

Sexual Behavior and Satisfaction in Same-Sex and Different-Sex Relationships

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Abstract: Among both academics and the lay public remains a widespread and taken-for-granted belief that male and female sexuality are fundamentally different and that men and women in sexual relationships compromise on such differences. More recently, however, social scientists have begun to question the extent to which gender gaps in sexual desire may be socially rather than biologically determined. Because collecting accurate and representative data on sexual behavior within relationships is often challenging, very little empirical evidence has been available to scientifically disentangle these competing perspectives. This study evaluates variation in the sexual behavior and satisfaction of same-sex and different-sex couples through an analysis of two nationally representative American surveys, *How Couples Meet and Stay Together* (HCMST) and *The National Longitudinal Study of Adolescent to Adult Health* (Add Health). Findings demonstrate that women in same-sex relationships have sex less often than other couple pairings. Men in same-sex relationships report significantly lower sexual satisfaction and higher rates of non-monogamy relative to other couples, even after controlling for relevant factors. Overall, the results from this study support the notion that sexual relationships function differently in the absence of a male or female partner, but present a less deterministic and more socially complex perspective than has traditionally been accepted.

Introduction

A common assumption in American society is that male sexuality is fundamentally stronger and less controllable than female sexuality, and that men and women in sexual relationships with one another negotiate these innate differences. Because this belief is so culturally ingrained, it is difficult to disentangle the origins or causes of this proposed pattern, and there have been few attempts to empirically test its veracity. Over thirty years ago, one of the founders of evolutionary psychology, Donald Symons, hypothesized how best to scientifically identify variation in male and female sexual desire. He wrote that same-sex couples may serve as an “acid test for hypotheses about sex differences in sexuality,” reasoning that “the sex lives of homosexual men and women – who need not compromise sexually with members of the opposite sex – should provide dramatic insight into male sexuality and female sexuality in their undiluted states” (Symons 1979:292).

Large scale surveys of the population, capable of producing reliable data on the sex lives of same-sex couples, are relatively new and provide researchers with the ability to explore longstanding questions central to the study of both gender and sexuality. A large portion of the public holds essentialist views on gender and sexuality – believing that men and women are born with different sexual preferences and desires. Counter to the deterministic theories that justify and reinforce such differences, social scientists have argued that human sexuality in modern society has symbolic qualities, cultural variation, and capacity for change that far outstrip its biological evolutionary purposes (Caulfield 1985). Though scientists have long been concerned with the reproductive aspects of sexuality, there have been few attempts to interpret patterns of sexual behavior using multilevel theories on gender. Instead, recent sociological research has focused primarily on sexual orientation and identity, allowing evolutionary theories on male-female differences to dominate public discourse on sexual pleasure and behavior.

This study considers how the sex-composition of couples relates to patterns of sexual behavior. In recent years there have been dramatic changes in mainstream scientific, medical, and legal positions on homosexuality (Risman and Schwartz 1988), and the percentage of Americans accepting of same-sex sexual relations has more than doubled over the past two decades (Gates 2017; Rosenfeld 2017). Same-sex couples make up a growing proportion of American unions (Vespa, Lewis, and Kreider 2013) and are beginning to resemble different-sex couples in significant ways (e.g. stability, commitment timing, and child outcomes), making them a more justifiable point of comparison than in the past (Orth and Rosenfeld 2018; Manning, Fetto, and Lambidi 2014; Rosenfeld 2014; Rosenfeld 2015). As the influence of medical doctors and evolutionary biologists in the field of sex research has waned (Tiefer 2007), social scientists are in a unique position to deconstruct previous taken-for-granted interpretations of human sexual behavior (Hull 2017; Rosenfeld 2017).

This study evaluates differences in sex frequency, sexual satisfaction, and monogamy among same-sex and different-sex couples through an analysis of two nationally representative surveys, *How Couples Meet and Stay Together* (HCMST) and *The*

National Longitudinal Study of Adolescent to Adult Health (Add Health). The aim of this research is threefold. First, its findings contribute to the rapidly growing body of literature on same-sex relationships in the United States. Second, it overcomes one of the major methodological challenges to isolating sex differences in sexual desire. Third, this work expands upon biopsychosocial theoretical models of human sexual expression (DeLamater and Plante 2015; Lindau et al. 2003), developing an interactionist framework that can be used to understand gendered sexual negotiations.

To begin, I overview evolutionary and social theories on male-female sex differences in sexual behavior and discuss potential empirical predictions arising from such theories. I then review previous attempts to measure sexual activity in same-sex relationships, highlighting the challenges researchers have historically faced in collecting and interpreting data on such populations. Next, I overview the two data sources (HCMST and Add Health) and use multilevel regression models to test various hypotheses relating to sex frequency, sexual satisfaction, and monogamy. Lastly, I discuss the findings of this study in the context of recent work on sex and gender in the United States, calling attention to the necessity of developing socially-motivated theories to interpret changing patterns of human sexual behavior.

Theories of Human Sexuality

Evolutionary Theories

Evolutionary biologists and medical doctors were among the first to systematically study and document patterns of human sexual behavior (Freud 1905; Kinsey et al. 1948; Kinsey, Pomeroy, and Martin 1953; Masters and Johnson 1966). Because the authors of such work were concerned with the physiological aspects of human sexuality, their findings were typically interpreted through a biologically deterministic lens, with many reasoning that the early stages of human evolution resulted in the proliferation of certain traits and desires in men and women that continue to be present (Buss 1998). Though the specific evolutionary stories for why sex differences arise vary, sociobiological theories tend to suggest that relative to women, men have a stronger sexual drive and a greater desire for sexual variety. Cited as evidence for such claims are findings that masturbation, casual sex, and infidelity tend to be more frequently reported by men than women (Oliver and Hyde 1993).

Evolutionary theories of sexuality fall short in addressing why many patterns of sexual behavior vary across time and place and typically do not reflect universally shared practices or norms. Many fail to adequately explain the growing global prevalence of same-sex sexual behavior, which lacks a straightforwardly reproductive aim. Many of the most prominent early sexologists explained homosexuality as an “unnatural” genetic or developmental deviation (Freud 1905; Masters and Johnson 1966). From this perspective, same-sex relationships are too distinct to accurately reflect the innate desires of heterosexual men and women. Others, such as Kinsey (1948, 1954), accepted the natural fluidity of sexual orientation or attraction, while at the same time arguing that such relationships were in fact a response to biological male-female sex

differences in desire. Kinsey argued that individuals in same-sex pairings are more sexually satisfied in part because they can better understand and relate to the anatomy and psychology of their own sex relative to that of the other sex. He suggested that the sexual needs of men were inhibited by the lower sex drive and monogamous tendencies of women, stating, "few males achieve any real freedom in their sexual relations, even with their wives. Few males realize how badly inhibited they are on these matters" (1948:545). Unlike men who engaged in relationships with women, he found that homosexual men were more likely to seek out a succession of partners to engage in casual sex with, resulting in "notably few" (1948:633) long-term relationships between men.

Socialization and Scripting Theories

Social scientists have begun to question the source, size, and universality of "natural" taken-for-granted sex differences, suggesting that biological forces often operate in the background, exerting much weaker influence than contemporary social factors. In this section, and the one that follows, I discuss how multilevel theories of gender socialization and inequality offer valuable and more nuanced interpretations of human sexual behavior.

Sexual activity is a physiological phenomenon, but when performed by humans, such relations are embedded in complex social and cultural contexts. Instead of understanding humans as being born sexual, sociologists argue that sexuality is socially learned and constructed. Observed patterns of behavior reflect the social classification of certain desires, acts, and identities as normal, respectable, good, healthy, and moral, while other forms of sexuality are classified as unhealthy, abnormal, sinful, and immoral. In the course of growing up, individuals are taught by society what feelings and desires count as sexual and what are the appropriate scripts for sexual behavior (Laumann et al. 1994; Longmore 1998; Simon and Gagnon 1984).

In some societies, such as the United States, scripts involve a sexual double-standard, applying stricter moral or legal controls to women's sexual behavior than to that of men. Historically, this meant that women were expected to refrain from initiating sex but also generally limit their sexual behavior to monogamous marriage. Men, on the other hand, were expected to be more promiscuous, even if they were married. Thus, for the same behavior that might earn women scorn, men might be rewarded. Girls and boys grow up being taught about and internalizing their corresponding gender roles, and such roles become the basis for how men and women later behave in romantic and sexual relationships. Despite dramatic social change (and sexual liberalization) over the past few decades, gendered heterosexual courtship rituals remain pervasive in American society, with men acting as the agentic initiator of sexual activity and women as the passive object of male advances (Wade 2017).

