer ME, Cronce JM. Identification, prevention, and treatment revisited: individual-focused college drinking prevention strategies 1999–2006. *Addictive Behaviors*. 2007; 32:2439–2468. [PubMed: 17604915]

- Lefkowitz ES. “Things have gotten better”: Developmental changes among emerging adults after the transition to university. *Journal of Adolescent Research*. 2005; 20:40–63.
- Lefkowitz, ES.; Gillen, MM.; Vasilenko, SA. Putting the romance back into sex: Sexuality and romantic relationships in emerging adulthood. In: Fincham, FD.; Cui, M., editors. *Romantic relationships in emerging adulthood*. New York: Cambridge University Press; 2011. p. 213-233.
- Meier AM. Adolescent first sex and subsequent mental health. *The American Journal of Sociology*. 2007; 112:1811–1847.
- O’Sullivan LF, Hearn KD. Predicting first intercourse among urban early adolescent girls: The role of emotions. *Cognition & Emotion*. 2008; 22:168–179.
- Oswalt SB, Cameron KA, Koob JJ. Sexual regret in college students. *Archives of Sexual Behavior*. 2005; 34:663–669. [PubMed: 16362250]
- Park CL. Positive and negative consequences of alcohol consumption in college students. *Addictive Behaviors*. 2004; 29:311–321. [PubMed: 14732419]
- Patrick ME, Mags JL, Cooper ML, Lee CM. Measurement of motivations for and against sexual behavior. Assessment. 2010 Advance Online Publication. doi: 10.1177/1073191110372298.
- Paul EL, McManus B, Hayes A. “Hookups”: Characteristics and correlates of college students’ spontaneous and anonymous sexual experiences. *The Journal of Sex Research*. 2000; 37:76–88.
- Raudenbush, SW.; Bryk, AS. *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage; 2002.
- Regan PC, Levin L, Sprecher S, Christopher FS, Cate R. Partner preferences: What characteristics do men and women desire in their short-term sexual and long-term romantic partners? *Journal of Psychology and Human Sexuality*. 2000; 12:1–21.
- Rotheram-Borus MJ, Swendeman D, Flannery D, Rice E, Adamson DM, Ingram B. Common factors in effective HIV prevention programs. *AIDS and Behavior*. 2009; 13:399–408. [PubMed: 18830813]
- Shrier LA, Shih M, Hacker L, de Moor C. A momentary sampling study of the affective experience following coital events in adolescents. *Journal of Adolescent Health*. 2007; 40:e1–e8. [PubMed: 17367729]
- Shulman S, Walsh SD, Weisman O, Schelyer M. Romantic contexts, sexual behavior, and depressive symptoms among adolescent males and females. *Sex Roles*. 2009; 61:850–863.
- Smiler AP, Ward LM, Caruthers A, Merriweather A. Pleasure, empowerment, and love: Factors associated with a positive first coitus. *Sexuality Research and Social Policy*. 2005; 2:41–55.
- Sprecher S, Barbee A, Schwartz P. “Was it good for you, too?”: Gender differences in first sexual intercourse experiences. *The Journal of Sex Research*. 1995; 32:3–15.
- Sprecher SS, Regan PC. College virgins: How men and women perceive their sexual status. *The Journal of Sex Research*. 1996; 33:3–15.
- Spriggs AL, Halpern CT. Sexual debut timing and depressive symptoms in emerging adulthood. *Journal of Youth and Adolescence*. 2008; 37:1085–1096. [PubMed: 19802319]
- Tsui L, Nicoladis E. Losing it: Similarities and differences in first intercourse experiences of men and women. *The Canadian Journal of Human Sexuality*. 2004; 13:95–106.
- World Health Organization. *Official Records of the World Health Organization; Preamble to the constitution of the World Health Organization as adopted by the International Health Conference; 19–22 June, 1946; New York. p. 21946*

Positive and Negative Intrapersonal Consequences of Sex, by Percentage of Days and Percentage of Participants Ever Reporting on Study

