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Willingness to Have Unprotected Sex

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Little is known about people's willingness to engage in sex without protection from unwanted pregnancy. This study surveyed 1,497 women and men at 75 clinics and physician offices across California after their reproductive health care visits in late 2007 and early 2008. When asked if they would have sex without contraception, 30% said definitively that yes, they would have unprotected sex, and 20% indicated they would "sometimes" or "maybe" engage in unprotected sex. In multivariate models, compared to non-Latino White respondents, Latinos who responded to the survey in English were 52% more likely and African Americans were 75% more likely to report willingness to have unprotected intercourse. Wanting a child within the next three years was associated with increased willingness to have unprotected sex. Age, gender, parity, and relationship status were not significant in multivariate models. A considerable proportion of women and men may be willing to have unprotected sex, even with access to subsidized contraceptive services and even when recently counseled about birth control. The dominant behavioral models of contraceptive use need to acknowledge the widespread likelihood of occasional unprotected sex, even among people motivated to usually use contraceptives. Findings underscore the need to make contraceptive methods accessible, easy to use, and even pleasurable.

Unprotected sex—defined here as heterosexual vaginal intercourse by couples not actively seeking pregnancy and not using a contraceptive method—is poorly understood from a public health perspective. There is little information on the frequency of unprotected sex, who is most at risk, and why couples engage in risky behavior. More easily observable is one of the consequences of unprotected sex—unintended pregnancy.

An estimated 3.1 million unintended pregnancies are experienced by women in the United States each year, and just over one half (52%) of these are experienced by women who did not use any method of contraception in the month of conception (Finer & Henshaw, 2006). Assuming a probability of conception per act of unprotected intercourse of 0.03 (Wilcox, Dunson, Weinberg, Trussell, & Baird, 2001), at least 54 million acts of unprotected sex occur in the United States each year.

Surveys have shown that approximately one in 10 women at risk of an unintended pregnancy do not report using any method of contraception (Foster et al., 2004; Mosher, Martinez, Chandra, Abma, & Willson, 2004). Yet, these numbers may overestimate the extent of contraceptive use since even couples who have a regular method of contraception may have episodes of unprotected sex. In an analysis of one year of U.S. women's contraceptive use patterns, 15% of women had a gap in contraceptive use, and 8% used no contraceptive method at all (Frost, Singh, & Finer, 2007).

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There are multiple reasons couples may have unprotected sex even when they are not actively seeking pregnancy. Many reasons pertain to barriers to contraceptive use, such as poor access to contraceptives (Oliva, Rienks, & McDermid, 1999; Schur, Berk, Good, & Gardner, 1999), dissatisfaction with family planning services (Forrest & Frost, 1996), lack of knowledge of contraceptive methods, experience with or fear of side effects (Ramstrom, Baron, Crane, & Shlay, 2002; Rosenberg, Waugh, & Burnhill, 1998; Rosenberg, Waugh, & Meehan, 1995; Trussell & Vaughan, 1999), the cost of contraceptives (Oliva et al., 1999), and the difficulty or inconvenience of using contraceptive methods (Archer et al., 2002; Davis, 2000; Kerns, Westhoff, Morroni, & Murphy, 2003; Oakley, Sereika, & Bogue, 1991; Smith & Oakley, 2005; Urdl et al., 2005; Walsh, 1997). Another important barrier is that women may lack the ability to negotiate use of contraceptives with a partner (Kerns et al., 2003; Montgomery et al., 2008).

However, even when couples are able to negotiate contraceptive use, sexual and relationship factors have the potential to contribute to unprotected sex, even in the absence of desire for a pregnancy. Scholarship on condom use indicates that people may abandon condoms in an effort to facilitate both physical and emotional closeness (Randolph, Pinkerton, Bogart, Cecil, & Abramson, 2007; Sobo, 1993; United States Agency for International Development, 2000), or simply because of significant sexual desire (Abraham et al., 1999). Couples may abandon contraceptives if they perceive that contraceptives diminish sexual pleasure and enjoyment (Higgins & Hirsch, 2008). One study found that adolescents engage in unprotected sex to express love, experience pleasure, enhance mood, and please their partners (Gebhardt, Kuyper, & Dusseldorp, 2006). Another study found that young women were less likely to use a contraceptive method on the days when they felt particularly close to or connected with their partner (Bartz, Shew, Ofner, & Fortenberry, 2007). Moreover, qualitative evidence suggests that some people may deliberately risk an unprotected pregnancy, although a child is not wanted, because doing so may heighten the sexual experience, strengthen a relationship, or test one's fertility and procreative ability (Higgins, Hirsch, & Trussell, 2008).