Less has been said about the sexual scripts in same-sex relationships, though some, such as Symons, argue that sex differences in sexual desire are more fundamental than differences in sexual attraction: "The fact that homosexual men behave in many ways

like heterosexual men, only more so, and lesbians behave like heterosexual women, only more so, indicates that some other aspects of human sexuality are not so plastic” (Symons 1979, 304). This idea—that the behaviors of gay men and lesbian women reflect the unmet desires of heterosexual men and women – is pervasive in both popular culture and scholarly research on sex. This theory suggests that if individuals behave in ways consistent with their gender regardless of relationship context, one should then infer that gender differences in sexual desire are innate. While same-sex couples are distinct in many ways, the men and women who comprise them are similar to their heterosexual counterparts in that they received many of the same early messages regarding gender roles and expectations. Alternatively, one could also argue that individuals in same-sex relationships are perhaps socially or biologically distinct to the extent that they cannot serve as a point of comparison relative to their heterosexual counterparts.

Socially agreed upon sexual scripts are one way in which individuals act out and reinforce gender essentialist beliefs – that is, the notion that men and women are innately and fundamentally different in their desires and abilities (Bem 1993; Ridgeway 2009). Beliefs about natural gender differences in sexuality (and their attached justifications) have varied significantly across time and place. Unlike nineteenth century conceptions of men as helplessly carnal, the Puritans viewed women as more sexual sex; weaker than men, less able to control their passions. Furthermore, contrary to western focus on the untamable impulses of male sexuality, Islamic scripture teaches that the female desire is inherently greater and less disciplined than their male counterparts (Stone 2017). These socially prescribed and institutionalized rules and expectations produce wide cultural and geographic variation in human sexual behavior.

Theories on Gender Power Dynamics

Biologically deterministic theories on sex have historically been used to resist social change and legitimate an unequal, gendered and sexualized social order. Despite increasing gender equality in the public realms, essentialist schemas persist in the private and sexual sphere, in part because of the ubiquity of legitimizing cultural explanations of why these sex differences exist. Deterministic narratives create an expectation in which sex necessitates the male but not the female orgasm. Looking at sexual behavior from other perspectives provides a more complex narrative, such as findings that women who have female partners report two to three times as many orgasms as heterosexual women—as many, in fact, as heterosexual men (Coleman, Hoon, and Hoon 1983; Friedland and Gardininali 2013; Garcia et al. 2014; Harvey, Wenzel, and Sprecher 2004; Hite 1997; Tilos et al. 2014).

Essentialist beliefs about gender differences in sexuality are widespread and can become self-fulfilling prophecies. For instance, it has long been assumed that the gender gap in the frequency of orgasms during sex was physiological and “natural” (Masters and Johnson 1966). However, these narratives fail to account for the fact that orgasms come easily and quickly to both sexes during masturbation; on average, men

and women require a total of four minutes to reach climax (Douglass and Douglass 1997; Kinsey 1953; Thompson 1989).

Feminist perspectives stress the importance of historical patterns of male dominance and female economic and political dependence, arguing that male sexual pleasure has historically been prioritized over that of women, in part because women lack bargaining power within relationships, forcing them to trade sex for security, power, and resources (Chodorow 1978). These theories predict that that women and men make tradeoffs, with women agreeing to sex in exchange for men's monogamous commitment. Because power is often uneven, one might expect to find that sexual behavior in different-sex couples would be compromised in the direction of the male partner's desires. Since collecting data on intimate sexual negotiations is challenging, one way to test this hypothesis is to compare the sexual activity of different-sex couples to that of male and female same-sex couples. If the outcomes of different-sex couples more closely resemble male couples rather than female couples, this would be consistent with the notion of that male sexual desire is prioritized in different-sex relationships.

Institutionalized power relations also affect how society interprets and characterizes apparent differences between the sexes. To the extent that men have the power to define what desires, feelings, and behaviors are sexual, they have the power to define women's sexuality in a way that gives them control over women. Medicine has become increasingly important in the conceptualization and control of sexuality, a trend referred to as the medicalization of sexuality (Tiefer 2007). In many instances throughout history, medical discourse has pathologized female sexuality, reinforced the notion of male sexuality is the default and natural baseline. Diagnoses of hypoactive sexual desire disorder (HSDD) have increased among women, with some suggesting that it affects up to one-third of adult women in the United States (Warnock 2002). However, even when the female partner lacks sexual desire, studies have shown that "mercy sex" is remarkably common, with different-sex couples engage in sexual activity 2-3 times per month. Geographic and cultural variation have lead social scientists to question the extent to which HSDD reflects a genuine disorder or the internalized norms and social beliefs on male-female sex differences.

The biomedicalization of women's sexuality is also evident in the terminology used to characterize women engaged in same-sex relationships. The notion of "lesbian fusion" refers to the extreme emotional (yet non-sexual) closeness of lesbian couples (Ackbar and Senn 2010; Blyth and Straker 1996; Frost and Eliason 2014). Over time, this intimacy has been thought to result in low sexual desire and infrequent sexual activity, a phenomenon referred to as "lesbian bed death." This idea was popularized after Blumstein and Schwartz's finding of lower sex frequency among lesbian couples and was corroborated by reports from relationship and sex therapists claiming to have an overwhelming number of lesbian patients with inhibited sexual desire (ISD) (Nichols 1982). The notion of "bed death" reinforces the idea that female sexual desire is inferior and defective, and conflates two distinct concepts, the frequency of sex and sexual satisfaction. Additionally, some scholars argue that the empirical findings on which the

terms are based are flawed and lack reliable and representative data on same-sex couples (Cohen and Byers 2014; lasenza 2000, 2002; Nichols 2004).

Past Research on Sexual Behavior and Satisfaction in Same-Sex Couples

Alfred Kinsey's early publications, *Sexual Behavior in the Human Male* (1948) and *Sexual Behavior in the Human Female* (1953), are some of the first serious attempts to systematically document patterns of sexual behavior among same-sex partners. While Kinsey's attempts to document and normalize same-sex sexual behavior were revolutionary at the time, he lacked access to a significantly broad and representative sample of such relationships. Although reliable data on sexual minorities is still in short supply, a few major studies on relationships over the past fifty years have provided a more thorough but still limited understanding of sexual behavior in same-sex relationships. Two of the most influential works on the subject include Blumstein and Schwartz's 1983 publication, *American Couples* and Laumann et al.'s 1994 publication, *The Social Organization of Sexuality*.

Though published over thirty years ago, Blumstein and Schwartz's (1983) study on same-sex couples is the most extensive to date, but due to convenience sampling, their findings must be interpreted with caution. Their analysis found that on average, women in same-sex relationships had sex far less frequently than heterosexual pairings, while men in same-sex relationships had sex more frequently. In regard to satisfaction, they found that women with same-sex partners were most likely to say that they were having less sex than they desired, with 83 percent reporting a desire for more frequent sex. Non-monogamy was found to be most common among men in same-sex relationships, with 82 percent reporting extra-relational sex partners.

Laumann et al.'s (1994) findings on sexual behavior were published a decade after Blumstein and Schwartz's and focused more holistically on the sex lives of individuals, rather than those who were in formally established partnerships. Unlike Blumstein and Schwartz, they found relatively little variation in sex frequency and satisfaction among different pairings, though they noted that men with male partners tend to have a consistently, but not significantly, higher sex frequency relative to men with female partners. A few papers have attempted to replicate Blumstein and Schwartz's initial findings using small non-representative samples, but such attempts have produced inconsistent results, suggesting the need for updated data on this subject (Blyth and Straker 1996).

Data and Methodology

Data Sources

This paper has the advantage of including analyses of two nationally-representative datasets, *How Couples Meet and Stay Together* (HCMST) and *The National Longitudinal Study of Adolescent to Adult Health* (Add Health). Each dataset offers unique benefits, and their side-by-side analysis provides a thorough look into recent

patterns of sexual activity in same-sex and different-sex relationships. Below, I highlight the advantages and limitations of these data sources, including an overview of their design and sampling methodology.