Table 1

Positive	Days	People	Male	Female	Negative	Days	People	Male	Female
Any positive intrapersonal	89.0	92.3	85.7	96.8	Any negative intrapersonal	34.3	54.1	42.9	61.6
Any physical satisfaction	86.9	91.4	84.5	96.8	Any worry about health	19.4	35.4	30.1	38.4
<i>Feel physically satisfied</i>	80.8	88.0	81.0	92.8	<i>Worry about pregnancy</i>	17.4	32.1	27.4	35.2
<i>Feel a thrill or rush</i>	55.9	70.3	68.9	78.0	<i>Worry you were exposed to another STD</i>	6.3	16.3	20.2	13.6
Coping					<i>Worry you were exposed to HIV/AIDS</i>	5.4	12.9	22.6	6.4
<i>Feel better or cheered up</i>	53.5	66.5	65.5	67.2	Any guilt	15.9	28.7	27.4	29.6
Self-affirmation					<i>Feel you went against your morals or ethics</i>	10.5	18.2	15.5	20.0
<i>Feel attractive or better about yourself</i>	31.1	43.5	41.7	44.8	<i>Worry your parents may find out</i>	7.2	13.4	11.9	14.4
					<i>Wish you had not had sex</i>	5.4	21.4	11.9	12.8
					Any not satisfied	12.5	23.0	13.1	29.6
					<i>Experience any discomfort or pain</i>	10.3	18.7	9.5	24.8
					<i>Not enjoy it</i>	3.7	10.5	9.5	21.2

Note. Level 1 *N* ranges from 664–673 days due to small variations in missing data for particular items, Level 2 *N*=209 persons. Twelve items assessing intrapersonal consequences of sex (in italics) were subdivided into categories of consequences. For categories that contained only one item, this item's frequency was reported; for categories with multiple items, frequencies for individual items were reported, as well as frequencies of reporting any item in the category.

Table 2

Positive and Negative Interpersonal Consequences of Sex, by Percentage of Days and Percentage of Participants Ever Reporting on Study Days

Positive	Days	People	Male	Female	Negative	Days	People	Male	Female
Any positive interpersonal	90.9	87.9	81.9	91.9	Any negative interpersonal	14.8	29.2	32.1	27.2
Intimacy					Any not ready	10.9	21.5	16.2	18.4
<i>Feel intimate or closer to partner</i>	88.6	85.0	74.7	91.9	<i>Worry your partner wants more commitment</i>	6.7	12.9	17.9	9.6
Partner approval					<i>Feel like things moved too fast</i>	6.6	15.3	17.9	13.6
<i>Feel you avoided annoying or angering your partner</i>	14.2	22.0	31.0	16.0	Other negative interpersonal <sup>a</sup>				
Peer approval <sup>a</sup>					<i>Worry another partner could find out</i>	6.7	14.8	17.9	12.8
<i>Feel you enhanced your reputation</i>	4.9	12.0	26.2	2.4	<i>Feel you harmed your reputation</i>	4.2	11.0	15.5	8.0

Note. Level 1 *N* ranges from 670–673 due to small variations in missing data for particular items, Level 2 *N*=209 persons. Seven items assessing interpersonal consequences of sex (in italics) were subdivided into categories of consequences. For categories that contain only one item, this item's frequency was reported; for categories with multiple items, frequencies for individual items were reported, as well as frequencies of reporting any item in the category.

<sup>a</sup>These consequences were not included in subsequent analyses, as they were reported on less than 10% of days of sex.



**Table 3**  
 Correlations Between Participants' Average Number of Daily Consequences of Sex in Nine Categories

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Physical satisfaction	1	.42**	.43**	-.01	.02	-.04	.42**	.19**	.14*
2. Coping		1	.42**	-.03	-.01	-.01	.24**	.32**	.05
3. Self-affirmation			1	.15*	.10	.17*	.21*	.42**	.24**
4. Worry about health				1	.49**	.44**	-.16*	.30**	.52**
5. Guilt					1	.30**	-.08	.20**	.37**
6. Not satisfied						1	-.16*	.16*	.35**
7. Intimacy							1	.10	-.15*
8. Partner approval								1	.38**
9. Not ready									1

*Note.* Variables used in this table assess individuals' average number of consequences reported in a category across days they reported vaginal sex.

