

## Same-Sex Cohabitation and Cigarette Smoking: Qualitative and Quantitative Evidence

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## Abstract

Cigarette use is a leading contributor of death in most developed nations, and a major goal of public health initiatives is to reduce smoking prevalence. A significant body of research suggests that marriage is associated with a reduction in smoking. However, gays and lesbians report higher levels of cigarette consumption than the heterosexual population, and in most states in the U.S., same-sex couples are unable to legally marry. The question remains as to whether individuals in same-sex cohabiting relationships have a reduced rate of smoking that is comparable to their counterparts in heterosexual marriage, or whether same-sex cohabiters have smoking rates more similar to the relatively higher rates of other non-married groups. We use pooled data from the 1997-2009 National Health Interview Survey to examine how smoking status differs for 662 same-sex cohabiting men and 630 same-sex cohabiting women compared to their heterosexual married, heterosexual cohabiting, divorced, widowed, and never married counterparts (N = 297,976). We also utilize qualitative data (N = 120) collected with same-sex cohabiting and heterosexual married individuals to provide insight into the relationship between union status and health behaviors. Results from multinomial logistic regression models reveal that same-sex cohabiters are more likely to smoke than their married counterparts, as equally likely to smoke as their heterosexual cohabiting counterparts, and more likely to smoke than their divorced, widowed and never married counterparts. Gender and racial-ethnic differences in these findings are examined. Supplementary qualitative analyses highlight the mechanisms that underlie these survey trends, pointing to the ways legal and institutional policies and social discrimination shape smoking and other health habits of same-sex cohabiters. We further argue that same-sex cohabiters are a unique population that requires additional public health effort to reduce smoking and other risky behaviors.\*

**Keywords:** Same-Sex Cohabiters, Smoking, National Health Interview Survey, Marriage, Gender, Race-Ethnicity

\*NOTE: This paper does not include the qualitative analysis; the qualitative portion of the paper will be supplementary in the presentation.

## 1. INTRODUCTION

Cigarette use is a leading contributor of death and chronic disease in industrialized nations, and a public health goal is to reduce smoking prevalence (CDC 2008; WHO 2008). Following research showing marriage is associated with a reduction in smoking, several policy efforts have promoted marriage in an effort to reduce tobacco and other substance use (USDHHS 2000). Yet about 650,000 Americans in same-sex couples are not allowed to legally marry at the federal level. Recent research suggests that sexual minority populations are subject to substantial and “unique health disparities,” including higher rates of tobacco use in comparison to heterosexual populations (IOM 2011); these higher smoking rates may relate to “the lack of consistent legal recognition for same-sex partners” (USDHHS, 2000 p. 284). However, few empirical studies examine the connection between union status and cigarette use for individuals in same-sex relationships. In order to address this research gap, we ask: Do same-sex cohabiters who cannot marry have reduced smoking rates analogous to heterosexual married individuals? Or are same-sex cohabiter’s smoking rates more similar to the relatively higher rates of heterosexual cohabiters, the divorced, widowed, or never married? In order to answer this question, we use pooled data from the 1997-2009 National Health Interview Survey to compare the smoking status (never smoker, former smoker, current “everyday” or “somedays” smoker) of same-sex cohabiters with that of heterosexual married individuals, heterosexual cohabiting individuals, and the divorced, widowed, and never married single. Additionally, given long-standing observations about gender and racial-ethnic differences in family (Brown et al., 2008; Ross et al., 1990) and smoking processes (Galea et al., 2004; U.S. DHHS 2000) we examine gender and racial-ethnic differences in the linkage between same-sex cohabitation and smoking.

### *1.1 Empirical Evidence on Same-Sex Cohabitation and Smoking*

Recent empirical research suggests that sexual minorities smoke at two to six times higher rates than heterosexuals (Burgard et al., 2005; Diamant et al., 2000; Gruskin et al., 2001; IOM, 2011). While this research provides important data on the population patterns of cigarette use, this body of work has several limitations. First, few studies utilize nationally representative data, limiting generalizability (e.g., Cochran et al., 2007). Second, research suggests that the sexual minority population has heterogeneous characteristics (Conron et al., 2010), and understanding racial-ethnic and gender variations in the sexual minority population is critical for ameliorating smoking disparities (IOM, 2011; DHHS, 2000). However, few studies go beyond individual smoking trends to empirically examine how race-ethnicity and gender relate to smoking status in this population. Third, and perhaps most importantly, few studies in this research area examine the role of union status in smoking prevalence. This is an important consideration as research shows that being in a heterosexual union significantly reduces the risk of smoking (Bachman et al., 2002; Umberson 1992).