Pregnancy ambivalence may also contribute significantly to a couple's willingness to engage in unprotected sex. The willingness to risk conception is likely related to the strength of couples' desire to avoid pregnancy and perceptions of how an unintended pregnancy would affect life plans. In a recent analysis of 1,978 adult women, ambivalence around pregnancy was one of the strongest predictors of both contraceptive nonuse and having a gap in use while remaining at risk for unintended pregnancy (Frost et al., 2007). Attitudes toward pregnancy, even among women not actively seeking pregnancy, range from a pregnancy making a woman "feel like you are dying" to feeling like "perfect health" (Schwarz, Smith, Steinauer, Reeves, & Caughey, 2008).

Couples who are not actively trying to become pregnant may not use contraception when their judgment is impaired—for example, due to drug or alcohol use (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009; Kiene, Barta, Tennen, & Armeli, 2009). Finally, after having several episodes of unprotected intercourse in which they did not conceive, some couples may believe that they are not fertile, increasing the risk of future acts of unprotected intercourse (Rainey, Stevens-Simon, & Kaplan, 1993; White, Rosengard, Weitzen, Meers, & Phipps, 2006; Wimberly, Kahn, Kollar, & Slap, 2003). According to one study, belief that one could not become pregnant is a leading cause of nonuse of contraceptive methods among women at risk of an unintended pregnancy (Foster et al., 2004).

Despite this multitude of reasons why people may engage in deliberately unprotected sex, we have little empirical data on people's perceived willingness to take pregnancy risks, or on the characteristics of people most likely to engage in unprotected sex. The purpose of this study was to examine willingness to have sex without birth control among women and men who were not actively seeking pregnancy. We identify characteristics associated with risk taking and explore some covariates to explain willingness to engage in unprotected sex.

Method

The study population was composed of clients in the state-administered California Family Planning, Access, Care, and Treatment (Family PACT) Program. Family PACT provides contraceptive and reproductive health services to more than 1.6 million women and men each year. Services comprise contraceptive services (including provision of barrier methods), sexually transmitted infection (STI) testing and treatment, pregnancy testing, education and counseling, and sterilization. Abortion is not a covered Family PACT service. Those eligible for Family PACT include all women and men residing in California with incomes less than 200% of the federal poverty level and who have no other source of confidential family planning health care coverage. There are currently more than 2,000 public and private (including both non-profit and for profit) health clinics and doctors' offices throughout the state providing services through Family PACT. Eighty Family PACT providers in 13 counties were randomly selected to be recruiting sites for this study between August 2007 and February 2008. The 13 counties represented a cross-section of rural and urban areas and northern, southern, and central California. The sampling frame excluded providers who had seen fewer than 12 Family PACT clients per day in the previous year. Clinics agree to participate in evaluation activities, such as the client exit interview,

when they sign their contracts to provide family planning services under the state program. Of the 80 selected providers, 75 (94%) participated in the study. Of the five providers who were not in the final sample, three providers were no longer seeing Family PACT clients, one could not be located, and one refused to participate.

The interview was performed as part of the Family PACT evaluation by the University of California, San Francisco (UCSF) Bixby Center for Global Reproductive Health and the Public Health Institute. Clients participating in the study signed an informed consent form to participate and received an information sheet approved by the UCSF Committee for Human Research, the State of California Health and Human Services Agency's Committee for the Protection of Human Subjects, and the Public Health Institute's institutional review board. The sheet detailed the risks and benefits to study participants, and provided research staff contact information.

Fourteen female bilingual interviewers were recruited and trained to conduct interviews in both English and Spanish. Each interviewer posted a sign onsite at selected provider sites to solicit participation in the survey. At most sites, clinic staff also helped to recruit participants as clients checked in or out for their appointments. Interviewers aimed to conduct 20 in-person interviews per site. All Family PACT clients who received services on a scheduled interview day were eligible to participate in the study. Interviews were confidential, but not anonymous—medical record numbers were collected to allow for comparisons between survey results and claims data (not used in this article). Clients were given $20 upon completion of the interview. The average interview length was 13 min.

The interview tool consisted of 118 items covering topics such as pregnancy and birth history, contraceptive and STI services, STI risk behaviors, satisfaction with health care, access to general health services, and referrals. The interview was pre-tested for clarity and comprehension. Respondents were asked, "Would you have sex even if you did not have birth control?," and were offered three responses: "Yes," "sometimes or maybe," and "no." This question appeared after questions about their main method of contraception before and after the visit, the birth control methods they discussed during their visit, barriers to use of the intrauterine device (for female respondents), and what method they would use if contraceptives were not provided free through Family PACT.