How Couples Meet and Stay Together (HCMST). HCMST is a nationally representative and longitudinal study of how American adults meet their romantic partners (Rosenfeld, Thomas, and Falcon 2011). Wave 1 of HCMST was fielded by Knowledge Networks (an online survey firm) in 2009, and couples that were intact were re-interviewed repeatedly in the years that followed. The analyses presented in this paper were restricted to couples that were intact in 2014-2015 (Wave 5), since it was during this wave that questions on sexual behavior were asked. The sample of couples included in this analysis was slightly older and more stable than the overall population of couples might be, since all couples had been together for at least five years at the time of the survey. Respondents in HCMST only reported on their current relationship, which included sexual, romantic, and casual partnerships as well as cohabiting and married couples. The data is unique in that it includes an oversample of same-sex couples, making it one of the first nationally representative longitudinal studies of same-sex couples in the United States. The data analyzed from Wave 5 included a total of 942 couples, of which 77 were men in relationships with male partners and 74 were women in relationships with female partners.

The National Longitudinal Study of Adolescent to Adult Health (Add Health). Add Health is a longitudinal study of a nationally representative sample of adolescents in grades 7-12 in the United States during the 1994-95 school year. Data was collected via in-person interviews using computer-assisted interviewing (CAPI). This paper includes an analysis of coupled individuals measured in 2008 (Wave 4) of Add Health. Respondents in this wave were between the ages of 24 and 32, meaning that the sample analyzed was on average younger than the overall U.S. adult population. Racial and ethnic minorities were also oversampled in Add Health. To identify recent romantic relationships, respondents were asked to list all current and previous relationships occurring six years prior to the survey. The data included in the present analysis was restricted to relationships that were still intact at the time of the survey¹. Similar to the sample in HCMST, Add Health included data on both dating, cohabiting, and married couples. The sample from Add Health analyzed in this study included 10,643 currently intact couples, of which 90 were men in relationships with male partners and 125 were women in relationships with female partners.

Dependent Variables

Logged Weekly Sex Frequency. The first outcome considered in this paper is the weekly sex frequency of a respondent and his or her partner. In HCMST, respondents were asked to report how often, on average, they and their partner had sex in the past

¹ For a complete explanation of how relationships were selected, see documentation and flowchart for Section 16 of Add Health Wave 4 (<http://www.cpc.unc.edu/projects/addhealth/documentation/restricteduse/datasets/wave-iv-in-home-interview-data>).

year by selecting from a set of predetermined response options. In Add Health, they were asked to type a number and time unit corresponding to how often (in general) they had sexual relations. In the multivariate analyses, monthly and yearly frequencies reported in both surveys were converted to weekly estimates through multiplication and division. The decision to convert to weekly reporting was based on previous work finding that when asked to calculate sex frequency, respondents tended to recall average weekly estimates and multiply by four to convert to other time units (Udry 1993).

In HCMST, respondents reported how often they had sex with their partner by selecting from a set of responses to the following question: "During the last 12 months, about how often did you have sex with [partner name]?" Response options included once a day or more, 3-6 times per week, 1-2 times per week, 2-3 times per month, and once a month or less. The response options were recoded to represent the midpoint of the specified range, so that the resulting frequencies ranged from 0.125 to 7.5 times per week. Additional tests were conducted to confirm that coding at the midpoint versus the minimum or maximum of the range would not produce substantively different findings.

Add Health respondents were asked, "On average, how often do you have sexual relations with [partner name]? By 'sexual relations,' we mean vaginal intercourse, oral sex, anal intercourse, or other types of sexual activity." Instructions prompted respondents to enter a number (open-ended) and select "times per week," "times per month," or "times per year." To convert monthly and annual averages to a weekly average the frequency responses was divided by 4 (if weeks per month was selected) and 52 (if weeks per year was selected), respectively.

Academic research has previously demonstrated that there is a threshold effect with sexual activity, arguing that increased frequency at higher levels is not as important as increased frequency at lower levels (Blanchflower and Oswald 2004; Yabiku and Gager 2009). To account for the tail of high frequencies, sex frequency was transformed with a logarithmic function, thereby compressing the distribution at the higher range more than at the lower range (as well as reducing sensitivity to outliers). Additional coding decisions included the exclusion of frequencies exceeding 200 times per week, due to a high likelihood of misreporting. However, key findings are robust to the inclusion of outliers.

Sexual Satisfaction. In reference to their current partner, respondents in Add Health were asked to indicate their agreement with the following statement, "I am satisfied with our sex life." Responses range from (1) "strongly disagree" to (5) "strongly agree."

Non-Monogamy. Partners that lack an expectation of monogamy may be more likely to satisfy sexual desires outside of the dyadic relationship. Since this study only included information about sexual activity *within* relationships, it is difficult to draw conclusions about sexual desire more broadly without considering that some couples allow for and even encourage sexual fulfillment outside of the dyadic relationship. In HCMST, respondents were asked to report whether or not they expect their partner to remain

monogamous: "Do you expect [partner name] to have sexual activity only with you?" Response options included (0) No, I expect [partner name] to have sex with other people besides me or (1) Yes, I expect that [partner name] will only have sex with me. In Add Health, respondents were asked two questions about whether the respondent and his or her partner had engaged in sex outside of the relationship: "As far as you know, during the time you and [partner name] have had a sexual relationship, has [partner name] ever [had] any other sexual partners?" and, "During the time you and [partner name] have had a sexual relationship have you ever had any other sexual partners?" A response of "no" to both of these questions was coded as (0) and a response of "yes" to either question is coded as (1).

Independent Variables

Couple Sex-Composition. Because this paper focuses on the outcomes of couples, respondents are grouped on the basis of their sex/gender identity as well as that of their partner, rather than on the sexual identity of the respondent. Individuals who report being in a relationship with a partner of the same sex are reported here as being in a same-sex relationship. Those who report having a partner of a different sex are classified as being in a different-sex relationship. Based on the reported sex of the respondent, this produces four types of couples: female respondents with female partners (FF), female respondents with male partners (FM), male respondents with female partners (MF), and male respondents with male partners (MM). MF and FM couples were separated in the analyses in order to differentiate between actual sex variation in sexual behavior and mere sex differences in the reporting of sexual behavior.

Co-residency. Past research has demonstrated that sexual activity tends to decrease once couples transition to marriage (Laumann et al. 1994). At the same time, the marital transition is also associated with an increase in sexual satisfaction, particularly for women (Waite and Gallagher 2002). Additionally, descriptive findings indicate that men in same-sex relationships were less likely to cohabit relative to other couples, which may reduce their available opportunities for sexual activity. To account for these possibilities, the multivariate analyses included a control indicating whether or not couples were coresident by including an indicator of whether couples were cohabiting, engaged, or married².

Relationship Quality. Previous work has shown a significant and positive correlation between relationship satisfaction and the frequency of sex (Blumstein and Schwartz 1983; Edwards and Booth 1994; Sprecher 2002). Furthermore, researchers have demonstrated that couples of varying sex-compositions tend to differ in terms of self-reported relationship quality, with female same-sex couples reporting high satisfaction

² Both datasets were collected before the legalization of same-sex marriage in the United States. While HCMST instructed same-sex couples to report being "married" if they are in a marriage-like relationship, civil union, or domestic partnership, Add Health did not provide such options. As a result, the categories of engaged/cohabiting and married are combined in the analysis of Add Health to equalize potential variation in levels of commitment between same-sex and different-sex couples.

relative to other couple types (Kurdek 2008). Since most respondents report maximum levels of relationship quality, the analysis is simplified to include a binary indicator of whether individuals report being highly satisfied or not highly satisfied. In HCMST, the survey asks, “In general, how would you describe the quality of your relationship with [partner]?” Responses were reported on a 5-point scale ranging from “excellent” to “very poor.” In Add Health, the question wording is as follows: “In general, how happy are you in your relationship with [partner]?”. Responses include “very happy,” “fairly happy,” and “not too happy.” Individuals who reported being “very happy” or waving “excellent” relationship quality are coded as 1 and all other responses are coded as 0.