### *1.2 Theoretical Perspectives on Same-Sex Cohabitation and Smoking*

Theoretical perspectives on heterosexual marriage, heterosexual cohabitation, and smoking provide insight into the scant literature on smoking in same-sex cohabitation. Heterosexual marriage is hypothesized to significantly reduce smoking rates through several mechanisms (Carr & Springer, 2010). For example, marriage is hypothesized to reduce smoking as a result of increased socioeconomic status (e.g., income, wealth) (Link & Phelan, 1995; Pampel & Rogers, 2004), perhaps through in the division of labor, economies of scale, access to health care, and the pooling of wealth (Waite & Gallagher, 2000). Marriage also provides access to psychological resources such as social integration (i.e., feeling connected to others) and social support (i.e., providing care). Integration and support promote psychological and physical well-

being, which in turn are related to a reduction in smoking (Ross et al., 1990). Additionally, social control processes shape smoking rates through the indirect internalization of marital smoking norms, as well as through the direct regulation of smoking habits (Umberson, 1992).

It is unclear from previous empirical research whether these resources are present—and if so to what degree—in same-sex cohabiting relationships. Preliminary research suggests that same-sex cohabiters may have resources more similar to heterosexual marriage, not heterosexual cohabitation. Reczek and Umberson (forthcoming) show that long-term same-sex cohabiting and heterosexual married couples deployed similar social control mechanism to promote health and well-being, and Wienke and Hill (2009) found no differences between the self-rated health of same-sex cohabiting and heterosexual married individuals. However, research on heterosexual cohabitation finds that cohabitation reduces the risk of smoking, although not as strongly as marriage and only if one is cohabiting with the intent to marry (Duncan et al., 2006). This suggests that since same-sex cohabiters cannot legally marry due to legal restrictions (Lau & Strohm, 2011), they may accrue only partial resources in ways that are similar to heterosexual cohabiters, and thus have similar smoking rates as their heterosexual cohabiting—not married—counterparts. Research supports this view, finding that same-sex cohabiters are more likely to have chronic conditions such as asthma (Heck & Jacobson, 2006) and are less likely to have health insurance (Buchmueller & Carpenter, 2010) compared married heterosexuals. Both asthma and health insurance are related to smoking status (Cokkinides et al., 2005; U.S. DHHS, 2004), further indicating that cohabiting same-sex couples may have higher rates of smoking compared to their married heterosexual counterparts. Moreover, individuals in same-sex couples may not only receive fewer resources from their intimate tie, but they may also experience higher levels of stress due to stress and discrimination due to homophobia (Meyer, 2003). This may

suggests that same-sex cohabiters have more similar rates to the never married, widowed, and divorced counterparts who also accrue fewer resources and experience higher levels of stress than the married and cohabiting population (Waite & Gallagher, 2000).

### *1.3 Gender Variation*

Previous research suggests gender differences in the relationship between union status and smoking. Men are more likely than women to be current smokers (Dube et al., 2010), and lesbian women and gay men report higher levels of smoking than heterosexual women and men, respectively (Gruskin et al., 2007; Drabble et al., 2005). Moreover, while marriage is associated with lower levels of smoking among both men and women, this association is more strongly and more consistently present for men (Waite & Gallagher, 2000). This suggests that gender may play an important role in the smoking rates of same-sex cohabiters. Because women on average are more likely to regulate smoking behavior (i.e., social control) (Umberson, 1992) and provide psychosocial support (Ross et al., 1990) than men, it may be that women in cohabiting relationships with women receive higher levels of social control and support from their women partners, which in turn may promote lower smoking rates than found for not only heterosexual married women but also heterosexual cohabiting women as well as other nonmarried women. In contrast, due to gendered norms (Courteney, 2000), men in same-sex relationships may not provide social support or perform social control on their partner's smoking habits. Thus, men in same-sex cohabiting relationships may report higher levels of smoking than heterosexual married men. However, it is likely that same-sex cohabiting men receive *at least some* level of social control and social support. Thus, same-sex and heterosexual cohabiting men may have similar levels of current smoking; yet because lower levels than nonmarried individuals who receive the lowest levels of social control (Duncan, 2006).