In presenting the factors that were associated with willingness to have sex without birth control, we tested all cross-tabulations using analysis of variance tests to determine significance between groups. We used multivariate logistic regression models to determine the variables predictive of giving a response of "yes" or "sometimes or maybe" to the question about willingness to have sex without birth control. Our predictive variables of interest included age, sex, race and ethnicity, parity, relationship status, and whether and when respondents wanted more children. Results were considered significant at the $p < .05$ level.

Results

Sample Characteristics

One thousand four hundred ninety-seven clients at the 75 participating providers responded to the exit interview upon completion of their Family PACT visit. Response rates were high; nine out of 10 clients (90%) who were approached agreed to participate. One quarter of the interviews (26%) were conducted at Planned Parenthood® clinics, followed by group medical practices (23%), other community or free clinics (22%), and private doctors' offices (13%). Overall, 61% of the study respondents were clients of public or nonprofit providers, and 39% were seen by private for-profit providers. The purpose of the visit was birth control for 46% of women and 13% of men, annual exam for 31% of women and 19% of men, and STI services for 11% of women and 60% of men. More than three quarters (79%) of the female respondents and two thirds (68%) of the male respondents reported that they had discussed their birth control needs and specific contraceptive methods during the visit.

Table 1 shows the distribution of characteristics of respondents in this study. The characteristics of the client exit interview respondents are similar to the demographic profile of the Family PACT Program as a whole (Bixby Center for Reproductive Health, 2009). We excluded women and men who were pregnant or whose partners were pregnant ($n = 43$) or seeking pregnancy ($n = 29$), those who had been sterilized ($n = 13$), and those who said they did not know if they would have sex without birth control ($n = 30$) from these analyses. More than one half of the respondents were in their 20s (52%), with 18% under the age of 20, 22% in their 30s, and 9% 40 years or older. One in eight respondents was male. Regarding marital status, 22% of respondents were married, 25% were not married but were living with a partner, 25% were in a relationship but not living together, and 18% were single and not in a relationship. One half (49%) of the respondents had no children, 18% had one child, 17% had two children, and 15% had three or more children.

Consistent with the population served by Family PACT, two thirds (66%) of respondents were Latino, 16% were White, 7% were African American, 7% were Asian or Pacific Islander, and 4% gave their race and ethnicity as "other." Sixty percent of Latinos responded to the survey in Spanish. Due to presumed differences in level of acculturation, Latinos who responded to the survey in Spanish and those who chose English were treated

Table 1. *Characteristics of Respondents*

Total	**1,382**	**100%**
Age		
<20	242	18%
20–29	713	52%
30–39	304	22%
40+	122	9%
Gender		
Male	156	11%
Female	1226	89%
Parity		
No children	692	50%
1 child	244	18%
2 children	237	17%
3+ children	208	15%
Language and race or ethnicity		
Latino; interview in Spanish	553	40%
Latino; interview in English	358	26%
Non-Latino White	227	16%
African American	94	7%
Asian or Pacific Islander	90	7%
Other	57	4%
Relationship status		
Married	301	22%
Cohabiting	346	25%
In a relationship (not cohabiting)	488	35%
Not in a relationship	245	18%
Reproductive intentions		
Wants no more children	386	28%
Wants a child in ≤3 years	376	27%
Wants a child in >3 years	480	35%
Doesn't know	140	10%

as two discrete groups in our race and ethnicity variable. However, because the interviews were only done in English and Spanish, clients who could not communicate in either of these languages were excluded from the client exit interview. According to the 2007 through 2008 Family PACT annual report, 4% of the clients served by Family PACT have a primary language other than English or Spanish; however, some of these clients may have been able to do the survey in English or Spanish.

Who Would Have Sex without Birth Control? Bivariate Analyses

Table 2 shows responses to the question, "Would you have sex even if you did not have birth control?" Among the 1,382 women and men who responded to the question, none were either pregnant or seeking pregnancy, and none had not been sterilized. Nearly one third of the respondents gave the answer "yes," they would be willing to have sex even if they did not have birth control. Another 20% said that they might do it or would do it "sometimes." One half of the respondents said that they would refrain from having sex if they did not have a method of birth control.

