Sexual Behavior among Adults in the U.S.: A Couples-Based Approach

John O.G. Billy
William R. Grady
Daniel H. Klepinger
Morgan E. Sill

Battelle
Centers for Public Health Research and Evaluation
2101 Wilson Boulevard, Suite 800
Arlington VA 22201

Paper prepared for presentation at the 2008 Annual Meeting of the Population Association of America, New Orleans, LA, April 16-19. The research reported in this paper derives from a project entitled, "Sexual Behavior and Sexual Decision Making among Adult Couples," supported by the National Institute of Child Health and Human Development, under Grant Number 1 R01 HD055611-01. The views and opinions expressed in this paper are those of the authors and do not necessarily reflect the views or policies of NICHD or the Battelle Memorial Institute. Direct all correspondence to John O.G. Billy at the above address, or email at: billy@battelle.org.

Introduction

Sexual behavior is a significant part of most adult relationships. In addition to being a potential risk factor for pregnancy and STDs, it is a definitional component of marriage and cohabitation, as well as an important part of many nonmarital relationships. Indeed, sex has been described as a fundamental "building block" of all human relationships because it provides physical pleasure and "revelation to others of intimate aspects of the self" (Reiss 1986:235).

Unfortunately, the importance of sexual behavior has not been matched by an increase in its understanding, especially the sexual behavior of adults in the U.S. In an earlier paper (Billy et al., 2007) we attempted to add to that understanding by using a unique data set of adult heterosexual couples and examining factors related to unmarried and non-cohabiting dating couples' sexual and contraceptive behaviors that are risk factors for HIV and STDs. Specifically, we examined how personal, partner and relationship characteristics are related to a dating couple's risk of having anal sex and also whether the couple did anything to protect themselves from STDs during the four weeks prior to interview.

In this paper, we extend our study of the sexual behavior of adults in the U.S. by using the same couples data set and investigating the sexual behavior of married and cohabiting adults. We focus on two behaviors: whether the couple engaged in male and female receptive oral sex during the four weeks prior to interview; and whether the couple had anal sex during the four weeks prior to interview. Although both behaviors have low pregnancy risk, and both may carry less disease risk when practiced among adults in more committed forms of relationships, they are relatively under-studied behaviors that are important because of their implication for the physical pleasure of one or both partners and consequent relationship satisfaction.

The richness of our data set, the National Couples Survey, affords us the opportunity to examine the sexual behavior of those in married and cohabiting relationships from a broader perspective than typically has been accomplished in the literature. It allows us to take a couple's approach and include personal and relationship characteristics as reported by each partner in the relationship to investigate how the female and male partner reports are related to reports of the couple's sexual behavior and whether the female or male's reports are more influential. We also examine whether the effects of those

characteristics on the sexual behavior outcomes differ by relationship type (married, cohabiting). A particularly distinguishing characteristic of our study is that we take power in the couple's relationship explicitly into account and examine how the respondent's or their partner's power, defined along several dimensions, is related to the sexual practices of the couple. Further, we examine how couple communication impacts sexual behavior.

Background

Increasing numbers of researchers are beginning to stress the importance of couple dynamics in sexual decision making. For example, several studies have examined the association of relationship characteristics with STD/HIV risk (e.g. Amaro & Raj 2000; Brown, Feiring, & Furman 1999; Katz et al. 2000; Kelly & Kalichman 1995; Ku et al. 1994; Logan, Cole, & Leukefeld 2002; Noar, Zimmerman, & Atwood 2004; Sheeran, Abraham & Orbell 1999; Soler et al. 2000). This includes characteristics such as length and type of relationship (Katz et al. 2000; Ku et al. 1994), gender and power dynamics within relationships (Amaro & Raj 2000; Logan et al. 2002; Pulerwitz, Gortmaker & DeJong 2000; Soler et al. 2000), and partner support (e.g., Sheeran, Abraham & Orbell 1999). However, in addition to their focus on behaviors directly related to STD risk (e.g. condom use), most of these studies are limited in their findings due to the very specific populations (e.g. young adult females and males aged 13-24, minority-focused) available for analysis. Further, none of these studies takes into consideration reported behavior from both partners.

Indeed, much of what we know about any aspect of sexual behavior is based largely on women's or men's separate reports of their attitudes and behaviors. Relatively little research has been based on couples, where information about both partners is used, despite the fact that sexual behavior is inherently dyadic. At most, we use proxy reports about the partner's characteristics, behaviors and attitudes obtained from the index respondent. These reports may be inaccurate and can lead to a distortion of the individual and joint attitudes and behaviors of the partners that drive those behaviors (Miller 1994).

One reason for this individualistic research focus is simply lack of data. The few studies that have had couples data are small, purposive samples that focus mainly on white, middle-class, or college-

aged couples (e.g., Blumstein & Schwartz 1983; Christopher & Cate 1985; Harvey et al. 2002; Ochs & Binik 1999; Peplau, Rubin & Hill 1977; Seal 1997). Further, most of these studies using couples data are restricted to married couples and tend to focus not on sexual behavior, but instead examine fertility behavior and intentions, and occasionally contraceptive use and STD acquisition (e.g., Beach et al. 1982; Beckman 1984; Beckman et al. 1983; Clark & Swicegood 1982; Downs 1977; Fried & Udry 1979; Green & Biddlecom 2000; Miller & Pasta 1996; Miller et al. 1985-86, 1986, 1991, 1993; Severy & Silver 1993; Shain et al. 1985; Sobel & Arminger 1992; Thomson 1989, 1990, 1995, 1997; Thomson & Williams 1982; Thomson et al. 1988).

An exception to these generalizations is the "couples sample" of Wave III of the National Longitudinal Study of Adolescent Health in which 1,500 Add Health respondents recruited their romantic partners (married, cohabiting and dating) to complete the same interview as they (see Harris 2005). However, although an exceptionally rich database, Add Health lacks measures of relationship characteristics like power that are available in the data set we use here.

Couples studies using data from larger population-based surveys offer the promise of gaining a more comprehensive, accurate understanding of factors that affect the sexual behaviors of the couple. Most sexual behavior is experienced and expressed within a close relationship and can not be separated from that relationship (Christopher & Sprecher 2000; DeLamater & Hyde 2004). Using information from both partners in sexuality research allows the examination of individual and relationship variables that combine to determine interdependent decision making (Becker 1996; Gomez & Marin 1996; Miller & Pasta 1996; Severy & Silver 1993). That is to say, a couple's collective sexual behavior is the result of some level of interaction between the couple, interaction that may not be captured by studies based only on the reports of men or women (Agnew 1999; DeLamater & Hyde 2004).

A particularly important characteristic affecting couple interaction and sexual decision making is the relative power of each partner in the relationship. In general terms, power refers to the relative ability of one partner to act independently, to dominate decision making, to engage in behavior against the other partner's wishes, or to control a partner's actions (Pulerwitz et al. 2000). Power plays a role in determining whose pleasure is given priority and when and how sexual activity takes place (Vohs et al.

2004). Despite the norm of egalitarianism in romantic relationships in the U.S. (Peplau et al. 1977), power imbalances occur (Sprecher & Felmlee 1997), and these imbalances may have different effects depending on relationship type (Brines & Joyner 1999). One source of power differences between partners is gender role ideology. Individuals who have an egalitarian gender role orientation are more likely to adopt traits and behaviors that are non-traditional for their gender (Presser 1994; Ross 1987). As such, partners who have an egalitarian gender role orientation will have more balanced dependencies in their relationships, and each partner's sexual preferences will have a similar level of influence in the decision making. In contrast, in a traditional gender role orientation where women engage in family care roles and men engage in economic provider roles, the man's power may be higher and decisions about sex may therefore be more strongly influenced by his preferences (Lucke 1998; Ostovich & Sabini 2004; Shearer et al. 2005). To our knowledge, no study has examined the gender role ideology of both partners and how together they may affect a couple's sexual risk taking behavior.