In contrast, however, women tend to receive a greater economic boost than men with marriage (Ross et al., 1990); thus, the economic aspects of union status may also differentially matter for the smoking habits of men and women across union status groups. It may be that two men in a relationship have greater economic resources and in turn have lower rates of smoking than married, cohabiting, and single men. However, recent research finds that men in same-sex relationships earn significantly less than men in heterosexual marriages with the same levels of education, while women in same-sex relationships are not significantly disadvantaged in terms of income compared to women in heterosexual marriages (Black et al., 2007). Thus, it may be that both same-sex cohabiters have higher smoking rates than heterosexual marrieds due to their lower socioeconomic status, but have similar rates as cohabiting heterosexual individuals as well as other non-married individuals due to the slight economic benefit accrued in cohabitation.

#### *1.4 Racial-ethnic Variation*

Race-ethnicity may also play a role in the smoking rates of same-sex cohabiters. Blacks and Hispanics are less likely to smoke than their White counterparts (Fagan, 2007; Krueger et al., 2011). This is shown to be true despite consistent evidence that Blacks and Hispanics have lower socioeconomic status (Liu & Hummer, 2008) and report higher levels of stress (Turner & Avison, 2003) than their White counterparts—factors associated with higher smoking rates (Fagan et al., 2007). In line with findings from the general population, recent community-based non-representative and thus nongeneralizable research suggests Black sexual minorities have lower prevalence of cigarette smoking compared to White and Hispanic sexual minorities (Blosnich et al., 2011; Mays et al., 2002), while Hispanic and White gays and lesbians do not significantly differ from one another on smoking behavior (Blosnich et al., 2011). Moreover, Gruskin and colleagues (2007) found that White lesbian women had higher smoking rates than

White heterosexual women, but found no significant differences in smoking patterns between Hispanic or Black lesbian women compared to their heterosexual counterparts.

Despite differential levels of cigarette use by race-ethnicity, recent research finds that Blacks, Hispanics, and Whites all experience at least some decline in cigarette use with marriage (Kandel et al., 2011). However, a growing body of work suggests that Black men and women's health may not benefit *as greatly* from marriage as Whites (Liu, 2009), potentially because the economic and social-psychological gains of marriage are less prevalent in racial-ethnic minority populations (Waite & Gallagher, 2000). Additionally, because racial-ethnic minorities smoke less on average, union status may be less important for promoting lower levels of smoking rates than found for Whites. This would suggest that Black and Hispanic same-sex cohabiters would have more similar rates as their heterosexual married, heterosexual cohabiting, and single counterparts, while White same-sex cohabiters would have relatively higher rates of smoking than their counterparts. However, Black and Hispanic same-sex cohabiters may have profoundly different life experiences than their Black and Hispanic counterparts in other union statuses, and these experiences may in turn shape smoking status in unique ways (Meyer, 2003; Meyer et al., 2008). For example, Blacks and Hispanics in same-sex relationships may face more socioeconomic disadvantages, stigma, stress, and discrimination than their Black and Hispanic heterosexual counterparts (Herek et al. 2010; Meyer et al., 2008). These factors may produce a "triple jeopardy" wherein low-socioeconomic status racial-ethnic and sexual minorities face multiple socioeconomic, interpersonal, and institutional stressors (IOM, 2011), in turn promoting smoking (Kassel, Straud, & Paronis, 2003). If this is the case, the pattern of higher smoking rates among same-sex cohabiters compared to their heterosexual married, cohabiting, and nonmarried



counterparts would be stronger among Black and Hispanic groups than Whites (Cochran et al., 2007; Meyer et al., 2008).