Younger respondents were more likely than older respondents to report that they were willing to have sex without birth control: 56% of teenagers and 54% of respondents in their 20s were willing to engage in sex without birth control, compared to 46% of respondents in their 30s. There were no significant differences by gender of the respondent. Respondents who had zero children or one child were more likely to go without birth control than respondents with two or more children. There were differences by racial and ethnic groups, with English-speaking Latinos and African Americans more likely to report willingness to have sex without birth control. Unmarried respondents in a relationship, both those who were living with and apart from their partners, were more likely to report willingness to go without birth control than were married respondents. There were differences in willingness to go without birth control by when respondents wanted to have a child or another child—respondents who said they wanted a child or another child within the next three years were much more likely to report willingness to have sex without birth control than respondents who did not want any more children.

Willingness to Have Unprotected Sex: A Multivariate Model

When the characteristics shown in Table 2 were combined in a multivariate model, we could identify which factors remained significantly associated with an increased willingness to have unprotected sex, even when other factors were held constant. Language, race and ethnicity, and reproductive intentions remained statistically significant factors (see Table 3).

Two racial and ethnic groups stood out as having a higher likelihood of reporting a willingness to have unprotected sex. Compared to non-Latino White respondents, Latinos who responded to the survey in English were 52% more likely and African Americans were 75% more likely to report willingness to have unprotected intercourse. Latinos who responded to the survey in Spanish and Asian or Pacific Islanders were no more likely to report a willingness to have unprotected sex than White non-Latinos.

Reproductive intentions were also significant predictors of willingness to have unprotected sex, even among women and men who were not actively seeking pregnancy. Clients who reported wanting a child within the next three years were 41% more likely to report being willing to have unprotected sex than respondents who wanted no more children.

The remaining three factors that were significant in the bivariate analyses—age, parity, and relationship status—were not significant when examined together with race or ethnicity and reproductive intentions in a multivariate model.

Table 2. *Willingness to Have Sex without Birth Control among Respondents Who Were Not Pregnant or Seeking Pregnancy*

Total	Yes 30%	Sometimes or Maybe 20%	No 50%	Total 100%	*n* 1,382	*p*
Age						
<20	34%	22%	44%	100%	242	*
20–29	31%	22%	47%	100%	713	*
30–39	26%	20%	54%	100%	304	Reference
40+	23%	11%	66%	100%	122	
Gender						
Male	28%	24%	47%	100%	156	Reference
Female	30%	20%	50%	100%	1,226	
Parity						
No children	33%	22%	45%	100%	692	*
1 child	33%	21%	45%	100%	244	*
2 children	24%	20%	56%	100%	237	
3+ children	22%	16%	63%	100%	208	Reference
Language & race and ethnicity						
Latino; interview in Spanish	23%	19%	58%	100%	553	
Latino; interview in English	35%	25%	40%	100%	358	*
Non-Latino White	29%	19%	52%	100%	227	Reference
African American	45%	19%	36%	100%	94	*
Asian or Pacific Islander	32%	18%	50%	100%	90	
Other	42%	18%	40%	100%	57	*
Relationship status						
Married	26%	16%	58%	100%	301	Reference
Cohabiting	32%	20%	49%	100%	346	*
In a relationship (not cohabiting)	32%	23%	45%	100%	488	*
Not in a relationship	28%	21%	51%	100%	245	
Reproductive intentions						
Wants no more children	25%	18%	57%	100%	386	Reference
Wants a child in ≤3 years	39%	20%	41%	100%	376	*
Wants a child in >3 years	27%	22%	51%	100%	480	
Doesn't know	30%	22%	48%	100%	140	

*Significant difference from the reference group at the .05 level using an analysis of variance *F* test.

Discussion

Most unintended pregnancies in the United States are caused not by contraceptive failure, but by lack of contraceptive use or gaps in use (Finer & Henshaw, 2006). The literature's dominant explanations for nonuse relate primarily to contraceptive access and ease, effectiveness, side effects, and the woman's desire to space or limit births. In other words, practitioners tend to assume that most women *want* to use contraceptives, but can be stymied by access barriers, prohibitive expenses, or side effects. Most researchers have yet to explore how, why, and which couples engage in (or think they would engage in) deliberately unprotected sex, even when a child is not wanted.

This study of family planning clients in California is among the first to directly ask women and men about their inclination toward unprotected sex (Gebhardt, van Empelen, & van Beurden, 2009; Norris et al., 2009). In previous studies, we and others have asked women who are at risk of unintended pregnancy about their contraceptive practices, identifying women who are not currently using contraception as most "at risk" of unintended pregnancy. In contrast, asking about *willingness* to engage in unprotected sex, even among those seeking or already using contraceptives, picks up the much larger group of people who might have a regular method but would nonetheless have sex without that or another method, either regularly or occasionally.