Nor has gender role ideology been considered jointly with other dimensions of power within the relationship. Structural power may arise from individual characteristics that are linked to inequality in the larger social structure, such as education or income. Power imbalances also emerge from differences between partners in their level of commitment to the relationship. A more highly committed partner will be relatively more dependent, and thus less powerful in sexual decision making. Similarly, when partners differ in how well they think they could manage on their own if their relationship were to end, the less dependent partner will have more power. A final source of power are the relationship alternatives of the partners. When individuals believe they have little trouble in attracting potential partners, they will perceive more alternatives to their current partnership, be less dependent on it, and thus have greater power (Agnew 1999; Beckman 1984; Clark & Swicegood 1982; Cohen et al. 1991; Fullilove et al. 1990; Gomez & Marin 1996; Pulerwitz et al. 2000; Thomson 1990). Here, we examine both the main effects of power, defined along several dimensions, as well as how power may moderate (condition) the impact of the respondent's or partner's characteristics on the sexual behaviors in which they engage.

Another important relationship characteristic is couple communication. Talking about sex can be difficult for many couples, especially for the female partner (Aggleton et al. 1999; Muehlenhard & McCoy 1991). In many settings, women are not supposed to be as knowledgeable about sex as men, may be expected to be passive in sexual matters, and may be less comfortable than men with discussing sexual matters (Barnett & Stein 1998; McCormick 1994). Another barrier to communication is that men and women may lack the language to describe their desires and fears, and men especially may be reluctant to acknowledge their ignorance of sexual matters by discussing them (Zeidenstein & Moore 1996). Individuals with less traditional attitudes toward gender roles may be more likely to discuss sexual issues and disclose more sexual information with their partners (Greene & Faulkner 2005). Although there is an extensive literature on the relationship between couple communication and sexual and relationship satisfaction, as well as literature on communication between partners about contraceptive choices (see e.g., Harvey et al. 2006; Inazu 1987; Wagstaff et al. 1995), more information is needed about the extent to which couple communication affects the balance in the couple's sexual decision making and how communication may increase the couple's range of practiced behaviors.

Data and Study Population

Data used in this paper are from the married and cohabiting couple samples of the National Couples Survey (NCS). Completed interviews were obtained from both partners of 413 married couples and 261 cohabiting couples (1348 individuals). Because the primary purpose of the survey was to provide information about couple decisions about contraception, the eligibility criteria are that the female is age 20 to 35 years (ages during which most childbearing occurs) and not currently pregnant or trying to get pregnant and neither partner is sterile. An additional eligibility criterion was that the male partner is age 18 or older so that both partners are adults and parental informed consent was not necessary for either partner.

The survey used computer-assisted self interviewing (CASI) to collect data from an area probability sample of household residents in four cities and the county subdivisions immediately adjacent to them: Baltimore, MD; Durham, NC; St. Louis, MO; and Seattle, WA. These four cities were chosen for substantive and pragmatic reasons. On the pragmatic side, these cities are where Battelle

has survey research offices, making the survey much more cost efficient. On the substantive side, these sites provide diverse populations with respect to race, ethnicity, economic status and other factors influencing sexual and contraceptive decision making. Within the four study sites, we stratified segments by percent black and oversampled segments with high minority concentrations. This procedure yielded a large enough sample of couples where one or both partners are black to provide stable estimates of both their behaviors and the antecedents of those behaviors. Participants were recruited through door-to-door visits from female interviewers where there was an attempt to match, where possible, the race of the interviewer with that of the respondent.

During the survey effort, 65% of households were successfully rostered (all adult residents listed by age). During this rostering endeavor, 27% of households were identified as having one or more age-eligible person.[1] If more than one age-eligible person was identified, one of them was randomly selected for screening for eligibility on the other survey criteria. If the selected person was married or cohabiting, we screened the female partner in the couple for eligibility; and had an 83% screening rate. If the selected person was a dater, the selected (focal) respondent was screened first, and then we screened his/her nonresident partner prior to establishing the couple's eligibility. Eligibility screening was completed for 79% of focal respondents. If the focal person was defined as a "dater," field interviewers then asked that respondent to recruit his/her dating partner. If the focal respondent's dating partner agreed to be contacted, the field interviewer administered an eligibility screener, which was completed with 77% of the focal respondents' partners. Overall, 72% of eligible married and cohabiting couples completed the survey, and 94% of eligible dating couples completed the survey.

At the interviewing stage, partners were scheduled to take the survey contemporaneously, usually at their residence. The questionnaires for males and females are nearly identical. Field interviewers took two laptop computers to the home and set up the partners in separate spaces for the interview, preventing communication. The computer-assisted survey allowed us to capture and resolve many data inconsistencies during the interview process. Overall, the rostering, screening, and interview response

[1] Only men age 18-45 were included in the roster since men in this age range were the most likely to have age-eligible female partners. If a female was selected for screening, there was no upper limit on her partner's age as a selection criterion.

rates are respectable, given the heavy burden of the survey on the participants, in that each member of the couple was asked to provide rather sensitive information about their private lives. Further, the requirement that both partners had to agree to participate also increased the chances for refusal, particularly among daters who had to recruit their non-resident partner for us, telling that person that s/he wanted to provide us with information about their sexual relationship and convincing the partner to do the same.

The analysis weights used in this study were separately constructed for each of the four study sites, with the sampling weights reflecting the probability of selection of each sampled address and of the couple sampled from that address (if any) and then adjusting these weights to account for nonresponse. When data from all four sites are used together, as in this study, the weights are readjusted such that each site has an equal impact on the analysis. To facilitate this approach, we created a combined weight by adjusting each site's weights so that they summed to a common population total.

Measurement

The outcomes measures used in this analysis are defined based on the reports of the female partner. Female reports are also used to define relationship duration and number and age of children in the household. All other measures are based on separate reports from each partner.

Outcome Measures

We focus on two couple sexual behavior as outcomes: 1) whether the couple had anal intercourse during the four weeks before the survey; and 2) whether the couple had male or female receptive oral sex during the four weeks prior to interview. Whether the couple had anal sex is based on a direct question about this behavior and is defined as a dichotomous (1=yes, 0=no) measure. In our sample of married and cohabiting couples, 12% of couples had anal sex in the last four weeks. The second outcome is a polytomous measure based on direct questions about whether the respondent performed oral sex on her partner and whether her partner performed oral sex on her in the last four weeks. Response categories are: 1) neither receptive male or female oral sex; 2) male receptive but not female receptive oral sex; 3) female receptive but not male receptive oral sex; and 4) both male receptive and

female receptive oral sex. In our sample, 28% of couples had no oral sex activity in the last four weeks, 11% had male receptive oral sex only, 13% had female receptive oral sex only, and 47% of couples practiced both male and female receptive oral sex.