## **2. METHODS**

### *2.1 Data*

We use pooled data from the 1997-2009 National Health Interview Survey (NHIS) Sample Adult Core files. The NHIS is a cross-sectional household survey conducted annually by the National Center for Health Statistics. NHIS sampling follows a multistage probability design and is representative of the civilian non-institutionalized population of the United States (USDHHS, 2000). The NHIS first collected data on cohabitation status in 1997; to increase the number of same-sex cohabiters in our sample, we pool data from 1997 to 2009. We limit our analyses to respondents between the ages of 18 and 65, excluding individuals older than 65 because both cohabitation and same-sex relationships have different meanings for older adults (Brown et al., 2008; Reczek et al., 2009). We further exclude those observations with missing values on union status. In the final analysis, we include 297,976 respondents who were interviewed in the NHIS from 1997 to 2009; among them, 662 men and 630 women are identified as same-sex cohabiters. Weights are applied in all of the analysis to adjust for the clustered nature of the NHIS sample. We use the “svy” commands in Stata (StataCorp LP, 2007) to further account for the primary sampling unit and strata in order to adjust for the complex sampling design of NHIS. All significance tests are based on robust standard errors.

### *2.2 Measures*

*Union Status.* From each NHIS family, one sample adult (“the householder”) is randomly selected, and the NHIS asks the relationship of each household member with the householder. We identify individuals in a same-sex cohabiting relationship if a member with the same gender

as the householder reports to be the “spouse” or “unmarried partner” of the householder. Union status is categorized into six categories: same-sex cohabiting, heterosexual married, heterosexual cohabiting, divorced or separated, widowed, and never married. We are also able to identify individuals who reported they were in same-sex marriages in the sample. However, because same-sex marriage is allowed in only a minority of states and not legally recognized at the federal level we are unclear as to the social and legal meaning—and therefore smoking implications—of marriage for these couples in this context (Reczek et al., 2009; Rosenfeld, 2007). Additionally, the total number of same-sex married individuals is relatively small. Therefore, we combine same-sex married and cohabiting individuals in one group. We use “same-sex cohabiters” as the reference group in the analysis to better understand smoking differences between same-sex cohabiters and other union status groups.

*Smoking Status* includes four categories: *never smoker (the reference)*, *former smoker*, *current everyday smoker*, and *current some days smoker*.

*Other sociodemographic covariates* include age (in years), nativity (native-born (reference), foreign-born, and unknown), NHIS survey year (centered at 1997), education (less than high school (reference), high school or GED, some college, college graduate, and unknown) and poverty status (not in poverty (reference), in poverty and unknown status). Poverty status is determined based on comparing the total family income with the U.S. Census Bureau’s poverty thresholds for the specific year, which takes account of family income, family size, and the ages and number of children. If the total family income is lower than the poverty threshold for families of that size and age composition, the respondent was determined to be “in poverty”; otherwise the respondent was determined to be “not in poverty”.

### *2.3 Statistical Methods*

Because the meanings and processes of same-sex cohabitation and health are fundamentally different across gender and race-ethnicity (IOM, 2011), we conduct the analysis separately for White men, Black men, Hispanic men, White women, Black women, and Hispanic women. Within each gender and racial-ethnic subgroup, we run multinomial logistic regression models with “never smokers” as the reference category. The model can be specified as:

$$\log \frac{p(y = k)}{p(y = 0)} = \tau_k + \sum \beta_{kj} M_{kj} + \sum \alpha_{km} X_{km}$$

Where  $y$  represents the smoking status (0 = never smokers, k = 1,2 and 3 indicating current everyday smokers, current somedays smokers and former smokers);  $\tau_k$  represents the intercept.  $M_{kj}$  represents the set of dummy variables indicating union status with same-sex cohabiters serving as the reference category. The  $X_{km}$  term represents the other covariates in the model.  $\alpha_{km}$  and  $\beta_{kj}$  are the coefficients.

### 3. RESULTS

#### 3.1 Descriptive Results

We first report descriptive statistics of all analyzed variables for the same-sex cohabiting, heterosexual married, heterosexual cohabiting, and unpartnered singles including divorced, widowed and never married groups for men (Table 1) and women (Table 2). Table 1 shows that among both White men and Hispanic men, the proportion of same-sex cohabiting current everyday smokers is higher than that of their heterosexual married and single counterparts, but lower than that of their heterosexual cohabiting counterparts. For both White men and Hispanic men, the proportion of same-sex cohabiting current somedays smokers is lower than their heterosexual cohabiting and single counterparts, but higher than their heterosexual married counterpart; while the proportion of same-sex cohabiters who are former smokers is higher than