Our findings indicate that a considerable proportion of people say they would have unprotected sex, even when they have access to subsidized contraceptive services—and even when recently counseled about birth control. When asked if they would have sex without contraception, a sizeable 30% said definitively that yes, they would have unprotected sex, and an additional 20% indicated they would "sometimes" or "maybe" engage in unprotected sex. These respective proportions may be even larger among the general population since respondents in this study were at least somewhat motivated to avoid unintended pregnancy by attending a family planning clinic; moreover, respondents in our study may have minimized their own willingness to have unprotected sex due to interest in providing more socially desirable responses. Even with access to reproductive health services and despite the potential undesirability of their responses, women and men still reported a significant willingness to take deliberate pregnancy risks through lack of contraceptive use.

Table 3. *Factors Associated with Willingness to Have Unprotected Sex among Clients at Family Planning Clinics*

Variable	Odds Ratio	95% Confidence Interval
Age		
<20	1.24	0.81, 1.89
20–29	1.16	0.85, 1.57
30+	Reference	
Gender		
Female	0.91	0.64, 1.30
Male	Reference	
Parity		
0	1.38	0.87, 2.21
1	1.46	0.94, 2.26
2	1.09	0.73, 1.64
3+	Reference	
Language and race and ethnicity		
Latino; interview in Spanish	0.81	0.55, 1.19
Latino; interview in English	1.52*	1.07, 2.17
Non-Latino White	Reference	
African American	1.75*	1.05, 2.93
Asian or Pacific Islander	1.11	0.67, 1.82
Other	1.55	0.85, 2.82
Relationship status		
Married	Reference	
Cohabiting	1.22	0.88, 1.70
In a relationship (not cohabiting)	1.25	0.88, 1.78
Not in a relationship	1.01	0.68, 1.49
Reproductive intentions		
Wants no more children	Reference	
Wants a child in ≤3 years	1.41*	1.01, 1.96
Wants a child in >3 years	0.74	0.53, 1.06
Doesn't know	1.03	0.68, 1.56

Note. $N = 1{,}382$ family planning program clients, who were not pregnant or seeking pregnancy, and were not were sterilized. Data are from the California Family Planning, Access, Care, and Treatment Program client exit interview 2007 through 2008.
*$p = .05$.

One of the intentions of this study was to identify those people who were most likely to express willingness to have unprotected sex. Although findings were largely in the expected direction in univariate analyses, few factors remained statistically significant in multivariate analyses. It could be that willingness to take pregnancy risk relates less to the demographic factors we have captured here and more to psycho-biological factors, such as propensity for risk more generally or one's profile relating to sexual excitation and inhibition (Janssen & Bancroft, 2007). That said, three subgroups of people within our multivariate analyses were significantly more likely to report willingness to engage in unprotected sex—namely, those who said they wanted a child within the next three years and two racial and ethnic groups (African Americans and Latinos who responded to the survey in English).

Reproductive Intentions

Study participants who said they wanted a child within the next three years were significantly more likely than those who did not want any more children to express willingness to have unprotected sex. These findings support the emerging literature on the power of pregnancy ambivalence in shaping contraceptive nonuse (Frost et al., 2007; Higgins et al., 2008; Stanford, Hobbs, Jameson, DeWitt, & Fischer, 2000). Compared to those who have completed or nearly completed their desired childbearing, women and men who want another child in the near future may be less invested in preventing a pregnancy at all costs. Qualitative evidence suggests that people may deliberately risk an "unintended" pregnancy, although a child is not fully wanted, because doing so may heighten the sexual experience, strengthen a relationship, or confirm one's fertility (Higgins et al., 2008). Moreover, at the clinical level, we have encountered substantial anecdotal evidence suggesting that many people wonder if they can get pregnant at all, especially if previous episodes of unprotected sex have not resulted in a pregnancy.

Language and Race or Ethnicity

The significant difference in willingness to have unprotected intercourse between Latinos who responded to the survey in English versus Spanish is surprising. We expected that Latinos who responded to the survey in English, who are unlikely to be recent immigrants and, therefore, more acculturated to the United States, would more closely resemble non-Latino Whites than mostly Spanish-speaking Latinos regarding a willingness to have unprotected sex. Yet, this was not what we found. One possible explanation may be social desirability bias. Predominantly Spanish-speaking Latinos may be sensitive to stereotypes about high fertility among new immigrants and, therefore, less willing to admit intention to have unprotected intercourse.