Male and Female Partner Demographic and Social Characteristics

We include in our analyses a number of socio-demographic characteristics of the male and female partners that are often used to account for adult sexual behavior. These include: age (in years); race/ethnicity (measured as a series of dummies defining three categories: Hispanic, non-Hispanic black, and non-Hispanic other); completed education (in years); personal income during the last calendar year (in thousands of dollars); and religiosity (a dichotomy defined as not religious at all vs. somewhat or very religious). We also include mother's education and father's education (measured as a series of dummies defining five categories: less than high school, high school complete, some college, college complete, and "no man[woman] who mostly raised you"). As a measure of sexual experience, we also include the number of sex partners the female and male report having had in their lifetime. This is an interval level measure truncated at the point where the distribution becomes highly skewed.

Couple Relationship Characteristics

Relationship status is a dichotomy based on screener data, defined as "1" if the couple cohabits and "0" if they are married. Duration of the relationship is measured as the number of months between the date when the partners began "seeing each other on a regular basis" and the date of the interview. Finally, we include an interval level measure of the total number of children (biological or non-biological) living in the household, and a measure of the age of the youngest child in the household. This latter measure is constructed as a spline, with a dichotomous variable set to "1" if the couple has no children and "0" otherwise, and then an interval-level variable of the reported age of the youngest child in the household.

Couple Communication

Level of couple communication is captured with four variables. The first is a direct question about the percent chance that the respondent will tell the partner about what is going on when s/he has had a particularly difficult or bad day, and the second is the respondent's belief about the percent chance that

the partner will tell the respondent about what is going on when the partner has had a particularly difficult or bad day. The third and fourth variables are based on a series of questions from which we compute interval-level measures of the average number of hours per week the respondent spends telling the partner about the respondent's day, and the respondent's report of the average number of hours per week the partner tells the respondent about the partner's day (Bean et al. 1983).

Relationship Power

We include multiple measures of power so as to capture its multidimensional nature in relationships (Pulerwitz et al. 2000). Among these underlying sources of power are measures of the partners' relative structural power based on differences in their education and income. *Relative education* is calculated by subtracting the male's years of education from the female's such that positive values indicate more education of the female. *Relative income* is an interval-level measure of the percentage of the couple's combined income (her total personal income plus his total personal income during the last calendar year) that is provided by the female.

Another dimension on which power is based is relationship commitment, with the less committed partner being more powerful. To tap relationship commitment we use two measures in our analyses. The first is based on responses to the question: "Compared to your partner, who is more *committed to making your relationship last*?" (with responses ranging from 1="definitely me" to 5="definitely him/her"). The second is based on responses to the question, "Compared to your partner, if it ever ended, who's more *likely to end your relationship*?" (with responses reverse-coded so that 1="definitely him/her" to 5="definitely me")(Drigotas & Rusbult 1999).

We measure gender role ideology using items from the King and King (1997) Sex Role Egalitarianism Scale. The eight items in this summative scale ask how strongly (1="very strongly disagree" to 5="very strongly agree") respondents agree to statements about the roles of husbands and wives. These statements take the form: "A wife's career is less important than her husband's;" and "A wife's career is less important than her husband's." Higher scores indicate greater traditionalism.

Another power dimension is relationship alternatives, with those who have more alternatives to their current relationship having more power. Relationship alternatives are based on responses

(1="impossible" to 4= "certain") to three questions: 1) "If you broke up this month, how likely is it that you could find another partner better than him/her?"; 2) "…how likely is it that you could find another [husband/wife/partner] as good as [him/her]?" and 3) "…how likely is it that there are many other men/women you could be happy with?" (Udry 1983). Responses to these questions were factor analyzed to construct a scale of relationship alternatives for each partner, ranging from few perceived alternatives to many perceived. The scale for the male partner was then subtracted from the scale for the female partner to create a measure of *relative relationship alternatives* such that more positive values indicate more relationship alternatives for the female relative to her male partner.

A related dimension of power is relationship dependency, with those who are less dependent on the relationship having more power. Questions tapping relationship dependency take the form: "If you broke up this month, how likely is it that during the next year you would be quite satisfied without a partner?;" and "…how likely is it that you would be able to take care of yourself?" (Udry 1983). Responses to these questions on life disruption after a breakup have 4-point response sets ranging from "impossible" to "certain." Six questions were used to create a summative scale of relationship dependency for each partner, ranging from high dependency to low dependency. The scale for the male partner was then subtracted from the scale for the female partner to create a measure of *relative relationship dependency* such that more positive values indicate lower dependency for the female relative to her male partner.

Means and standard deviations for all variables used in the analyses are presented in Table 1.

[Table 1 about here]

Analytic Approach

To maintain the couple as the unit of analysis and to be able to assess the impact of each partner's characteristics on the couple's sexual behavior, one member (the female partner) is selected as the index respondent. We then examine how her characteristics, her male partner's characteristics, and couple characteristics are related to her report of each of the two sexual behavior outcomes.

Multivariate models of the dichotomous measure of anal sex are estimated using the logit procedure in STATA. Models of the oral sex polytomous measure are estimated using the multinomial logit procedure.

For each outcome we first estimated a main effects model that included relationship status, relationship duration, number of children and age of youngest child in the household, both partners' demographic and social characteristics, their reports of couple communication, and our constructed measures of relationship power. The modeling procedure actually involved the estimation of many preliminary models to determine the interrelationship among the predictor variables, whether there was any suppression of variable effects, and particularly whether it was the female's characteristic, the same characteristic but pertaining to her partner, or both the female' and male's comparable characteristic that was related to the outcome. For example, we wanted to be able to determine whether what mattered was only the female's religiosity, only the male's religiosity, both partner's religiosity together, neither partner's religiosity, or whether both partner's religiosity had predictive power but not when entered together. Following this exercise, for simplicity all non-significant coefficients were trimmed from the model of each outcome. To maintain a minimum level of socio-demographic background control, however, relationship status, relationship duration, and the index respondent's age and ethnicity were retained regardless of significance level.

We then repeated our modeling procedure for each outcome by testing for interactions between relationship status and all other variables to see if any of their effects differed by whether the couple was married or cohabiting. We also tested for interactions between measures of couple communication and selected characteristics. Finally, we interacted variables in our model with each of the power measures to investigate the extent to which relationship power weights the decision to engage in a sexual behavior toward one partner or the other by increasing, reducing or eliminating the importance of the respondent's or her partner's beliefs or characteristics. This included testing for significant interactions between the power measures and variables that were previously dropped from the model in order to examine whether the main effects of some of the beliefs and characteristics were non-significant because their effects are conditional on the respondent's or her partner's power. The final model that

we derived for each outcome includes the set of significant terms that most succinctly describes the effects of female, male and couple characteristics on the likelihood that the couple had anal sex and male and female receptive oral sex in the four weeks prior to interview.

Although the coefficients in these models adequately convey the direction of the effects and whether they are statistically significant, they are difficult to interpret substantively, particularly the multinomial logit models. For easier interpretation, we therefore used the model results to calculate predicted probabilities of the extent to which the couple with a certain characteristic engaged in each behavior.[2] Note that for continuous measures, we calculated predicted probabilities for "low" and "high" values, defined roughly as one standard deviation below and above the mean value of the measure.[3]

Results

Anal Sex

Predicted probabilities of having anal sex in the last four weeks for couples with different characteristics are presented in Table 2. Relationship duration is unrelated to having anal sex. Overall, there also is no difference between married and cohabiting couples in their probability of having anal sex. However, relationship status does condition the effect of presence of children in the household. Among married couples, number of children does not affect the probability of having anal sex. Among cohabiting couples, however, those with no children have a much higher probability of having anal sex than those with children. Indeed, cohabiting couples with two children resemble married couples with or without children, whereas cohabiting couples with no children have a probability of having anal sex that is about double. Thus, although it may be that cohabiting couples are more open to having anal sex than married couples, the presence of children in cohabiting households dampens that openness.[4]

[2] In performing these simulations we gave each respondent her and her partner's own value on all of the characteristics included in the logit model except the single characteristic of interest. For example, to get the predicted probabilities that a couple whose female partner is Black, Hispanic, or other had anal sex in the last four weeks, all couples in the sample were given respondent and partner values on all characteristics and beliefs except race/ethnicity. We then used the parameter estimates in the model to calculate a predicted probability of having anal sex if the female partner was Black, Hispanic or other.