their heterosexual cohabiting and single counterparts, but lower than their heterosexual married counterparts. Among Black men, same-sex cohabiters have the lowest proportion of individuals who report being a current everyday smoker, but the highest proportion of individuals who report being current somedays smokers across union status groups. Table 2 shows that among White women, same-sex cohabiters are more likely to report both current everyday and somedays smokers than their heterosexual married counterparts, but less likely to report being a current smoker than their heterosexual cohabiting and single counterparts; same-sex cohabiting White women are more likely to be former smokers than their other union status counterparts. For Black women, same-sex cohabiters report the highest proportion of current everyday smokers or former smokers across union status groups; same-sex cohabiting Black women report higher proportion of current somedays smokers than their heterosexual married counterparts, but lower proportion of current somedays smokers than their heterosexual cohabiting and single counterparts. Hispanic same-sex cohabiting women are the most likely to report being current everyday, somedays, and former smoker across union status groups.

Tables 1 and 2 here

Tables 1 and 2 also suggest strong education and poverty patterns. In general, same-sex cohabiters have a higher proportion of college graduates than other union status groups within each gender and racial-ethnic subgroup. Same-sex cohabiters are *generally* more likely to live in poverty when compared with their heterosexual married counterparts, but they are less likely to do so when compared with their opposite-cohabiting and single counterparts for each gender and race-ethnicity groups except for Hispanic men; same-sex cohabiting Hispanic men are the least likely to live in poverty compared to Hispanic men in any other union status. Results in Tables 1 and 2 also suggest that same-sex cohabiters are generally less likely to be foreign-born than

heterosexual marrieds for all gender and racial-ethnic subgroups. On average, same-sex cohabiters are younger than heterosexual married couples and older than heterosexual cohabiters and singles within each gender and racial-ethnic subgroup.

### *3.2 Multinomial Logistic Regression Results*

Now, we turn to the results from multinomial logistic regression models. Table 3 shows the estimated odds ratios of reporting being a current “everyday” smoker (Panel A), current “somedays” smoker (Panel B), and former smoker (Panel C) versus never smoker by union status for men, and Table 4 shows the results for women. When interpreting these results, the odds ratios of greater than 1 indicate that in comparison to same-sex cohabiters, individuals from the specific union status group are more likely to be a current “everyday” smoker, current “somedays” smoker, or former smoker rather than never smoker; while the odds ratios of less than 1 indicate that they are less likely to be in such smoking status.

#### *3.2.1 Current “Everyday” Smokers*

We first discuss Panel A of Tables 3 and 4 that show the estimated odds ratios of being a current everyday smoker versus never smoker. Results from Tables 3 and 4 suggest that for each gender and racial-ethnic subgroup, higher education is associated with lower odds of reporting current everyday smoking status, and living in poverty is related to significant higher odds of reporting current everyday smoking status. We start with results from Panel A of Table 3, which indicate that the odds of reporting being a current everyday smoker are 60.69% (i.e.,  $(1-0.3931) \times 100$ ) lower for heterosexual married White men and 31.02% and 58.58% lower for widowed and never married White men respectively, compared to same-sex cohabiting White men net the effects of age, nativity, education, poverty status, and survey year. Results from Panel A of Table 3 also suggest no significant differences in the odds of being a current everyday smoker for

Black men in all other groups compared to Black same-sex cohabiting men. However, we find the odds of being a current everyday smoker is lower for heterosexual married Hispanic men compared to same-sex cohabiting Hispanic men. We now turn to results from Panel A of Table 4, which shows that heterosexual married, widowed, and never married White women have lower odds of being everyday smokers than same-sex cohabiting White women. Further, for both Black and Hispanic women, the heterosexual married, divorced, widowed, and never married have lower odds of being current everyday smokers than their same-sex cohabiting counterparts. Additionally, the odds of being a current everyday smoker is lower for heterosexual cohabiting Black women compared to same-sex cohabiting Black women.

### 3.2.2 *Current “Somedays” Smoker*

We now discuss Panel B of Tables 3 and 4 that show the estimated odds ratios of being a current somedays smoker versus never smoker. We start with Panel B of Table 3 which indicates there are no significant differences in the odds of being a current somedays smoker for White and Hispanic men (respectively) in all other union status groups compared to same-sex cohabiting White or Hispanic men. Results further indicate that for Black men, the odds of reporting being a current somedays smoker are 72.70% lower for heterosexual married Black men compared to same-sex cohabiting Black men, but there are no other significant differences between same-sex cohabiting Black men and their counterparts in other groups. We now turn to results from Panel B in Table 4. These results indicate there are no significant differences in the odds of being a current somedays smoker for Black or White women in other union status groups compared to Black or White women (respectively) in same-sex cohabiting relationships. Results from Panel B of Table 4 also reveal that the odds of being a current somedays smoker is lower for married, widowed and never married Hispanic women compared to same-sex cohabiting

Hispanic women, but no other significant differences were found among same-sex cohabiting Hispanic women and other groups.