Opportunities for Sex. Time and energy constraints can limit how often a couple engages in sexual activity. Pregnancy and the presence of children are associated with a decrease in sexual contact (Call et al. 1995). Since different-sex couples are more likely to have children relative to same-sex couples, this analysis included two binary measures indicating whether or not the respondent is currently residing with one or multiple children aged 0 to 5, or children aged 6 to 17. Furthermore, past work indicates that sex significantly declines by the third trimester of pregnancy (Kumar et al. 1981). Therefore, an indicator of whether or not the respondent was pregnant at the time of the survey was included in the analysis of Add Health data. Though HCMST did not include an indicator of whether or not the couple were expecting a child, the potential impact of pregnancy poses less of a concern, since HCMST respondents were slightly older than average and many beyond childbearing ages.

Age and Age Differences. As couples age, the frequency of sexual activity tends to decrease (James 1974; Jasso 1985; Rao and Demaris 1995; Udry and Morris 1978; Udry 1993; Westoff 1974). This decline is attributed to changes in health throughout the aging process as well fluctuation in men’s and women’s hormone levels throughout the life course. As a result, a control was included indicating the age of the oldest partner in the couple. Given that same-sex couples tend to have larger age differences between partners, there may be some disconnect between the sex drives of partners, resulting in a difference in frequency and satisfaction. To account for this possibility, the models include a variable measuring the absolute age difference between partners.

Habituation. Research on sexual behavior has demonstrated a negative relationship between sexual activity and relationship duration, suggesting that this decline is the result of habituation, or the loss of interest or novelty in a sexual partner (James 1974, 1981). Past studies of this phenomenon have been limited in their ability to test this hypothesis in non-married couples. The two datasets in this analysis, Add Health and HCMST, are unique in that respondents reported the specific timing of their romantic relationship formation prior to marriage. This allows me to accurately capture the total duration of sexual and romantic relationships, regardless of the marital status of respondents. Relationship duration (in years, from union formation to survey date) was included in the models both as a covariate as well as an interaction term with couple sex-composition, providing the ability to test if and to what extent sex frequency declined over time for different types of couples.

Other Socio-Demographic Variables. Past work has acknowledged the importance of controlling for certain social and demographic characteristics in research on sexual activity. The analyses presented below include controls for couple race, couple religion, and respondent education. In regard to race, I take into account the race of both partners, including: (1) both non-Hispanic white, (2) both non-Hispanic black, (3) both Hispanic, (4) both other race, and (5) interracial. Religiosity has been shown to impact the timing and frequency of sexual activity (Rostosky, Regnerus, and Wright 2003). In this analysis, couples were divided into three religious groups as follows, (1) no religion, (2) Christian, and (3) other religion. Couples of mixed religious affiliation are assigned to the "other religion" category. Lastly, I controlled for respondent education, which was coded as (1) high school degree or less (2), some college, (3) college degree, (4) postgraduate degree.

Methodology

First, I display descriptive statistics comparing different types of couples in the sample (Tables 1 and 2). To test the robustness of differences in sex frequency (Tables 3 and 4), sexual satisfaction (Table 5), and non-monogamy (Tables 6 and 7), I use unweighted multivariate ordinary least squares regression (OLS) and logistic regression to predict these outcomes with couple sex-composition as the main independent variable. The distribution of sex frequency is often positively skewed, so a logged version of the outcome variable was chosen in order to place a greater emphasis on incremental increases at the lower values of frequency. I test the robustness of differences between couples by introducing a number of relevant demographic and social controls, which are discussed in the previous section.

Results

Descriptive Findings

[Table 1 Here]
[Table 2 Here]

Tables 1 and 2 display differences between same-sex and different-sex couples from the datasets HCMST and Add Health, respectively. The abbreviation MF corresponds to a male survey respondent with a female partner, while FM corresponds to a female survey respondent with a male partner. MM and FF correspond to male and female same-sex couples, respectively. The far-right columns include the significance of differences between different groups as determined by two-tailed t-tests and chi-squared tests.

Relative to couples in Add Health, HCMST couples were older, in longer relationships, more likely to coreside, more likely to have children, and more likely to be monogamous. On average, sex frequency was higher for couples in Add Health, relative to those in HCMST. This discrepancy was largely because the question format concerning sex frequency varied between surveys, making comparisons between

datasets challenging. The higher sex frequency of Add Health respondents can likely be explained by the fact that respondents were younger and in earlier stages of their relationships relative to HCMST, both factors which correspond to a higher frequency.

[Figure 1 Here]

The raw survey responses on sex frequency in HCMST (before log transforming the variable for later analyses) are presented in Figure 1 above. These descriptive findings suggest that the sex frequency of women in same-sex relationships was lower than other couple types; 74% of FF couples reported having sex once a month or less (the lowest response option), relative to roughly 40% of other couples who said the same. After transforming weekly sex frequency into a continuous value in Table 1, one can see that the average frequency for FF couples was 0.45, relative to 1.08 for MF couples, 1.15 for FM couples, and 1.78 for MM couples. The difference in average frequency between FF couples relative to MF, FM, and MM couples was statistically significant ($p < .05$). The direction of male-female sex differences between couples in Add Health, reported in Table 2, was similar to findings from HCMST. An average weekly frequency of 4.23 was reported for FF couples, relative to 5.87 for MF couples, 4.48 for FM couples, and 6.27 for MM couples. After log-transforming the sex frequency variable, statistically significant differences were found in the comparison between FF-MF ($p < .01$), FF-FM ($p < .1$) and MF-FM ($p < .001$) couples. In the next row, I explore whether significant differences exist in regard to the likelihood that a respondent reported a sex frequency of zero, finding that 32% of FF couples, 20% of MF/FM couples, and 26% of MM couples fall into this category. Here, significant differences ($p < .01$) are found between FF and MF/FM couples.

[Figure 2 Here]

In regard to sexual satisfaction (Table 2), men in same-sex relationships reported being less sexually satisfied (on a scale from 1-5) than other types of couples; the average for MM couples was 3.70, relative to 4.03 for MF couples, 4.09 for FM couples, and 3.96 for FF couples. A breakdown of responses to the Add Health question on sexual satisfaction are presented in Figure 2, which shows that MM couples were half as likely as other couples to say that they strongly agree that they are satisfied with their sex lives. MM couples were also twice as likely as others to report that they neither agree nor disagree that they are satisfied. While men in same-sex relationships appear to have lower reported sexual satisfaction, Tables 1 and 2 demonstrate little to no differences concerning overall relationship quality between couple types.

In both surveys, men in same-sex relationships were significantly more likely than other types of couples to report being non-monogamous. 25% of MM couples in HCMST (Table 1) reported that they expected their partner to have sex with other people, relative to roughly 3% of MF, FM, and FF couples. In Add Health (Table 2), 46% of MM couples reported being in non-monogamous relationships, relative to 26% of MF couples, 25% of FM couples, and 30% of FF couples.

Overall, the direction of difference on other characteristics between couple types was similar across datasets. On most demographic characteristics, same-sex couples varied significantly from different-sex couples, but not from one another. Same-sex couples have shorter relationship durations, are slightly older, have more substantial age differences, and are less likely to have children than different-sex couples. Consistent with previous studies, FF couples in Add Health are also more likely to have children relative to MM couples (Rosenfeld 2014).

Taken together, these initial results provide preliminary evidence to suggest a number of important differences in the sexual lives of men and women in same-sex and different-sex relationships: (1) FF couples report significantly lower sex frequency (2) MM couples report significantly lower sexual satisfaction, and (3) MM couples report significantly higher rates of non-monogamy. In the following sections, I explore these apparent differences under closer scrutiny and control for relevant social and demographic variables which may affect the outcomes under consideration.

Analysis of Sex Frequency

Tables 3 and Table 4 depict multivariate OLS regression analyses predicting logged weekly sex frequency for couples of varying sex-compositions using data from HCMST and Add Health, respectively. Since preliminary findings suggest that female same-sex couples (FF) are distinct in this regard, they are used as the comparison group in both sets of analyses. Findings are consistent with the notion that couples without a male partner engage in sexual activity less often than those with a male, even after controlling for demographic characteristics as well as variation in coresidency, monogamy, relationship satisfaction, and relationship duration.