[3] For example, the effect of relationship duration is evaluated when the couple has been together for 24 months compared to 120 months.

[4] We note that the interaction with number of children in the household is the only conditioning effect of relationship status on other variables in the model that we found.

[Table 2 about here]

Age of the female (or male) partner does not affect a couple's probability of having anal sex. Nor does the race or ethnicity of the female (or male) partner. Females (but not males) with a higher number of lifetime sex partners have a higher probability of having anal sex in the last four weeks. This suggests that prior sexual experience is related to greater sexual experimentation and alternative sexual practices within a current relationship.

As the female partner's father's education increases, the probability that a married or cohabiting couple has anal sex decreases. This suggests that anal sex is a behavior practiced by couples of lower socioeconomic origin. Most importantly, there is a strong effect of the female's education relative to her partner's education. Regardless of his education, the more education she has relative to him, the lower the probability that the couple has anal sex. Other dimensions of the woman's power in the relationship are also important. Females with a more traditional gender role ideology, who may be more strongly influence by their male partners' sexual preferences, have a higher probability of engaging in anal sex with their partner than females with a more egalitarian gender role orientation.[5] Further, couples where the female reports that she is more likely to end the relationship than her partner, and where the female therefore expresses less commitment to her relationship, are less likely less to have anal sex. In short, a woman's power, defined along several different dimensions, lowers the couple's probability of having anal sex.

We find that couples whose male partner spends more time during the week telling his partner about his day have a higher probability of having anal sex than couples whose male partner spends less time talking about his day. Given that women with more power appear more reluctant to have anal sex, we may have expected that greater couple communication would help convey a female's preference not to engage in this behavior. Our finding, however, pertains to the male's level of communication; net of other variables in the model, none of the measures of female communication have an effect. It may be, then, that greater male communication conveys the male's greater desire to increase the couple's

[5] This is similar to our finding for dating couples, in which couples with more traditional male partners have a higher probability of engaging in anal sex than less traditional males.

sexual repertoire by having anal sex, or even greater male overall dominance in the relationship that increases the practice of this behavior.

None of the other characteristics listed in Table 1 and tested for inclusion in preliminary models predicting anal sex have significant main effects. Nor do we find that couple communication, or the female or male's power in the relationship, conditions the effects of other male, female or couple characteristics.

Oral Sex

Table 3 presents predicted probabilities of not having oral sex in the last four weeks, compared to engaging only in male receptive oral sex, only female receptive oral sex, or both male and female receptive oral sex for couples with different characteristics. Cohabiting couples have a higher probability of practicing both male and female receptive oral sex and a lower probability of not having any type of oral sex than married couples. Cohabiting couples also have a higher probability of engaging in both male and female receptive oral sex than female receptive oral sex only. Duration of the couple's relationship does not affect their probability of having oral sex. Nor does the number of children in the household (not shown). However, married and cohabiting couples with younger children have a higher probability of not having any oral sex and a much lower probability of engaging in male receptive only oral sex than couples with older children.

[Table 3 about here]

Age of the female partner has a tendency to lower the probability of engaging in any type of oral sex and increase the probability that the couple had no oral sex in the last four weeks.[6] Black couples do not differ from non-Hispanic other couples in their probability of having oral sex. However, compared to blacks and non-Hispanic others, couples in which the female is Hispanic have a much lower probability of engaging in both male and female receptive oral sex and a higher probability of having no oral sex. As we found for couples having anal sex, females (but not males) with more sexual experience are more likely to have oral sex in their current relationship. That is, the more sex partners the female partner has had in her lifetime, the higher the probability that she and her partner had both

[6] Note that the male partner's age has a similar effect, although not as strong.

male and female receptive oral sex in the last four weeks and the lower the probability they had no oral sex. Couples where the male reports that he is somewhat or very religious have a lower probability of having both male and female receptive oral sex, a lower probability of engaging in female receptive only oral sex, and overall a higher probability of having no oral sex than couples where the male reports that he is not religious. Males do not differ by religiosity in the probability that the couple practiced male receptive oral sex. Note that the female partner's religiosity (not in the model) is not an important discriminating factor for whether the couple had oral sex.

Unlike what we found for anal sex, family background socio-economic status (male or female partner's mother's or father's education) is unrelated to the couples' practice of oral sex. However, similar to the anal sex findings, there are strong effects of the female's education and income relative to her partner's education and income. The more education the female has relative to her partner, the lower the probability that she performed unreciprocated oral sex on her partner, and the higher the probability that the couple had reciprocated oral sex or otherwise engaged in no oral sex activity. The couple's combined income has no statistically significant effect on a couple's oral sex behavior (not shown), but as with education, the higher the female's relative income (defined as her relative contribution to the couple's combined income), the lower the probability that the couple had male receptive only oral sex and the higher the probability that they had both male and female receptive oral sex or did not have oral sex at all.

Just like our findings for anal sex, other dimensions of the woman's power in the relationship are also important to the couple's oral sex behavior. When the female has a less traditional gender role ideology, if the couple has oral sex, there is some tendency for them to have female receptive oral sex only as opposed to both female and male receptive oral sex. Further, couples where the female reports that she is less committed to making the relationship last tend to have a higher probability of engaging in female only receptive oral sex than couples where the female partner is more highly committed to the relationship. In short, when the woman has more power, defined along several different dimensions, it appears to lower the probability that the couple practices male receptive only oral sex and increase the probability that they have both female and male receptive oral sex or female receptive only oral sex.

Finally, none of the other characteristics listed in Table 1 and tested for inclusion in preliminary models predicting oral sex, including measures of couple communication, have significant main effects on a couple's oral sex behavior. Nor do we find that relationship status, couple communication, or the female or male's power in the relationship conditions the effects of other male, female or couple characteristics.

Summary and Discussion

Our purpose has been to gain a better understanding of adult married and cohabiting couples' sexual behavior by using a unique data set that permits a couples-based approach and focusing on two behaviors that are alternatives or supplements to vaginal sex. Anal sex is a rather uncommon sex act, engaged in by fewer than 15% of the couples in our sample during the four weeks prior to interview. In contrast, oral sex is quite common, practiced in some form by over two-thirds of our couples over the four week period.

Despite this difference in incidence the results show that the two behaviors have a few antecedents in common. Overall, cohabiting couples are more likely than married couples to practice both male and female receptive oral sex, and they are more likely than married couples to have anal sex when there are no children in the household. Indeed, the number or age of children in the household generally limits these behaviors. While the number of children lowers the probability of having anal sex among cohabiting couples, both married and cohabiting couples are less likely to have oral sex, especially male receptive oral sex, when younger children are present in the household. Another common antecedent is the female's lifetime number of sex partners, with couples where the woman is more sexually experienced having a higher probability of having anal and oral sex in their current relationship.