### *3.2.3 Former Smokers*

We now discuss Panel C of Tables 3 and 4 that show the estimated odds ratios of being a former smoker versus never smoker. Results from Panel C of Table 3 indicate that never married and heterosexual married White men have a lower odds of being a former smoker than same-sex cohabiting White men. Additionally, there are no significant differences in the odds of being a former smoker for Black men in all other union status groups compared to same-sex cohabiting Black men. Never married Hispanic men have a lower odds of being a former smoker compared to same-sex cohabiting Hispanic men, yet there are no other significant differences in odds of being former smokers across union status for Hispanic men. Panel C in Table 4 shows that for White, Black, and Hispanic women, the odds of being a former smoker is significantly lower for the heterosexual married, widowed, divorced, and never married compared to their racial-ethnic same-sex cohabiting counterparts. For Black women, heterosexual cohabiters also have a lower odds of being a former smoker than same-sex cohabiting Black women.

## **4. DISCUSSION**

This study is among the first to empirically examine whether individuals in same-sex cohabiting relationships in the U.S. have a reduced rate of smoking that is comparable to their counterparts in heterosexual marriage, or if they have elevated rates of smoking similar to heterosexual cohabiters, the divorced, widowed, or never-married single. Given the relationship between gender, race-ethnicity, smoking, and union status, we additionally examine gender and racial-ethnic differences in the linkage between smoking status and same-sex cohabitation. Our results reveal four important gendered and racialized patterns in the linkages between union

status and smoking among same-sex couples, outlined below.

First, a central question regards whether same-sex cohabitation provides the same health benefits as marriage (IOM, 2011). We find that when compared to their heterosexual married counterparts, cohabiting same-sex individuals report higher rates of at least one smoking category (either current everyday, current somedays, or former smoking) across all racial and gender groups. These findings suggest same-sex cohabitation is not “marriage-like” in its facilitation of lower smoking rates. This may be because same-sex cohabiters experience fewer institutional advantages—advantages theorized to be responsible for many of the health benefits of heterosexual marriage (Stanley et al., 2004). For example, legal marriage provides access to spousal health insurance benefits. Same-sex cohabiters have lower rates of insurance and higher rates of unmet medical needs compared to heterosexual married individuals (Buchmueller & Carpenter, 2010; Heck, 2006), partially because they cannot obtain health insurance benefits from their partner (King & Bartlett, 2006). Thus, uninsured same-sex cohabiters may not receive access to treatment for tobacco addiction—shown to reduce smoking levels—due to their uninsured status (Cokkinides et al., 2005). Access to legal marriage may provide same-sex and heterosexual couples health benefits, reducing this disparity in smoking status (King & Bartlett, 2006; Lau & Strohm, 2011). Additionally, research consistently suggests that “out” sexual minorities such as those who disclose being in a cohabiting relationship experience heightened levels of stress (IOM, 2011; Meyer 2003). These experiences may promote higher levels of smoking, offsetting potential economic and psychosocial benefits accrued by being in a cohabiting tie (IOM, 2011).

Second, while same-sex cohabiters have higher smoking rates than heterosexual married individuals, we find that for all racial-ethnic and gender groups except for Black women, same-



sex and heterosexual cohabiters report similar current and former smoking rates. This may be because same-sex and heterosexual cohabiters are in analogous non-legalized relationships (King & Bartlett, 2006; Lau & Strohm, 2011), and therefore receive parallel levels of social, economic, and psychological resources that may promote or deter smoking in comparable ways.