[Table 3 Here]

Model 1 of Table 3 suggests that on average, FF couples had sex 34% less often than FM couples ($p < .001$), 30% less often than MF couples ($p < .001$), and 32% less than MM couples ($p < .001$). In Model 2, demographic controls are introduced, including age, age difference, race, religion, education, and the presence of children. Though the introduction of controls decreases the gap between FF and other couples by roughly 10%, differences in sex frequency remain substantial and significant ($p < .01$). Controls relating to the couple's relationship are added in Model 3, including whether the couple was coresident, monogamous, highly satisfied with their relationship, and relationship duration. The finding of significantly lower sex frequency among FF couples was robust ($p < .01$) to the inclusion of these controls. In Model 4, couple sex-composition was interacted with relationship duration (in years) to test the "lesbian bed death" hypothesis, which predicts that relationship duration has a particularly negative effect on the sex lives of lesbian couples (as emotional closeness is thought to reduce sexual drive). I find no evidence to support this theory³.

[Table 4 Here]

³ Note: results are comparable when looking at instances of "no sex."

In Table 4, I reproduce the analysis in Table 3 using data from Add Health. Model 1 shows that the sex frequency of FF couples was 25% lower than FM couples ($p < .1$), 38% lower than MF couples ($p < .01$), and 23% lower than MM couples ($p > .1$). Model 2 introduces demographic controls, resulting in the increasing size and significance of differences between FF and other MF/FM couples. These gaps are robust ($p < .05$) to the inclusion of relationship relevant controls in Model 3. Consistent with the findings from HCMST (Table 3), high relationship satisfaction is shown here to have a positive and significant relationship with sex frequency. In Model 4, relationship duration is interacted with couple sex-composition, resulting in a positive effect ($p < .05$) of relationship duration (in years) for female respondents in relationships with men.

Analysis of Sexual Satisfaction

[Table 5 Here]

Table 5 displays multivariate OLS regression analyses using Add Health data to predict sexual satisfaction, which ranged from (1) strongly dissatisfied to (5) strongly satisfied. Because descriptive findings suggest that men in same-sex relationships (MM) are distinct in this regard, they are used as the reference group. Results indicate that individuals in relationships that lacked a female partner reported lower sexual satisfaction, even after controlling for demographic and relationship-level variables. Model 1 indicates that relative to MM couples, satisfaction is .33 higher for MF couples ($p < .01$), 0.39 higher for FM couples ($p < .001$), and 0.26 higher for FF couples ($p < .1$). Model 2 includes demographic controls, which have little effect on the differences between couples. Model 3 introduces relationship-relevant controls. Co-residency ($\beta = -.35$), non-monogamy ($\beta = -.15$), and relationship satisfaction ($\beta = .94$) were all found to have a significant relationship ($p < .001$) with sexual satisfaction. In Model 4, I test the extent to which sex frequency is related to sexual satisfaction for different types of couples. I find how often couples have sex is significantly tied to how satisfied they are with their sexual lives. This correlation between sex frequency and satisfaction is significant ($p < .05$) across all types of couples, though this effect is slightly smaller ($p < .1$) for men in different-sex relationships relative to those in same-sex relationships.

Analysis of Non-Monogamy

Tables 6 and Table 7 depict multivariate logistic regression analyses predicting non-monogamy by couple sex-composition using data from HCMST and Add Health, respectively. Since preliminary findings suggest that male same-sex couples are distinct in this regard, they are used as the comparison group in both sets of analyses. Analyses of both datasets indicate that relationships without a female partner (MM) are more likely to be non-monogamous relative to those with one (MF/FM/FF), even after controlling for demographic characteristics as well as variation in coresidency, relationship satisfaction, relationship duration, and couple sex frequency.

[Table 6 Here]

Using data from HCMST, Table 6 displays the log odds coefficients from a logistic model predicting expectations of partner non-monogamy, based on couple sex-composition. Model 1 indicates that relative to MM couples, other couples had significantly lower log odds ($p < .001$) of being non-monogamous. Model 2 includes demographic controls, which have little effect on differences between couple types. Model 3 introduces relationship-relevant controls, demonstrating that individuals who were more satisfied in their relationships were significantly less likely to be non-monogamous ($\beta = -1.66$, $p < .001$). Even after controlling for relative differences in satisfaction and sex frequency, the log-odds of non-monogamy were significantly lower for MF ($\beta = -2.32$, $p < .001$), FM ($\beta = -2.17$, $p < .001$), and FF ($\beta = -2.68$, $p < .001$) couples, relative to MM couples.

[Table 7 Here]

In Table 7, I reproduce the analyses predicting non-monogamy in Table 6 using data from Add Health. The directions of the findings in Model 1 are consistent with those from HCSMT, showing that men in same-sex relationships are significantly ($p < .05$) more likely to be non-monogamous, relative to other types of couples. These findings are robust to the inclusion of demographic controls introduced in Model 2. Model 3 includes relationship-relevant controls, and indicates that relationship satisfaction has a negative relationship with non-monogamy ($\beta = -1.37$, $p < .001$), a finding consistent with Model 3 of Table 6. Even after controlling for relative differences in coresidency, relationship satisfaction, relationship duration, and logged weekly sex frequency, I find that the log-odds of non-monogamy were significantly lower for MF ($\beta = -1.20$, $p < .001$), FM ($\beta = -1.30$, $p < .001$), and FF ($\beta = -0.94$, $p < .01$) couples, relative to MM couples.

Discussion

The findings presented above support the notion that American sexual relationships function differently in the absence of a male or female partner, but present a more complex picture of gender and sexual dynamics than has previously been accepted. First, I find that couples without a male partner (i.e. female same-sex couples) have sex less often than those with one. This is consistent with the theories proposing that men in heterosexual relationships hold greater bargaining power than women and their desires are prioritized as a result. This result is also consistent with theories on socialization and sexual scripts, which suggest that women are less likely than men to initiate sex and may feel as if they are less in control of decisions regarding when to have sex. Couples without a female partner (i.e. male same-sex couples) were found to be less sexually satisfied than couples with one. This is consistent with theories that suggest women are taught to prioritize their partner's sexual pleasure over their own (Wade 2018). Consistent with previous studies on sex and commitment, this analysis found that non-monogamy was most common among men in same-sex relationships, relative to those that include a female partner (Parsons et al. 2012).

This paper contributes to literature on the gendered nature of sexual activity, and its findings expand our understanding of how male and female sexuality are expressed and

negotiated in same-sex and different-sex relationships. The findings presented here provide a more up to date picture of the dynamics of same-sex relationships, which have gained rapid social approval and legal recognition in the United States. Little to no research over the past few decades has comparatively analyzed the sexual activity of such pairings. The results presented in this paper reexamine some of the conclusions drawn from the from bivariate analyses conducted by Blumstein and Schwartz (1983) and Laumann et al. (1994) using updated and nationally representative samples of couples (HCMST and Add Health), and thus provide a more accurate and analytically useful picture of sexual behavior in modern American relationships.

However, because the social world is complex, these interpretations are only useful insofar as one assumes that a person's identity as a male/man or female/woman and his or her choice of sexual partner are distinct social characteristics. Determining the extent to which such characteristics are distinct, as well as the extent to which they are biologically determined, is beyond the scope of the present study. Regardless, this paper can contribute in that it highlights the importance of considering the social construction of male and female sexuality. Additionally, it is important to note that many of the differences reported, though significant, were in fact quite small, if one starts from the premise that the innate gap in male and female sexual desire is biologically ingrained and insurmountable. While this study cannot single-handedly confirm or deny any particular social or biological theory on sex and desire, its findings are consistent with various hypotheses and less consistent with others.

If one starts from the essentialist premise that the male sex drive is innately stronger than that of women, one would expect to find that sex frequency would be highest among couples with two male partners, followed by those with one male partner, followed by those with no male partner. The findings presented here are partially consistent with this hypothesis. While I find evidence that women in same-sex relationships have sex significantly less often, I find no evidence to support the notion that men in same-sex relationships have sex more often than men in relationships with women. These seemingly mixed outcomes can potentially be explained by drawing insights from a number of different social theories on gender. One way to view this discrepancy is through the lens of gender power dynamics present in heterosexual relationships, which leave women less in control of when they have sex. If the sex drive of women is innately lower than that of men (as evolutionary biologists have proposed). These findings suggest that negotiations among male and female partners favor the male desire, resulting in the seemingly unique behavior of lesbians but not gay men. The fact that men in same-sex relationships have sex as often as different-sex couples could indicate that women are not, as previously proposed by Kinsey (1948), preventing their male partners from having sex as often as they would like to.