Compared to non-Latino Whites, African American respondents' greater willingness to engage in unprotected sex is more in keeping with national patterns of lower contraceptive use (Mosher et al., 2004) and more frequent unintended pregnancy (Finer & Henshaw, 2006). African Americans' cultural suspicion of contraception, particularly given historic abuses to their reproductive rights (Davis, 1983; Malat, 2000; Roberts, 1997), may explain the higher willingness to engage in unprotected intercourse. There may also be less emphasis in African American communities about deliberately planning the timing of parenthood, especially when children can serve as such a source of pride or hope (Edin & Kefalas, 2005), or when "weathering" effects (i.e., the shortening of African Americans' lifespan due to chronic racism and structural violence) may increase the attractiveness of unintended pregnancy (Geronimus, 1996). Compared to other racial and ethnic groups, African Americans may feel less agency or interest in controlling exactly when and how they have children.

Future studies should attend to racial and ethnic influences on the psycho-social–sexual processes at work in shaping contraceptive use (or lack thereof), and not just the demographic differences in unintended pregnancy. Doing so, particularly regarding condom use, may be especially important in light of disparate STI and HIV rates between racial and ethnic groups.

This study had several limitations. First, we are simply reporting intentions to have or not have unprotected sex, and intentions cannot infallibly predict behavior (Gebhardt et al., 2009). However, social desirability indicates that most people are likely to underestimate, rather than overestimate, their lack of contraceptive use (Stuart & Grimes, 2009), so we find the widespread willingness to have unprotected intercourse notable.

Second, we are unable to provide the reasons *why* people would engage in unprotected sex—for example, sexual pleasure, infertility fears, or emotional and relational benefits. A man or woman not actively avoiding a pregnancy is not necessarily actively *seeking* a pregnancy either. We suspect that ignorance regarding fecundity and ambivalence around pregnancy are two major explanatory factors, but confirming these explanations is beyond the scope of the data. Moreover, a meaningful difference may exist between those people who prefer not to use contraception (especially condoms) and those who are prepared to take a risk if no contraception is available—a distinction we were unable to explore in this analysis. Future work would benefit from exploring the range of reasons why people may engage in sex without contraception, and whether willingness to engage in such unprotected sex means something significantly different than apathy around contraception or pregnancy prevention.

Third, the survey questions were designed to ask about use of modern methods of contraception. It is not clear how many respondents would use withdrawal, use natural family planning (rhythm method), or only engage in non-vaginal intercourse if a more effective method of contraception was not available. Because we recruited participants from family planning clinics (where people go to get prescription methods of birth control), this population may be particularly inclined to use modern methods of contraception. Fewer than 2% of respondents said they would use withdrawal, natural family planning, or abstinence if they had to pay out of pocket for their birth control.

The lack of difference in willingness to have unprotected sex between male and female respondents was surprising. This gender similarity may be partly due to the relatively small sample of men compared to women (156 compared to 1,226). The results presented in our logistical regression model hold when the sample was restricted to women alone. One would need a larger sample of men to reliably estimate predictors of willingness to have unprotected sex among only male respondents. That said, our findings may challenge commonly held notions regarding men, risk taking, and unintended pregnancy—mainly, that men are much more willing than women to take sexual risks. Men are infrequently surveyed about contraceptive and pregnancy motivations, and should be included in future research on these topics.

A significant proportion of women and men reported that they were willing to engage in unprotected sex, even among those seeking family planning services. Our findings challenge the notion that lack of contraceptive use necessarily represents barriers relating to access, expense, or side effects; nor is unprotected sex a definitive indicator of a heat-of-the-moment lapse of judgment since respondents reported a willingness to risk conception far outside of the sexual moment. The dominant behavioral models of contraceptive use need to be expanded to acknowledge the widespread likelihood of occasional unprotected sex, even among people motivated to (usually) use contraceptives. Findings also underscore the need to make contraceptive methods accessible, easy to use, and even as pleasurable as possible because without access to contraceptives, many couples may engage in unprotected intercourse. More research into couples' perceptions of the risk of conception from unprotected intercourse and cultural differences in attitudes toward contraceptive use is needed.

References

Abraham, C., Sheeran, P., Norman, P., Conner, M., de Vries, N., & Otten, W. (1999). When good intentions are not enough: modeling postdecisional cognitive correlates of condom use. *Journal of Applied Social Psychology*, *29*, 2591–2612.

Adefuye, A. S., Abiona, T. C., Balogun, J. A., & Lukobo-Durrell, M. (2009). HIV sexual risk behaviors and perception of risk among college students: implications for planning interventions. *BMC Public Health*, *9*, 281.