There are also differences in the effects of some of the social and demographic characteristics on a couple's anal and oral sex behavior. Neither the age of the female or male partner is related to a couple's practice of anal sex, but partner age has a small, negative effect on their having oral sex. In general, race does not affect these behaviors; however, Hispanics are far less likely than blacks or whites to engage in reciprocated oral sex and are more likely to have no oral sex. Interestingly, in our

prior study of dating couples (Billy et al. 2007) we found that couples where the female is Hispanic have a much higher probability of having anal sex than black and white couples. This, however, is not the case among married and cohabiting couples. A male's religiosity negatively affects a couple's engaging in oral sex, especially female receptive only oral sex. However, neither the female or male partner's religiosity affects the likelihood of having anal sex.

Although a couple's socio-economic background status, as measured by mother or father's education, is unrelated to their having oral sex, the female partner's father's education is negatively related to the couple's engaging in anal sex. As discussed below, the importance of the couple's SES is more in terms of the partner's structural power and their relative education and/or income. If anything, however, a couple's SES is negatively related to their practice of anal sex (as well as oral sex). Some previous research has found a positive relationship between SES and having anal sex, suggesting that higher SES, more educated individuals are more willing to engage in a greater variety of non-traditional activities, including sex acts that depart from vaginal sex (Billy et al. 1993; Laumann et al. 1994). These previous findings typically have pertained to ever having anal sex. It is possible that higher SES individuals are more likely to have ever experimented with anal sex, but lower SES individuals are more likely to engage in the behavior on a more regular basis. There is some evidence of this difference in the Billy et al. study (1993) where men's reports of ever having anal sex are positively related to their education, but reports of having anal sex in the last four weeks are slightly negatively related to men's education.

Interestingly, couple communication has little influence on the sexual behaviors examined here, either as a main effect or by conditioning the effects of power or other personal, partner and relationship characteristics considered in our study. Among the several measures of partner communication examined, we find only one significant relationship. Couples are more like to have anal sex when the male partner spends more time telling his partner about his day, suggesting greater communication by the male of his preference for anal sex. Our failure to find more evidence that couple communication affects the balance in the couple's sexual decision making may reflect a measurement problem. It may

be that our measures of couple communication are too generic and do not adequately capture communication between partners about their preferences for sex and specific sex acts.

A most significant outcome of this study is the importance of relationship power for a couple's sexual behavior. Having sex, or engaging in a particular sex act, can have three main consequences. It can lead to pregnancy, disease, and/or physical pleasure. Oral sex carries minimal risk of pregnancy, and probably disease (CDC 2000; Edwards & Carne 1998). Anal sex carries minimal risk of pregnancy, and among heterosexual couples in more committed forms of relationships may have lower risk of disease than among those in other types or relationships (Halperin 1999; Volperin 1991). We may therefore reasonably assume that a primary reason for married and cohabiting couples to have, or not to have, anal and oral sex is for physical pleasure. We may also assume that one partner may derive more physical pleasure from a particular sex act than the other. For example, males may derive more pleasure performing anal sex and receiving oral sex. Females may derive more pleasure receiving oral sex and less pleasure receiving anal sex, perhaps even viewing anal sex as a submissive act.

Our findings suggest that there are gender preferences for different types of sex acts and that a partner's power in the relationship helps determine whose preferences are carried out. A woman's power, defined along several different dimensions, appears to lower the couple's probability of having anal sex and either oral sex in general or oral sex acts that she may not find pleasurable. Couples are less likely to engage in anal sex when the female's education is higher relative to her partner (granting her more structural power), when she has a less traditional gender role ideology, and when she is less committed to her relationship. Similarly, when the female partner has higher relative education and income, couples are less likely to engage in male receptive only oral sex and are more likely to have reciprocated oral sex or no oral sex at all. Couples are also more likely to engage in female receptive oral sex only, as opposed to reciprocated oral sex, when the female partner has a less traditional gender role ideology and when she is less committed to making the relationship last.

We should note that our examination of how power weights the decision making process toward one partner or the other by elevating or reducing the importance of a person's characteristics did not uncover any significant interaction effects. This may be because we do not have direct measures of

partner preferences for particular types of sex acts and because it is these preferences that we would expect a partner's power most likely to condition.

We began this paper noting that much of what we know about sexual behavior is based largely on women's or men's separate reports and that a couples-based study where the characteristics of both the male and female partner are included might provide a more comprehensive, accurate understanding of factors that affect the sexual behaviors of a couple. Our findings show that most of the characteristics that account for the sexual behaviors of the couple (as reported by the female) are the female's characteristics. Religiosity is the only socio-demographic characteristic where the male's report of his religiosity but not the female's report of her religiosity is important. Nevertheless, adopting a couples-based approach has been extremely useful for several reasons. First, testing and determining whose characteristics and reports matter is itself very important information. Second, as indicated in the presentation of our results, sometimes either partner's characteristic is related to the behavior, and this too is informative. Most important, however, is finding that relationship power, particularly relative structural power, is a key factor related to a couple's sexual behavior. We would not have this important result without a couples-based approach that provides characteristics of both the male and female partners, that permits measurement of relative power differences along several dimensions of power, and that does so without the potential distortion of proxy reporting by only one of the partners.

Although there are clear advantages to using couples data and taking a couples-based approach, this is not to say that the approach is without its problems and complexities. In any couples survey there will always be some amount of partner disagreement about what the couple has done, as well as who really has the power in the relationship. In the National Couples Survey, there is some partner disagreement in the reporting of the two sexual behaviors examined here. For example, 12.5% of females compared to 11.4% of their male partners reported that they had anal sex in the last four weeks. Also, 28.3% of females reported no oral sex in the last four weeks, 11.0% reported male receptive only oral sex, 13.4% reported female receptive only oral sex, and 47.2% of females reported both male and female receptive oral sex during the four weeks prior to the survey. For males, the comparable percentages are 27.0%, 13.2% 11.5% and 48.3%, respectively. A next step would be to go

through the same detailed model fitting procedures with males as the index respondent as was done with females as the index respondent (i.e., using the males' reports of the outcomes). Comparing these two sets of models would address the question of whether we come to the same conclusion about the impact of personal, partner and relationship characteristics on a couple's anal and oral sex behaviors if we had only female reports or male reports.[7]

Future investigations also should consider other sexual behaviors of married and cohabiting couples, including the number of times the couple had vaginal sex in the four weeks prior to interview. It may be that some couples who reported not having anal or oral sex simply were not very sexually active. If so, then the interpretation of results may be more from the perspective of personal, partner and relationship factors affecting whether married and cohabiting couples are sexually active at all, as opposed to factors that influence whether they engage in sex acts that are alternatives or supplements to vaginal sex. In addition to analyzing number of times the couple had vaginal sex during the last four weeks as an outcome, a measure of the diversity of sexual behaviors practiced by the couple during the four weeks prior to interview would also be useful for better understanding the sexual behavior of adult married and cohabiting couples. Finally, it would be useful to further examine the sexual practices of dating couples and compare differences in factors affecting these practices across all three relationship groups.

[7] Note that differences in reports of the outcome by females and males is the only thing that could change the results, since both sets of models would contain predictor variables based on male and female partner reports. Note also that using males as the index respondent would not answer whether we would come to different conclusions if we had reports from males (or females) and only his (or her) proxy reports about the partner.

References

Aggleton, P., K. Rivers, and S. Scott. 1999. "Use of the Female Condom: Gender Relations and Sexual Negotiation." In *Sex and Youth: Contextual Factors Affecting Risk for HIV/AIDS. A Comparative Analysis of Multi-Site Studies in Developing Countries* (p. 104-145). Geneva: UNAIDS.