The observed results may also be driven by variation in how men and women are socialized; women are taught to be sexually submissive, while men are taught to be aggressive. Similar to heterosexual women, lesbian women may feel less comfortable initiating sex, resulting in lower sex frequency relative to couples with one or two male partners. However, this implies that women in same-sex relationships are having less sex than they would ideally desire, a theory which is not supported by the findings on

satisfaction presented in this paper. Further research is needed to disentangle social and biological explanations on the comparatively low sex frequency of female same-sex couples.

As expected, the frequency of sex is lower for couples that have been in relationships longer. Unlike the sharp decrease implied in the notion of “lesbian bed death,” I find that relationship duration has a similar effect on the sex lives of women with female partners as it does on those of other couples. While women in same-sex relationships may have less sex than other couples, the tendency to frame this difference as problematic, and to conflate sex frequency with satisfaction rests upon the assumption of male sexuality as the natural baseline, while women’s desire is a deviation.

Contrary to this perspective, this study found that women in same-sex relationships (who had significantly less sex) reported higher sexual satisfaction relative to men in same-sex relationships (who reported more sex). While it is beyond the scope of this paper to explain the lower sexual satisfaction of men in same-sex relationships, this finding should be interpreted with caution for a number of reasons. One way in which the current datasets are biased is that they only include men and women currently in relationships, thereby excluding the sexual satisfaction of men who are single or dating a variety of partners (who could hypothetically be more sexually satisfied). Future studies might explore this possibility by examining differences in male sexual satisfaction inside and outside of committed unions. Others have argued that men in same-sex relationships couples are more likely to be non-monogamous and that measures of inter-partner sex frequency must take into account outside sources of sex that might compensate for levels of sex within a relationship. Even after controlling for this possibility, sex frequency was not found to significantly differ for men in relationships with other men relative to those in relationships with women.

Consistent with previous studies (Blumstein and Schwartz 1983; Kinsey 1948), this study found that male same-sex relationships were significantly more likely to be non-monogamous relative to other types of relationships. This finding was consistent across both HCMST and Add Health datasets. This pattern implies that relationships involving women come with the expectation of monogamy, while those without women are more flexible in their approach to monogamy. In some ways, this difference mirrors the gender difference in sex frequency, suggesting a potential compromise between male and female partners regarding sex and commitment.

Determining which of these theories best explains the observed patterns is beyond the scope of this paper. Despite the growing visibility and acceptance of same-sex couples, very little is known about the characteristics of these unions. While same-sex couples still make up a relatively small percentage of all relationships, there is reason to believe that change is underway; among older generations, such as baby boomers, only 2.4% of people identify as LGBT, relative to over 7% of millennials (Pew 2016). Popular portrayals of gay men as particularly libidinous have likely contributed to negative social judgments around such relationships, and the research presented here provides evidence to cast doubt on this notion. In the past, our understanding of same-sex couples has relied on a heteronormative model of relationships. Collecting more

specialized information on sexual minorities can help relationship counselors and medical professionals cater their services to a growing population.

Sociological research on sexual behavior has stalled in recent decades. Social scientists might be reluctant challenge dominant evolutionary narratives that rest on physiological sex differences. The explosion of large public datasets in most areas of the social sciences has contributed very little to our knowledge of intimate behavior in committed relationships. Data from online dating sites and internet pornography provide some peak into the sexual dynamics and desires of today's men and women, but fall short of capturing the sexual negotiation process occurring on a daily basis in intimate relationships.

Scholarship on gender has increasingly focused on the relative position of men and women in public spheres, and often loses sight of how inequality may also influence negotiation among men and women in the most private and intimate contexts. Regardless of whether male-female sex differences are innate or socially constructed does not preclude them from reaching fair compromises regarding how often they have sex. One recent study examining daily diaries suggests that men in established relationships tend to underperceive their female partner's sexual desire, and as a result initiate sex less often than they would like (Muise et al. 2016). Additionally, the #MeToo movement has recently drawn attention to the effects of uneven sexual power dynamics, making the public aware of the implications of excluding certain spheres of life from social and legal discussion.

While we may expect same-sex couples to reflect widely held beliefs about male-female sex differences, such patterns are only partially borne out in the realm of sexual activity. The findings from this paper highlight the importance of understanding gender and sexuality from the lenses of both social and biological perspectives. Determinist theories of sex and gender often win out over social ones among the American public, in part because essentialist schemas tend to be reinforced in the discourse of medical doctors, geneticists, evolutionary psychologists, and journalists. Social scientists can play an important role in elevating such debates by collecting empirical data on private sexual negotiations and adding important context to essentialist characterizations of male and female sexuality.

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Table 1. Comparisons of Same-Sex and Different-Sex Couples in HCMST

Outcome	Couple Sex-Composition ¹					Significance of Difference					
	All Couples	MF Couples	FM Couples	FF Couples	MM Couples	MF-FM	MF-FF	MF-MM	FM-FF	FM-MM	FF-MM
Mean Weekly Sex Frequency	1.07	1.08	1.15	0.45	1.78		***		***		***
Mean Age of Oldest Partner	54.35	53.95	52.34	61.18	59.22		***	**	***	***	
Mean Age Difference	4.21	3.79	3.81	6.36	6.42		***	***	***	***	
Mean Relationship Duration (Years)	24.85	26.29	24.77	21.53	20.36		**	**	+	*	
% High Relationship Satisfaction	55.94	58.00	52.50	64.86	51.95				+		
% Non-Monogamous	4.78	2.78	3.33	2.70	24.68			***		***	***
% Coresident	97.35	98.14	97.22	95.95	94.81			+			
% Living with Child Age 0-5	12.95	14.15	15.83	2.70	2.60		*	*	*	*	
% Living with Child Age 6-17	26.54	33.18	27.22	5.41	6.50	+	***	***	***	***	
N of Couples	942	431	360	74	77						

Source: All values are unweighted from HCMST, Wave 5 (data collected in 2014-2015).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. Significance determined using logistic or OLS regression. Empty cells indicate no significant difference between groups.

¹The abbreviation MF corresponds to a male survey respondent with a female partner, while FM corresponds to a female survey respondent with a male partner. FF and MM correspond to male and female same-sex couples, respectively.

Table 2. Comparisons of Same-Sex and Different-Sex Couples in Add Health

Outcome	Couple Sex-Composition ¹					Significance of Difference					
	All Couples	MF Couples	FM Couples	FF Couples	MM Couples	MF-FM	MF-FF	MF-MM	FM-FF	FM-MM	FF-MM
Mean Weekly Sex Frequency	5.09	5.87	4.48	4.23	6.27	***	**		+		
% Reporting Zero Sex	20.39	20.08	20.31	32.00	25.56		***		**		
Mean Sexual Satisfaction (1-5)	4.06	4.03	4.09	3.96	3.70	**		**		***	+
Mean Age of Oldest Partner	30.98	29.99	31.74	31.42	32.40	***	***	***			+
Mean Age Difference	3.28	3.04	3.43	4.54	5.05	***	***	***	***	***	
Mean Relationship Duration (Years)	5.76	5.37	6.16	3.64	3.40	***	***	***	***	***	
% Non-Monogamous	25.50	26.03	24.68	29.60	45.56			***		***	*
% High Relationship Satisfaction	71.90	72.47	71.42	71.20	74.44						
% Coresident	87.13	86.35	88.01	81.60	77.78	*		*	*	**	
% Living with Child Age 0-5	46.02	43.17	49.49	16.80	8.89	***	***	***	***	***	+
% Living with Child Age 6-17	27.76	21.33	33.37	20	5.56	***		***	**	***	**
N of Couples	10,643	4,617	5,811	125	90						

Source: All values are unweighted from Add Health Wave 4 (data collected in 2008).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. Significance determined using logistic or OLS regression. Empty cells indicate no significant difference between groups. For mean weekly sex frequency, OLS regression is performed on a log-transformed version of the variable.

¹The abbreviation MF corresponds to a male survey respondent with a female partner, while FM corresponds to a female survey respondent with a male partner. FF and MM correspond to male and female same-sex couples, respectively.