Archer, D. F., Bigrigg, A., Smallwood, G. H., Shangold, G. A., Creasy, G. W., & Fisher, A. C. (2002). Assessment of compliance with a weekly contraceptive patch (Ortho Evra/Evra) among North American women. *Fertility and Sterility*, *77*(Suppl. 2), S27–S31.

Bartz, D., Shew, M., Ofner, S., & Fortenberry, J. D. (2007). Pregnancy intentions and contraceptive behaviors among adolescent women: a coital event level analysis. *Journal of Adolescent Health*, *41*, 271–276.

Bixby Center for Reproductive Health. (2009). *Family PACT Program report, FY 07/08*. Sacramento, CA: University of California, San Francisco.

Davis, A. J. (2000). Advances in contraception. *Obstetrics & Gynecology Clinics of North America*, *27*, 597–610, vii.

Davis, A. Y. (1983). Racism, birth control, and reproductive rights. In A. Y. Davis (Ed.), *Women, race and class* (pp. 202–221). New York, NY: Vintage.

Edin, K., & Kefalas, M. (2005). *Promises I can keep: Why poor women put motherhood before marriage*. Berkeley, CA: University of California Press.

Finer, L. B., & Henshaw, S. K. (2006). Disparities in rates of unintended pregnancy in the United States, 1994 and 2001. *Perspectives in Sexual and Reproductive Health*, *38*, 90–96.

Forrest, J. D., & Frost, J. J. (1996). The family planning attitudes and experiences of low-income women. *Family Planning Perspectives*, *28*, 246–255, 277.

Foster, D. G., Bley, J., Mikanda, J., Induni, M., Arons, A., Baumrind, N., et al. (2004). Contraceptive use and risk of unintended pregnancy in California. *Contraception*, *70*, 31–39.

Frost, J. J., Singh, S., & Finer, L. B. (2007). Factors associated with contraceptive use and nonuse, United States, 2004. *Perspectives in Sexual and Reproductive Health*, *39*, 90–99.

Gebhardt, W. A., Kuyper, L., & Dusseldorp, E. (2006). Condom use at first intercourse with a new partner in female adolescents and young adults: the role of cognitive planning and motives for having sex. *Archives of Sexual Behavior*, *35*, 217–223.

Gebhardt, W. A., van Empelen, P., & van Beurden, D. (2009). Predicting preparatory behaviours for condom use in female undergraduate students: a one-year follow-up study. *International Journal of STDs & AIDS*, *20*, 161–164.

Geronimus, A. T. (1996). What teen mothers know. *Human Nature*, *7*, 323–352.

Higgins, J. A., & Hirsch, J. S. (2008). Pleasure, power, and inequality: incorporating sexuality into research on contraceptive use. *American Journal of Public Health*, *98*, 1803–1813.

Higgins, J. A., Hirsch, J. S., & Trussell, J. (2008). Pleasure, prophylaxis and procreation: a qualitative analysis of intermittent contraceptive use and unintended pregnancy. *Perspectives in Sexual and Reproductive Health*, *40*, 130–137.

Janssen, E., & Bancroft, J. (2007). The Dual-Control Model: The role of sexual inhibition and excitation in sexual arousal and behavior. In E. Janssen (Ed.), *The psychophysiology of sex* (Vol. 15, pp. 197–222). Bloomington, IN: Indiana University Press.

Kerns, J., Westhoff, C., Morroni, C., & Murphy, P. A. (2003). Partner influence on early discontinuation of the pill in a predominantly Hispanic population. *Perspectives in Sexual and Reproductive Health*, *35*, 256–260.

Kiene, S. M., Barta, W. D., Tennen, H., & Armeli, S. (2009). Alcohol, helping young adults to have unprotected sex with casual partners: Findings from a daily diary study of alcohol use and sexual behavior. *Journal of Adolescent Health*, *44*, 73–80.

Malat, J. (2000). Racial differences in Norplant use in the United States. *Social Science & Medicine*, *50*, 1297–1308.

Montgomery, C. M., Lees, S., Stadler, J., Morar, N. S., Ssali, A., Mwanza, B., et al. (2008). The role of partnership dynamics in determining the acceptability of condoms and microbicides. *AIDS Care*, *20*, 733–740.

Mosher, W. D., Martinez, G. M., Chandra, A., Abma, J. C., & Willson, S. J. (2004). Use of contraception and use of family planning services in the United States: 1982–2002. *Advanced Data*, *350*, 1–36.

Norris, J., Stoner, S. A., Hessler, D. M., Zawacki, T., Davis, K. C., George, W. H., et al. (2009). Influences of sexual sensation seeking, alcohol consumption, and sexual arousal on women's behavioral intentions related to having unprotected sex. *Psychology of Addictive Behaviors*, *23*, 14–22.