Importantly, however, recent work on cohabitation emphasizes the need to view cohabiters as a heterogeneous group who have varying relationship dynamics (Brown et al., 2008). The varying dynamics of cohabiting couples may, in turn, produce heterogeneous consequences for smoking status. This may be especially true for same-sex couples who desire to marry but cannot legally self-select out of cohabitation (Rosenfeld, 2007). Therefore, there may be a large set of same-sex cohabiters who are in a committed, long-term tie that provides married-like resources (Reczek et al., 2009), and therefore may have similar smoking rates to the heterosexual married. While the present study is unable to examine these factors due to data limitations, future research should consider the heterogeneity of same-sex cohabiters when studying health disparities. Additionally, and in contrast, we report distinctive findings in the relationship between same-sex cohabitation and smoking for Black women, wherein Black women in same-sex relationships are *more* likely to be everyday and former smokers than their heterosexual cohabiting counterparts. Research suggests that cohabitation is “marriage-like” for Black women (Edin & Kefalas, 2005), thus, Black heterosexual women’s marital *and* cohabiting unions may provide a protective effect against smoking in similar ways. At the same time, Black women in same-sex relationships may experience especially heightened levels of stress and discrimination due to their triple minority status as racial minorities, sexual minorities, and women (Meyer, 2003). This heightened stress, in turn, may promote smoking at higher rates than for their heterosexual cohabiting counterparts who do not experience the stress of being in a same-sex relationship.

Third, we expected that because never-married single individuals have higher levels of cigarette use than partnered individuals in the general population due to higher rates of socializing with smokers and lower levels of income and social control processes (Duncan et al., 2006; Umberson, 1992), same-sex cohabiters would have lower levels of cigarette use than the never-married single. In contrast to our expectations, we found that all never-married single race-ethnic and gender groups except for Black men reported lower rates of smoking on at least one smoking measure compared to their same-sex cohabiting counterparts. Research shows that adolescent sexual minorities start smoking earlier and smoke more frequently than their heterosexual peers due to increased discrimination, victimization, and stress (Rosario et al., 2009). These early smoking habits have long term effects that may not be reduced—and perhaps are exacerbated—by virtue of a disclosed cohabiting relationship. Moreover, the sexual minority community is targeted by, and may be more receptive to, tobacco marketing campaigns (Dilley et al., 2008), and historical work shows that bars, where smoking has been prevalent, have been a central social space for sexual minorities to gather without fear of homophobia (Leibel et al., 2011). Presence at sexual minority bars and a higher incidence of smoking prior to entrance into a cohabiting relationship may promote cigarette use that extends *into* a cohabiting relationship (Gruskin et al., 2001). Moreover, same-sex cohabiters may continue to attend bars as this is a protected social place for couples, promoting continued smoking habits (Lewis et al., 2006). The only exception to this finding was for Black men; never-married single and same-sex cohabiting Black men reported statistically similar levels of smoking on all measures. This may be due to the higher levels of socioeconomic stress Black never-married single men accrue due to fewer economic prospects and social resources (Kandel et al., 2011); resources that are perhaps accrued in same-sex cohabiting relationship between Black men, offsetting stress-related smoking

disparities.

Fourth, research consistently shows the divorced and widowed have higher levels of cigarette use than the married in the general population (Waite & Gallagher, 2000). The dissolution of marriage via divorce or widowhood has been theorized to promote higher levels of smoking due to the increase of stressors and loss of economic and psychosocial resources (Carr & Springer, 2010). Therefore, we expected that because same-sex cohabiters receive at least some social, psychological, and economic benefit by virtue of being in a cohabiting relationship (Wienke & Hill, 2009), they would have lower rates of cigarette use than the divorced and widowed. In contrast to expectations, we found that compared to their same-sex cohabiting counterparts, widowed women in all ethnic-racial groups were less likely to be either a current everyday/somedays and/or former smoker, divorced women in all ethnic-racial groups were less likely to be a current everyday or former smoker, and widowed White men were less likely to be current everyday smokers. Previous research suggests several possibilities for these findings. Increased and long-term stress, stigma, and homophobia may promote the smoking habits of sexual minorities to an even higher degree than relatively short-term stress of divorce or widowhood (Meyer, 2003). It may also be that being in a cohabiting same-sex tie promotes higher levels of cigarette use than the divorced and widowed due to smoking diffusion processes (Lewis et al., 2006). Because sexual minorities in the general population smoke at higher rates than heterosexuals, it is more likely that one partner in a couple will smoke, which may in turn exacerbate or encourage the other's use. Moreover, research shows that spouses are concordant on their success of smoking cessation (Franks et al., 2002). Due to the legacy of cigarette use in the sexual minority community and lower levels of access to health insurance, same-sex couples may be less likely to attempt to quit smoking. It is notable, however, that same-sex cohabiting

men report similar levels of smoking as divorced and widowed men of all racial and ethnic groups except for White widowed men. This may be because men are more likely to cope with the stress of divorce and widowhood with externalizing methods such as substance use (Aneshensel et al., 1991), heightening their risk for smoking use comparable to same-sex cohabiting men across race-ethnicity.