Agnew, C.R. 1999. "Power Over Interdependent Behavior Within the Dyad: Who Decides What a Couple Does?" *Advances in Population*, 3:163-188.

Amaro, H and A. Raj. 2000. "On the Margin: Power and Women's HIV Risk Reduction Strategies." *Sex Roles*, 42(7/8):723-749.

Barnett, B. and J. Stein. 1998. *Women's Voices, Women's Lives: The Impact of Family Planning*. Research Triangle Park, NC: Family Health International.

Beach, L.R., A. Hope, B. Townes, and F.L. Campbell. 1982. "The Expectation-Threshold Model of Reproductive Decision Making." *Population and Environment*, 5:95-108.

Bean, F.D, Clark, M.P., Swicegood, G., & Williams, D. 1983. "Husband-Wife Communication, Wife's Employment, and the Decision for Male or Female Sterilization." *Journal of Marriage and the Family*, Vol. 45, No. 2. (May, 1983), pp. 395-403.

Becker, S. 1996. "Couples and Reproductive Health: A Review of Couple Studies." *Studies in Family Planning*, 27(6):291-306.

Beckman, L.J. 1984. "Husbands' and Wives' Relative Influence on Fertility Decisions and Outcomes." *Population and Environment*, 7(3):182-197.

Beckman, L.J., R. Aizenberg, A.B. Forsythe, and T. Day. 1983. "A Theoretical Analysis of the Antecedents Young Couples' Fertility Decisions." *Demography*, 24(4):519-534.

Billy, J.O.G., K. Tanfer, W.R. Grady, and D.H. Klepinger. 1993. "The Sexual Behavior of Men In the United States." *Family Planning Perspectives* 25(2):52-60.

Billy, J.O.G., M.E. Sill,and W.R. Grady. 2007. "Sexual Risk Taking among Adult Dating Couples in the US: The Influence of Respondent, Partner and Relationship Characteristics." Under review at *Perspectives on Sexual and Reproductive Health*.

Blumstein, Philip, and Pepper Schwartz. 1983. *American Couples: Money, Work, Sex.* New York: William Morrow.

Brines, J. and K. Joyner. 1999. "The Ties That Bind: Principles of Cohesion in Cohabitation and Marriage." *American Sociological* Review, 64(3): 333-355.

Brown, B., Feiring, C., and Furman, W. 1999. Missing the Love Boat: Why researchers have shied away from adolescent romance. In W. Furman, B. B. Brown, and C. Feiring (Eds.), *The Development of Romantic Relationships in Adolescence* (p.1-16). Cambridge, England: Cambridge University Press.

Center for Disease Control and Prevention. 2000. "Preventing the Sexual Transmission of HIV, the Virus that Causes AIDS: What You Should Know about Oral Sex." www.cdc.gov/hiv/resources/qa19.htm

Christopher, F.S. and R.M. Cate. 1985. "Premarital Sexual Pathways and Relationship Development." *Journal of Social and Personal Relationships*, 2:271-288.

Christopher, F. and S. Sprecher. 2000. "Sexuality in Marriage, Dating, and Other Relationships: A Decade Review." *Journal of Marriage and the Family*, 62(4):999-1017.

Clark, M. and G. Swicegood. 1982. "Husband or Wife? A Multivariate Analysis of Decision-Making for Voluntary Sterilization." *Journal of Family Issues*, 3(3):341-360.

Cohen, D., C. Dent and D. Mackinnon. 1991. "Condom Skills Education and Sexually Transmitted Disease Infection." *The Journal of Sex Research*, 28:139-144.

DeLamater, J. and Hyde, J. 2004. Conceptual and theoretical issues in studying sexuality in close relationships. In J. Harvey, A. Wenzel, and S. Sprecher (Eds.), *The Handbook of Sexuality in Close Relationships* (p. 7-30), Mahwah, NJ: Lawrence Erlbaum Associates.

Downs, P.E. 1977. "Intrafamily Decision Making in Family Planning." *Journal of Business Research*, 5(3):63-74.

Drigotas S.M. & Rusbult, C.E. 1999. Level of Commitment, Mutuality of Commitment and Couple Well-being. *Personal Relationships*, 6, pp. 389-409.

Edwards, S. and C. Carne. 1998. "Oral Sex and the Transmission of Viral STIs." *Sexually Transmitted Infections,* 74: 6-10.

Fried, E.S. and J.R. Udry. 1979. "Wives' and Husbands' Expected Costs and Benefits of Childbearing as Predictors of Pregnancy." *Social Biology*, 26(3):265-274.

Fullilove, M., R. Fullilove, K. Haynes, and S. Gross. 1990. "Black Women and AIDS Prevention: A View Toward Understanding the Gender Roles." *Journal of Sex Research*, 27(1):46-64.

Gomez, C.A. and B.V. Marin. 1996. "Gender, Culture and Power: Barriers to HIV Prevention Strategies." *Journal of Sex Research*, 33(4):355-362.

Greene, K. and S. Faulkner. 2005. "Gender, Belief in the Sexual Double Standard, and Sexual Talk in Heterosexual Dating Relationships." *Sex Roles*, 53(3-4):239-251.

Greene, M.E. and A.E. Biddlecom. 2000. "Absent and Problematic Men: Demographic Accounts of Male Reproductive Roes." *Population and Development Review*, 26(1):81-115.

Halperin, D.T. 1999. "Heterosexual Anal intercourse: Prevalence, Cultural Factors, and HIV Infection and Other Health Risks, Part I." *AIDS Patient care and STDs*, 13(12):717-730.

Harris, K.M. 2005. "Design Features of Add Health." Unpublished manuscript, Carolina Population Center, University of North Carolina at Chapel Hill.

Harvey, S.M., L.J. Beckman, M.A. Gerend, S.T. Bird, S. Posner, H.C. Huszti, and C. Galavotti. 2006. "A Conceptual Model of Women's Condom Use Intentions: Integrating Intrapersonal and Relationship Factors." *AIDS Care*, 18(7): 698-709.

Harvey, S.M., S. Bird, C. Galavotti, E. Duncan, and D. Greenberg. 2002. "Relationship Power, Sexual Decision Making and Condom Use Among Women at Risk for HIV/STDs." *Women and Health*, 36(4):69-84.

Inazu, J.K. 1987. "Partner Involvement and Contraceptive Efficacy in Premarital Sexual Relationships." *Population and Environment*, 9(4):225-237.

Katz, B.P., J.D. Fortenberry, G.D. Zimet, M.J. Blythe, and D.P. Orr. 2000. "Partner-Specific Relationship Characteristics and Condom Use Among Young People with Sexually Transmitted Disease." *The Journal of Sex Research*, 37(1):69-75.

Kelly, J. and Kalichman, S. 1995. Increased attention to human sexuality can improve HIV-AIDS prevention efforts: key research issues and directions. *Journal of Consulting and Clinical Psychology*, 63(6): 907-918.

King L.A. & King D.W. 1997. "Sex Role Egalitarianism Scale." *Psychology of Women Quarterly*, 21, pp. 71-87.

Ku, L., F.L. Sonenstein, and J.H. Pleck. 1994. "The Dynamics of Young Men's Condom Use During and Across Relationships." *Family Planning Perspectives*, 26:246-251.

Laumann, E.O., J.H. Gagnon, R.T. Michael, and S. Michaels. 1994. *The Social Organzation of Sexuality*, Chicago: University of Chicago Press.