Oakley, D., Sereika, S., & Bogue, E. L. (1991). Oral contraceptive pill use after an initial visit to a family planning clinic. *Family Planning Perspectives*, *23*, 150–154.

Oliva, G., Rienks, J., & McDermid, M. (1999). What high-risk women are telling us about access to primary and reproductive health care and HIV prevention services. *AIDS Education Preview*, *11*, 513–524.

Rainey, D. Y., Stevens-Simon, C., & Kaplan, D. W. (1993). Self-perception of infertility among female adolescents. *American Journal of Diseases of Children*, *147*, 1053–1056.

Ramstrom, K. C., Baron, A. E., Crane, L. A., & Shlay, J. C. (2002). Predictors of contraceptive discontinuation in a sexually transmitted disease clinic population. *Perspectives in Sexual and Reproductive Health*, *34*, 146–152.

Randolph, M. E., Pinkerton, S. D., Bogart, L. M., Cecil, H., & Abramson, P. R. (2007). Sexual pleasure and condom use. *Archives of Sexual Behavior*, *36*, 844–848.

Roberts, D. E. (1997). *Killing the Black body: Race, reproduction, and the meaning of liberty*. New York, NY: Pantheon.

Rosenberg, M. J., Waugh, M. S., & Burnhill, M. S. (1998). Compliance, counseling and satisfaction with oral contraceptives: a prospective evaluation. *Family Planning Perspectives*, *30*, 89–92, 104.

Rosenberg, M. J., Waugh, M. S., & Meehan, T. E. (1995). Use and misuse of oral contraceptives: risk indicators for poor pill taking and discontinuation. *Contraception*, *51*, 283–288.

Schur, C., Berk, M., Good, C., & Gardner, E. (1999). *California's undocumented Latino immigrants: A report on access to health care services*. Menlo Park, CA: Kaiser Family Foundation Project HOPE Center for Health Affairs.

Schwarz, E. B., Smith, R., Steinauer, J., Reeves, M. F., & Caughey, A. B. (2008). Measuring the effects of unintended pregnancy on women's quality of life. *Contraception*, *78*, 204–210.

Smith, J. D., & Oakley, D. (2005). Why do women miss oral contraceptive pills? An analysis of women's self-described reasons for missed pills. *The Journal of Midwifery & Womens Health*, *50*, 380–385.

Sobo, E. J. (1993). Inner-city women and AIDS: the psycho-social benefits of unsafe sex. *Cultural and Medical Psychiatry*, *17*, 455–485.

Stanford, J. B., Hobbs, R., Jameson, P., DeWitt, M. J., & Fischer, R. C. (2000). Defining dimensions of pregnancy intendedness. *Maternal and Child Health Journal*, *4*, 183–189.

Stuart, G. S., & Grimes, D. A. (2009). Social desirability bias in family planning studies: a neglected problem. *Contraception*, *80*, 108–112.

Trussell, J., & Vaughan, B. (1999). Contraceptive failure, method-related discontinuation and resumption of use: results from the 1995 National Survey of Family Growth. *Family Planning Perspectives*, *31*, 64–72, 93.

United States Agency for International Development. (2000). *Men and AIDS—A gendered approach*. Geneva, Switzerland: Author.

Urdl, W., Apter, D., Alperstein, A., Koll, P., Schonian, S., Bringer, J., et al. (2005). Contraceptive efficacy, compliance and beyond: factors related to satisfaction with once-weekly transdermal compared with oral contraception. *European Journal of Obstetrics & Gynecology and Reproduction Biology*, *121*, 202–210.

Walsh, J. (1997). Contraceptive choices: supporting effective use of methods. In Beyond acceptability: Users' perspectives on contraception (pp. 89–96): *Reproductive Health Matters for the World Health Organization*.

White, E., Rosengard, C., Weitzen, S., Meers, A., & Phipps, M. G. (2006). Fear of inability to conceive in pregnant adolescents. *Obstetrics and Gynecology*, *108*, 1411–1416.

Wilcox, A. J., Dunson, D. B., Weinberg, C. R., Trussell, J., & Baird, D. D. (2001). Likelihood of conception with a single act of intercourse: Providing benchmark rates for assessment of post-coital contraceptives. *Contraception*, *63*, 211–215.

Wimberly, Y. H., Kahn, J. A., Kollar, L. M., & Slap, G. B. (2003). Adolescent beliefs about infertility. *Contraception*, *68*, 385–391.