Table 3. OLS Regression Predicting Mean Weekly Sex Frequency (Logged) in HCMST

	(1) No Controls	(2) Demographic Controls	(3) Demographic + Relationship Controls	(4) Interaction with Relationship Duration
<u>Couple Sex-Composition</u>				
FM Couple (ref=FF Couple)	0.34*** (0.07)	0.20** (0.07)	0.22** (0.07)	0.02 (0.07)
MF Couple	0.30*** (0.06)	0.18** (0.06)	0.19** (0.06)	-0.27+ (0.15)
MM Couple	0.32*** (0.08)	0.27*** (0.08)	0.32*** (0.08)	0.15 (0.14)
Coresident			0.04 (0.10)	0.04 (0.10)
Non-Monogamous			-0.13+ (0.08)	-0.13+ (0.08)
High Relationship Satisfaction			0.17*** (0.03)	0.17*** (0.03)
<u>Relationship Duration (in years)</u>				
x FF Couple			-0.00 (0.00)	0.00 (0.01)
x FM Couple				-0.00 (0.00)
x MF Couple				-0.00 (0.00)
x MM Couple				-0.00 (0.01)
Constant	0.27*** (0.06)	1.05*** (0.12)	0.92*** (0.16)	0.85*** (0.21)
Additional Controls Included	None	age, age dif., race, religion, education, children	age, age dif., race, religion, education, children	age, age dif., race, religion, education, children
Observations	942	942	942	942
R ²	0.0284	0.1663	0.1965	0.1969
F Statistic	9.14***	11.53***	11.27***	9.79***

Source: All values are unweighted from HCMST Wave 5 (data collected in 2014-2015).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. FF = female respondent with female partner, FM = female respondent with male partner, MF = male respondent with female partner, MM = male respondent with male partner.

Table 4. OLS Regression Predicting Mean Weekly Sex Frequency (Logged) in Add Health

	(1) No Controls	(2) Demographic Controls	(3) Demographic + Relationship Controls	(4) Interaction with Relationship Duration
<u>Couple Sex-Composition</u>				
FM Couple (ref=FF Couple)	0.25+ (0.14)	0.29* (0.14)	0.30* (0.14)	0.24 (0.22)
MF Couple	0.38** (0.14)	0.37** (0.14)	0.38** (0.14)	0.42+ (0.22)
MM Couple	0.23 (0.21)	0.29 (0.21)	0.31 (0.21)	0.17 (0.32)
Coresident			-0.06 (0.05)	-0.06 (0.05)
Non-Monogamous			-0.10** (0.04)	-0.10** (0.04)
High Relationship Satisfaction			0.72*** (0.03)	0.72*** (0.03)
<u>Relationship Duration (in years)</u>				
			0.01*** (0.00)	
x FF Couple				0.00 (0.05)
x FM Couple				0.01* (0.01)
x MF Couple				-0.00 (0.01)
x MM Couple				0.04 (0.05)
Constant	0.26*** (0.14)	1.57*** (0.22)	1.10*** (0.23)	1.08*** (0.28)
Additional Controls Included	None	age, age dif., race, religion, education, children, pregnant	age, age dif., race, religion, education, children, pregnant	age, age dif., race, religion, education, children, pregnant
Observations	10,643	10,643	10,643	10,643
R ²	0.0019	0.0120	0.0575	0.0580
F Statistic	7.62***	7.59***	30.85***	27.26***

Source: All values are unweighted from Add Health Wave 4 (collected in 2008).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. FF = female respondent with female partner, FM = female respondent with male partner, MF = male respondent with female partner, MM = male respondent with male partner.

Table 5. OLS Regression Predicting Sexual Satisfaction (1= least satisfied, 5= most satisfied) in Add Health

	(1) No Controls	(2) Demographic Controls	(3) Demographic + Relationship Controls	(4) Interaction with Sex Frequency
<u>Couple Sex-Composition</u>				
MF Couple (ref = MM Couple)	0.33** (0.12)	0.28* (0.12)	0.27** (0.10)	0.33*** (0.10)
FM Couple	0.39*** (0.12)	0.38*** (0.12)	0.39*** (0.10)	0.43*** (0.10)
FF Couple	0.26+ (0.15)	0.24 (0.15)	0.29* (0.12)	0.31* (0.13)
Coresident			-0.35*** (0.03)	-0.35*** (0.03)
Non-Monogamous			-0.15*** (0.02)	-0.15*** (0.02)
High Relationship Satisfaction			0.94*** (0.02)	0.94*** (0.02)
Relationship Duration (in years)			-0.00 (0.00)	-0.00+ (0.00)
<u>Mean Weekly Sex Frequency (Logged)</u>			0.21*** (0.01)	0.29*** (0.06)
x MF Couple				-0.10+ (0.06)
x FM Couple				-0.07 (0.06)
x FF Couple				-0.01 (0.08)
Constant	3.70*** (0.11)	4.72*** (0.17)	3.47*** (0.15)	3.70*** (0.15)
Additional Controls Included	None	age, age dif., race, religion, education, children, pregnant	age, age dif., race, religion, education, children, pregnant	age, age dif., race, religion, education, children, pregnant
Observations	10,643	10,643	10,643	10,643
R ²	0.0019	0.0148	0.32737	0.3246
F Statistic	6.72***	9.40***	231.08***	204.06***

Source: All values are unweighted from Add Health Wave 4 (data collected in 2008).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. FF = female respondent with female partner, FM = female respondent with male partner, MF = male respondent with female partner, MM = male respondent with male partner. DV question wording = "I am satisfied with our sex life." Responses range from (1) strongly disagree to (5) strongly agree.

Table 6. Logistic Regression Predicting Expectation that Partner is Non-Monogamous in HCMST, Coefficients in Log-Odds

	(1) No Controls	(2) Demographic Controls	(3) Demographic + Relationship Controls
<u>Couple Sex-Composition</u>			
MF Couple (ref = MM Couple)	-2.44*** (0.39)	-2.27*** (0.44)	-2.32*** (0.48)
FM Couple	-2.25*** (0.40)	-2.12*** (0.45)	-2.17*** (0.48)
FF Couple	-2.47*** (0.76)	-2.68*** (0.79)	-2.68*** (0.80)
Coresident			1.33 (1.14)
High Relationship Satisfaction			-1.66*** (0.40)
Relationship Duration (in years)			-0.01 (0.02)
Mean Weekly Sex Frequency (Logged)			-0.55 (0.40)
Constant	-1.12*** (0.26)	-1.35 (1.78)	-1.15 (1.77)
Additional Controls Included	None	age, age dif., race, religion, education, children	age, age dif., race, religion, education, children
Observations	942	942	942
Pseudo-R ²	0.1169	0.1605	0.2254
LR Chi2	42.27***	57.37***	81.47***

Source: All values are unweighted from HCMST Wave 5 (data collected in 2014-2015).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. FF = female respondent with female partner, FM = female respondent with male partner, MF = male respondent with female partner, MM = male respondent with male partner. DV question wording = "Do you expect [partner name] to have sexual activity only with you?" Response options included (0) No, I expect [partner name] to have sex with other people besides me or (1) Yes, I expect that [partner name] will only have sex with me.

Table 7. Logistic Regression Predicting Non-Monogamy in Add Health, Coefficients in Log-Odds