Logan, T., J. Cole, and C. Leukefeld. 2002. "Women, Sex, and HIV: Social and Contextual Factors, Meta-Analysis of Published Interventions, and Implications for Practice and Research." *Psychological Bulletin*, 128(6):851-885.

Lucke, J.C. 1998. "Gender Roles and Sexual Behavior Among Young Women." *Sex Roles*, 39:273-297.

McCormick, N. 1994. *Sexual Salvation: Affirming Women's Sexual Rights and Pleasures*. Westport, CT: Praeger.

Miller, W.B. 1994. "Reproductive Decisions: How We Make Them and How They Make Us." *Advances in Population*, 2:1-27.

Miller, W.B, and D.J. Pasta. 1996. "The Relative Influence of Husbands and Wives on the Choice and Use of Oral Contraception, Diaphragm, and Condoms." *Journal of Applied Social Psychology*, 26(19):1749-1774.

Miller, W.B, R.N. Shain, and D.J. Pasta. 1985-1986. "A Model of the Determinants in Married Women of Sterilization Method Choice." *Population and Environment*, 8(3-4):223-39.

Miller, W.B., N.R. Shain and D.J. Pasta. 1986. "A Model of the Determinants in Married Women of Sterilization Method Choice." *Population and Environment*, 8(3-4):223-239.

Miller, W.B., N.R. Shain, and D.J. Pasta. 1991. "Tubal Ligation or Vasectomy: How do Married Couples Make the Choice?" *Fertility and Sterility*, 56:278-284.

Miller, W.B., R.N. Shain, and D.J. Pasta. 1993. "A Model of Pre-Sterilization Ambivalence and Post-Sterilization Regret in Married Couples." *Advances in Population*, 1:173-206.

Muehlenhard, C. and M. McCoy. 1991. "Double Standard/Double Bind: The Sexual Double Standard and Women's Communication about Sex." *Psychology of Women Quarterly*, 15:447-461.

Noar, S., Zimmerman, R., and Atwood, K. 2004. Safer sex and sexually transmitted infections from a relationship perspective. In J. Harvey, A. Wenzel, and S. Sprecher (Eds.), *The Handbook of Sexuality in Close Relationships* (p. 519-544), Mahwah, NJ: Lawrence Erlbaum Associates.

Ochs, E. and Y. Binik. 1999. "The Use of Couple Data to Determine the Reliability of Self-Reported Sexual Behavior." *The Journal of Sex Research*, 36(4):374-384.

Ostovich, J. and J. Sabini. 2004. "How are Sociosexuality, Sex Drive, and Lifetime Number of Sexual Partners Related?" *Society for Personality and Social Psychology*, 30(10):1255-1266.

Peplau, L.A., Z. Rubin, and C.T. Hill. 1977. "Sexual Intimacy in Dating Couples." *Journal of Social Issues* 33(2):86-109.

Presser, H.B. 1994. "Employment Schedules Among Dual-Earner Spouses and the Division of Household Labor by Gender." *American Sociological Review*, 59:349-364.

Pulerwitz, J., S.L. Gortmaker and W. DeJong. 2000. "Measuring Sexual Relationship Power in HIV/STD Research." *Sex Roles*, 42(7-8):637-660.

Reiss, I.L. 1986. *Journey Into Sexuality: An Exploratory Voyage*. Englewood Cliffs, NJ: Prentice Hall.

Ross, C.E. 1987. "The Division of Labor at Home." *Social Forces*, 65:816-833.

Seal, D. 1997. "Interpartner Concordance of Self-reported Sexual Behavior Among College Dating Couples." *The Journal of Sex Research*, 34(1):39-55.

Severy, LJ. and S.E. Silver. 1993. "Two Reasonable People: Joint Decisionmaking in Contraceptive Choice and Use." *Advances in Population: Psychosocial Perspectives*, 1:207-227.

Shain, R.N., W.B, Miller, and A.E.C. Holden. 1985. "Factors Associated with Married Women's Selection of Tubal Sterilization and Vasectomy." *Fertility and Sterility*, 43:234-244.

Shearer, C.L., S.J. Hosterman, M.M. Gillen, and E.S. Lefkowitz. 2005. "Are Traditional Gender Role Attitudes Associated with Risky Sexual Behavior and Condom-Related Beliefs?" *Sex Roles,* 52:311-324.

Sheeran, P., C. Abraham, and S. Orbell. 1999. "Psychosoical Correlates of Heterosexual Condom Use: A Meta-Analysis." *Psychological Bulletin*, 125(1):90-132.

Sobel, M.E. and G. Arminger. 1992. "Modeling Household Fertility Decisions: A Nonlinear Simultaneous Probit Model." *Jasa: Journal of the American Statistical Association*. 87(417):38-47.

Soler, H., D. Quadagno, D.F. Sly, K.S. Riehman, I.W. Eberstein, and D.F. Harrison. 2000. "Relationship Dynamics, Ethnicity and Condom Use Among Low-Income Women." *Family Planning Perspectives*, 32(2);82-101.

Sprecher, S. and D. Felmlee. 1997. "The Balance of Power in Romantic Heterosexual Couples Over Time From 'His' and 'Her' Perspectives." *Sex Roles*, 37:361-379.

Thomson, E. 1989. "Dyadic Models of Contraceptive Choice," In D. Brinberg and J.J. Jaccard, (Eds.) *Dyadic Decision Making,* New York: Springer-Verlag.

Thomson, E. 1990. "Fertility Desires and Fertility: Hers, His and Theirs." *Demography* 27(4):579-588.

Thomson, E. 1995. "Couple Fertility Desires and Outcomes." Paper presented at the annual meeting of the Population Association of America, San Francisco, California.

Thomson, E. 1997. "Couple Childbearing Desires, Intentions and Births." *Demography*, 34(3):343-354.

Thomson, E. and R. Williams. 1982. "Beyond Wives' Family Sociology: A Method for Analyzing Couple Data." *Journal of Marriage and the Family*, 44(4):999-1008.

Thomson E., E. McDonald, and L.L. Bumpass. 1988. "Couple (Dis)agreement and Baby Boom Fertility." *CDE Working Paper* No. 88-28, Madison, Wisconsin, University of Wisconsin, Center for Demography and Ecology.

Udry, J. Richard. 1983. "The Marital Happiness/Disruption Relationship by Level of Marital Alternatives," *Journal of Marriage and the Family*, 45(1), pp. 221-222.

Voeller, B. 1991. "AIDS and Heterosexual Anal Intercourse." *Archives of Sexual Behavior,* 20(3): 233-276.

Vohs, K., K. Catanese, and R. Baumeister. 2004. "Sex in 'His' Versus 'Her' Relationships." In J.H. Harvey, A. Wenzel, and S. Sprecher (Eds.), *Handbook of Sexuality in Close Relationships* (p. 455-474). Mahway, NJ: Lawrence Erlbaum.

Wagstaff, D.A., J.A. Kelly, M.J. Perry, K.J. Sikkema, L.J. Solomon, T.G. Heckman, E.S. Anderson, and the Community Housing AIDS Prevention Study Group. 1995. "Multiple Partners, Risky Partners and HIV Risk among Low-Income Urban Women." *Family Planning Perspectives*, 27(6):241-245.

Zeidenstein, S. and K. Moore. 1996. "Introduction." In S. Zeidenstein and K. Moore (Eds.), *Learning About Sexuality: A Practical Beginning* (p.1-14). New York: Population Council and international Women's Health Coalition.