**Table 4**  
 Logistic Multi-level Models Predicting Probability of Experiencing Intrapersonal Consequences of Sex by Gender, Relationship With Partner and Use of Contraception

	Positive			Negative								
	Satisfaction	Coping	Self-Affirmation	Health	Guilt	Dissatisfaction						
	OR	95% CI	OR	95% CI	OR	95% CI						
Average Odds $\pi_0$												
Intercept $\beta_{00}$	8.1***	5.5, 11.9	1.0	0.7, 1.5	0.4***	0.3, 0.6	0.2***	0.1, 0.2	0.1***	0.1, 0.2	0.2***	0.1, 0.3
Male $\beta_{01}$	0.9	0.5, 1.6	1.3	0.8, 2.3	1.2	0.7, 2.0	2.1*	1.3, 5.8	1.1	0.5, 2.2	0.4**	0.2, 0.8
Non-dating Partner $\pi_1$												
Intercept $\beta_{10}$	1.0	0.2, 4.3	0.8	0.3, 2.1	1.4	0.6, 3.6	2.7**	1.3, 5.7	2.7*	1.0, 7.2	1.2	0.4, 3.1
Male $\beta_{11}$	0.2	0.1, 1.0	0.4	0.1, 1.5	0.3*	0.1, 0.9	0.2*	0.1, 0.8	1.1	0.2, 7.3	1.0	0.2, 6.7
Non-Use of Contraception $\pi_2$												
Intercept $\beta_{20}$	0.6	0.3, 1.1	1.3	0.7, 2.3	0.9	0.5, 1.6	3.8*	1.4, 10.8	2.2*	1.3, 3.6	1.0	0.4, 2.4
Male $\beta_{21}$	2.5	0.9, 7.1	0.7	0.2, 1.6	1.1	0.5, 2.7	0.7	0.2, 2.7	0.9	0.4, 2.2	1.6	0.6, 4.5

Note: Due to small variations in missing data across each type of consequence, Level 1 N ranges from 657 to 664 person days. Level 2 N ranges from= 203 to 205 people. OR=Odds Ratio. CI=Confidence Interval.

\*  $p < .05$ ,  
 \*\*  $p < .01$ ,  
 \*\*\*  $p < .001$ .

Table 5

Logistic Multi-level Models Predicting Probability of Experiencing Interpersonal Consequences of Sex by Gender, Relationship With Partner and Use of Contraception

	Positive			Negative		
	Intimacy	Partner Approval	Not ready	Intimacy	Partner Approval	Not ready
	OR	95% CI	OR	95% CI	OR	95% CI
Average Odds $\pi_0$						
Intercept $\beta_{00}$	6.9***	4.0, 11.8	0.1***	0.1, 0.2	0.1***	0.1, 0.2
Male $\beta_{01}$	1.2	0.5, 2.5	2.3*	1.0, 5.1	1.6	0.7, 3.7
Non-dating Partner $\pi_1$						
Intercept $\beta_{10}$	0.3	0.1, 2.9	0.7	0.1, 5.7	7.9*	1.4, 44.6
Male $\beta_{11}$	0.7	0.1, 9.5	1.4	0.1, 18.5	0.1	0.1, 1.4
Non-use of Contraception $\pi_2$						
Intercept $\beta_{20}$	0.9	0.5, 1.9	1.5	0.4, 5.6	1.3	0.8, 2.2
Male $\beta_{21}$	0.9	0.4, 2.0	0.5	0.1, 2.3	0.8	0.3, 2.1

Note. Due to small variations in missing data across each type of consequence, Level 1 *N* ranges from 657 to 664 person days. Level 2 *N* ranges from 203 to 205 people. OR=Odds Ratio. CI=Confidence Interval.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$ .