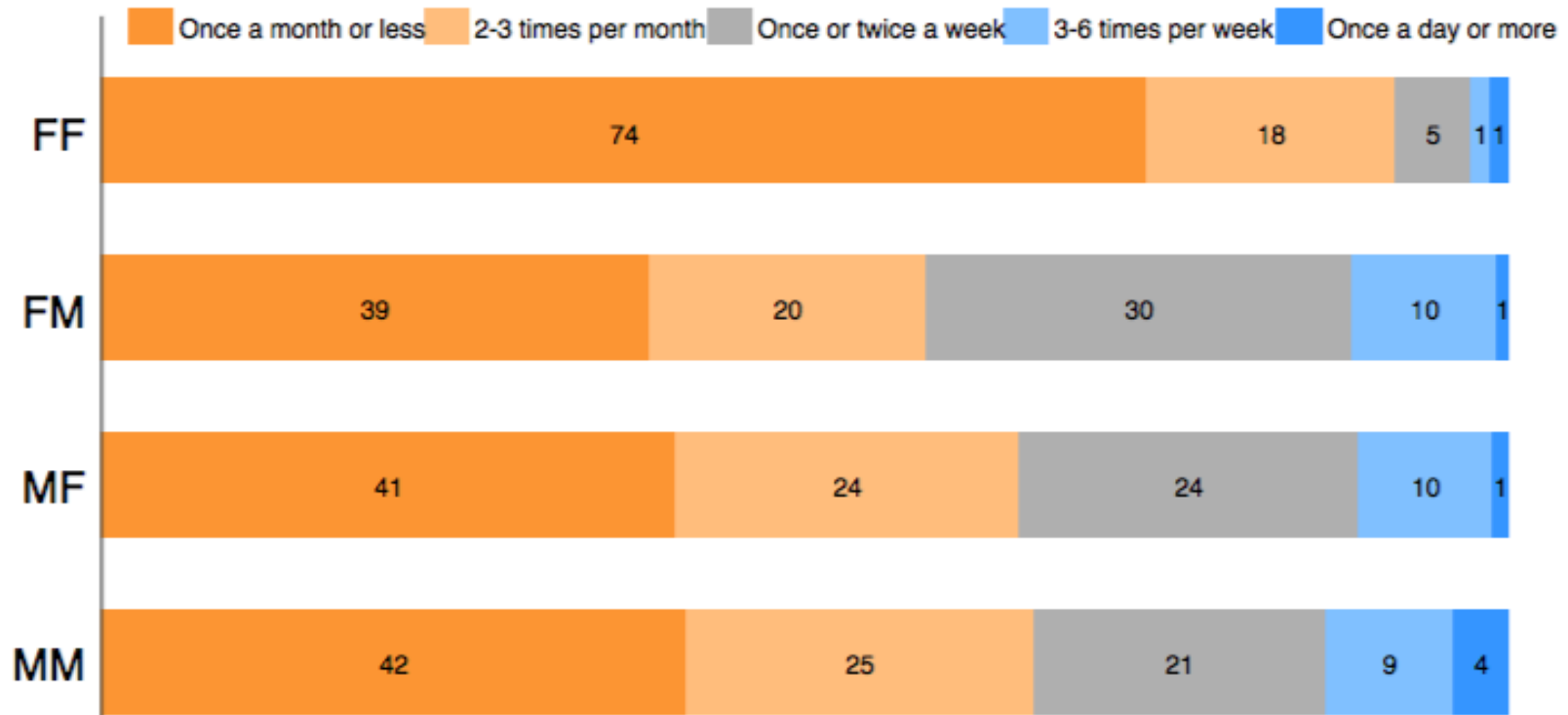
	(1) No Controls	(2) Demographic Controls	(3) Demographic + Relationship Controls
<u>Couple Sex-Composition</u>			
MF Couple (ref = MM Couple)	-0.87*** (0.21)	-0.98*** (0.22)	-1.20*** (0.23)
FM Couple	-0.94*** (0.21)	-1.06*** (0.22)	-1.30*** (0.23)
FF Couple	-0.69* (0.29)	-0.90** (0.29)	-0.94** (0.31)
Coresident			-0.05 (0.08)
High Relationship Satisfaction			-1.37*** (0.05)
Relationship Duration (in years)			0.08*** (0.01)
Mean Weekly Sex Frequency (Logged)			-0.04** (0.01)
Constant	-0.18 (0.21)	0.07 (0.35)	2.19*** (0.37)
Additional Controls Included	None	age, age dif., race, religion, education, children, pregnant	age, age dif., race, religion, education, children, pregnant
Observations	10.643	10.643	10.643
Pseudo-R ²	0.0017	0.0333	0.0952
LR Chi2	20.69***	402.78***	1150.88***

Source: All values are unweighted from Add Health Wave 4 (data collected in 2008).

Note: + p<.1 *p<.05, **p<.01, ***p<.001. FF = female respondent with female partner, FM = female respondent with male partner, MF = male respondent with female partner, MM = male respondent with male partner. DV question wording = "As far as you know, during the time you and [partner name] have had a sexual relationship, has [partner name] ever [had] any other sexual partners?" and, "During the time you and [partner name] have had a sexual relationship have you ever had any other sexual partners?" A response of "no" to both of these questions is coded as (0) and a response of "yes" to either question is coded as (1).

Figure 1. Sexual Frequency by Couple Sex-Composition

"During the last 12 months, about how often did you have sex with your partner?"

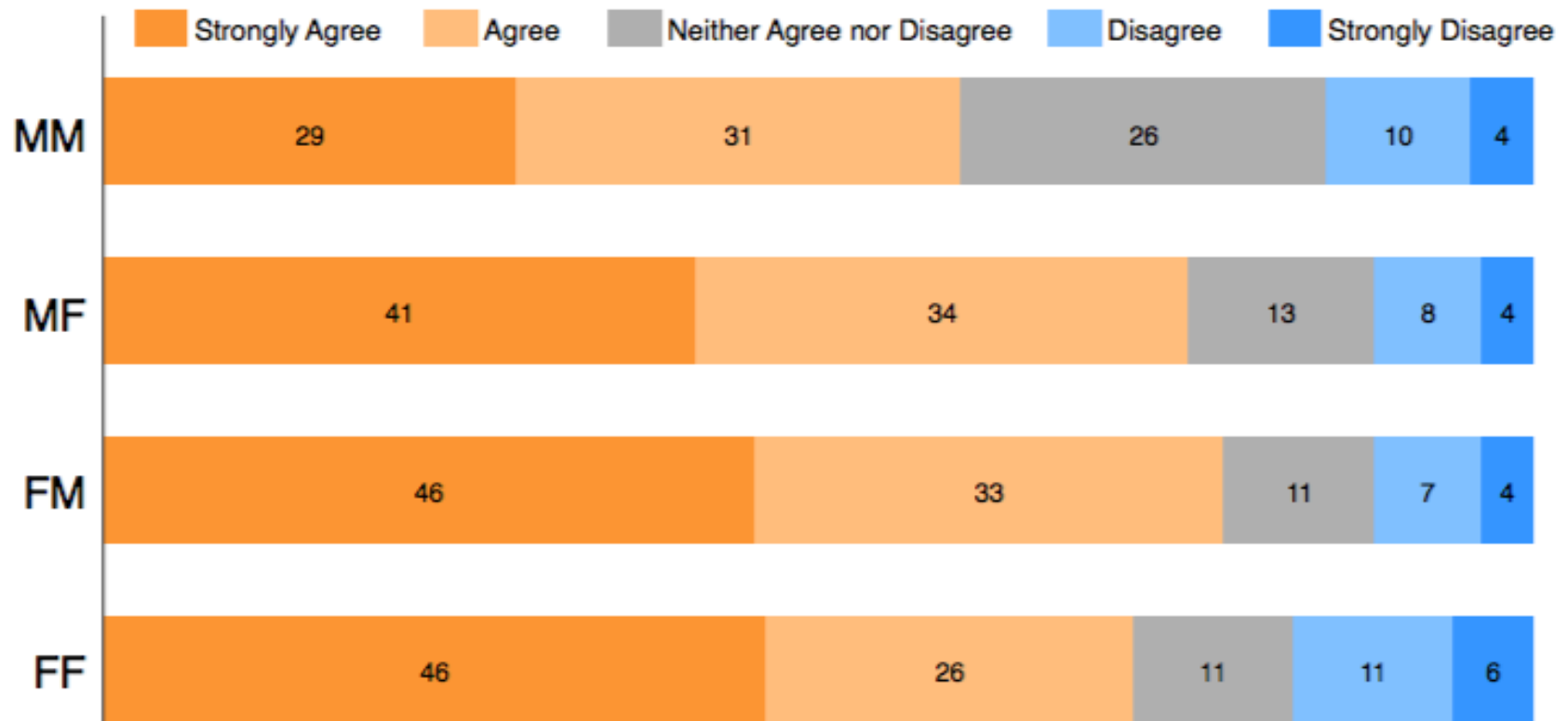


Note: FF = female respondent with female partner; FM=female respondent with male partner; MF=male respondent with female partner; MM=male respondent with male partner.

Source: All values are unweighted from HCMST Wave V (collected in 2014-2015). N=942.

Figure 2. Sexual Satisfaction by Couple Sex-Composition

"I am satisfied with our sex life."



Note: MM=male respondent with male partner; MF=male respondent with female partner; FM=female respondent with male partner; FF=female respondent with female partner.

Source: All values are unweighted from Add Health Wave IV (collected in 2008). N=10,643.