Table 1 – Means and Standard Deviations for All Variables Used in the Analyses

Variables	Couple's Characteristics			Female's Characteristics			Male's Characteristics		
	Mean	S.D.	N[1]	Mean	S.D.	N[1]	Mean	S.D.	N[1]
Outcome Measures									
Oral Sex[2]			652						
male receptive only	.11	.31							
female receptive only	.13	.34							
both	.47	.50							
neither	.28	.45							
Anal Sex[2] (0 = no; 1= yes)	.12	.33	657						
Demographic and Social Characteristics									
Relationship status (0 = married;	.41	.49	674						
1 = cohabiting)									
Duration of relationship[2]	75.94	53.90	667						
Age				28.44	4.37	674	30.59	5.70	674
Race/ethnicity						664			667
black				.31	.46		.34	.48	
Hispanic				.09	.29		.09	.29	
Other									
Education				14.12	3.13	674	13.88	3.30	671
Income (1,000s)				21.53	19.90	661	33.29	25.92	660
Religiosity (0 = somewhat or very religious; 1 = not religious)				.34	.47	664	.39	.49	662
Mother's education						661			659
< high school				.14	.35		.16	.36	
high school				.30	.46		.32	.47	
some college				.25	.44		.21	.41	
college				.29	.45		.28	.45	
no mom				.01	.10		.03	.17	
Father's education						656			.658
< high school				.13	.33			.17	.37
high school				.27	.45			.26	.44
some college				.18	.38			.16	.37
college				.31	.46			.31	.46
no dad				.11	.31			.11	.31

Table 1 – Means and Standard Deviations for All Variables Used in the Analyses

Variables	Couple's Characteristics			Female's Characteristics			Male's Characteristics		
	Mean	**S.D.**	**N[1]**	**Mean**	**S.D.**	**N[1]**	**Mean**	**S.D.**	**N[1]**
# of sex partners				10.57	14.99	651	16.91	20.87	645
# of children in HH[2]	1.39	1.44	668						
Age of youngest child in HH[2]									
no children (1 = none; 0 = any)	.35	.48	668						
age of youngest	2.05	3.36	668						
Couple Communication									
Hrs/wk partner tells R about day				9.48	10.94	640	9.64	11.86	628
Hrs/wk R tells partner about day				9.76	10.82	644	7.39	11.40	626
% chance R tells P about bad day				88.46	23.00	666	76.37	30.33	654
% chance P tells R about bad day				82.35	26.28	668	83.03	26.99	654
Relationship Power									
Structural Power									
relative education	.25	3.00	671						
combined income (1,000s)	55.15	36.84	651						
relative income	3.95	2.71	651						
Relative relationship alternatives	-.09	1.13	651						
Relative dependency	-.17	5.58	608						
Gender role ideology				16.49	4.60	660	17.30	4.84	654
Relationship commitment									
who more committed to making relationship last				2.99	.68	666	2.97	.64	662
who more likely to end the relationship				3.33	.92	648	2.94	.94	648

[1] Number of valid cases upon which measure is based

[2] Female partner's report

Table 2 – Predicted Probabilities of Married and Cohabiting Couples Having Anal Sex in the Last 4 Weeks: Probabilities Derived from a Logit Regression Model[†]	
Personal, Partner, and Relationship Characteristics	**Probability of Anal Sex**
All Couples	0.124
Couple Characteristics	
Duration of relationship [ns]	
24 month	0.118
120 months	0.128
Interaction of relationship status with number of children in HH **	
Married, no children	0.105
Married, 2 children	0.115
Cohabiting, no children	0.206
Cohabiting, 2 children	0.097
Female Characteristics	
Age [ns]	
Age 24	0.063
Age 35	0.072
Race/ethnicity [ns]	
Black	0.057
Hispanic	0.070
Other	0.074
Father's education **	
< high school	0.112
High school	0.066
Some college	0.048
College	0.027
No father	0.100
# of sex partners **	
1 partner	0.058
20 partners	0.073
Relationship Power	
Relative education **	
Male 12 years, female 12 years	0.071
Male 12 years, female 16 years	0.048
Male 16 years, female 12 years	0.070
Male 16 years, female 16 years	0.047
Her traditional gender role ideology **	
Low	0.042
High	0.081
Relationship commitment ***	
Her likelihood of ending the relationship	
Low	0.089
High	0.045

Table 2 – Predicted Probabilities of Married and Cohabiting Couples Having Anal Sex in the Last 4 Weeks: Probabilities Derived from a Logit Regression Model[†]

Personal, Partner, and Relationship Characteristics	**Probability of Anal Sex**
Couple Communication	
Hrs/wk male tells female partner about his day ***	
1 hour	0.052
12 hours	0.072

[†] $p \leq .10$, *$p \leq .05$, ** $p \leq .01$, ns = not significant

Note: Probabilities are predicted using the estimated logit regression model for the specific evaluation points shown in the table to illustrate the net effects of the variables in the model.

Table 3 – Predicted Probabilities of Married and Cohabiting Couples Having Oral Sex in the Last 4 Weeks: Probabilities Derived from a Multinomial Logit Regression Model[†]

Personal, Partner, and Relationship Characteristics	**Probability of Oral Sex by Type**			
	None	Male Receptive	Female Receptive	Both
All Couples	0.274	0.117	0.136	0.474
Couple Characteristics				
Relationship status **				
Married	0.303	0.122	0.154	0.421
Cohabiting	0.227	0.113	0.112	0.548
Duration of relationship [ns]				
24 month	0.274	0.124	0.145	0.457
120 months	0.272	0.109	0.130	0.489
Age of youngest child in HH **				
1 year old	0.251	0.153	0.107	0.489
10 years old	0.101	0.316	0.107	0.476
Female Characteristics				
Age *				
Age 24	0.224	0.131	0.141	0.504
Age 35	0.348	0.096	0.130	0.425
Race/ethnicity **				
Black	0.264	0.082	0.161	0.493
Hispanic	0.482	0.113	0.129	0.276
Other	0.251	0.132	0.126	0.491
# of sex partners **				
1 partner	0.304	0.114	0.140	0.442
20 partners	0.238	0.121	0.134	0.506
Male Characteristics				
Religiosity **				
Not religious	0.214	0.117	0.179	0.491
Somewhat or very religious	0.311	0.117	0.110	0.462
Relationship Power				
Structural Power				
Relative education **				
Male 12 years, female 12 years	0.286	0.132	0.113	0.469
Male 12 years, female 16 years	0.328	0.082	0.091	0.499
Male 16 years, female 12 years	0.279	0.166	0.136	0.420
Male 16 years, female 16 years	0.326	0.106	0.112	0.456

Table 3 – Predicted Probabilities of Married and Cohabiting Couples Having Oral Sex in the Last 4 Weeks: Probabilities Derived from a Multinomial Logit Regression Model[†]

Personal, Partner, and Relationship Characteristics	**Probability of Oral Sex by Type**			
	None	Male Receptive	Female Receptive	Both
Relative income **				
Female provides 10% of income	0.288	0.155	0.111	0.445
Female provides 70% of income	0.334	0.080	0.109	0.476
Her traditional gender role ideology *				
Low	0.319	0.124	0.149	0.409
High	0.300	0.109	0.072	0.518
Her commitment to making relationship last **				
High	0.332	0.105	0.085	0.479
Low	0.288	0.128	0.137	0.446
Couple Communication				
(none significant)				

[*] $p \leq .10$, [**] $p \leq .05$, [***] $p \leq .01$, ns = not significant

Note: Probabilities are predicted using the estimated multinomial logit regression model for the specific evaluation points shown in the table to illustrate the net effects of the variables in the model.