This study has important limitations. We utilize the NHIS to identify same-sex couples based on information of household relationship and gender. However, our estimates may be biased due to potential miscoding of the gender of cohabiters. This is relevant to the identified same-sex couples who are not, in fact, same-sex couples but instead accidentally misreported their cohabiting partner's gender. However, the potential for miscodes of gender is less relevant in the NHIS data than other national data (e.g., Census) that are used to identify same-sex couples because the NHIS data are collected via face to face interviews (U.S. DHHS, 2000). Therefore we assume that the possibility of misidentifying gender is relatively low. Finally, due to the cross-sectional nature of our data, we are unable to measure causality in the relationship between same-sex cohabitation and smoking; selection processes may play an important role in this relationship. Despite these limitations, this study is among the first to use nationally representative data to compare the smoking rates of same-sex cohabiters with those of heterosexual married individuals, heterosexual cohabiting individuals, the divorced, widowed and never married. We find that same-sex cohabiting relationships of all gender and racial-ethnic groups report higher levels of smoking on at least one measure than married heterosexuals, suggesting that this population is at a disadvantage—possibly due to their lack of access to legal marriage (Lau & Strohm, 2011). Moreover, while same-sex couples are similar in smoking status compared to heterosexual cohabiting couples, most same-sex cohabiting racial-ethnic and gender

groups have surprisingly higher smoking rates than their never-married single, divorced, and widowed counterparts. This suggests that same-sex cohabiters are a unique population that requires additional public health effort to reduce smoking rates. Future research should continue to examine how the effects of legal and institutional policies and social discrimination shape the smoking rates of same-sex cohabiters.

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Table 1: Weighted Descriptive Statistics By Union Status and Race-Ethnicity for Men

	White men (n=89,418)			Black men (n=17,669)			Hispanic men (n=26,234)		
	Same-sex cohabiting	Hetero married	Single cohabiting	Same-sex cohabiting	Hetero married	Single cohabiting	Same-sex cohabiting	Hetero married	Single cohabiting
Smoking (%)									
Never smoking	42.83	48.97	34.93	50.84	55.57	47.63	59.48	60.25	54.01
Current everyday smoker	29.26	19.10	41.44	27.33	16.72	32.41	21.59	11.85	19.15
Current some days smoker	4.32	3.45	5.67	6.37	13.81	9.15	8.40	7.88	10.48
Former smoker	23.59	28.47	17.96	15.46	13.90	10.81	10.53	20.02	16.36
Education (%)									
No high school diploma	4.78	8.56	14.53	12.97	8.83	19.61	22.09	43.95	42.86
High school graduate	16.93	28.26	35.51	30.18	33.38	42.01	33.37	24.11	27.15
Some college	34.11	27.88	29.74	34.13	23.63	27.14	31.19	18.79	19.56
College graduate	43.56	34.83	19.61	22.20	34.16	9.90	12.36	11.49	7.96
Unknown	0.62	0.47	0.61	0.51	0.00	1.35	0.99	1.65	2.47
Poverty status (%)									
Not in poverty	79.02	81.00	76.40	71.46	73.45	64.28	61.13	67.17	65.23
In poverty	5.19	3.10	7.43	11.01	14.65	16.56	18.06	4.19	19.12
Unknown	15.79	15.90	16.17	17.53	11.90	19.16	20.81	14.30	15.65
Nativity (%)									
U.S. born	95.50	95.14	97.46	96.09	89.09	91.69	91.11	36.97	42.62
Foreign born	4.40	4.81	2.49	3.86	10.91	8.17	8.83	63.03	57.01
Unknown	0.09	0.05	0.06	0.05	0.00	0.14	0.06	0.00	0.37
Mean Age	41.43	44.96	35.43	34.65	38.05	36.04	34.40	37.73	33.80
N	508	46,788	4,417	37,705	61	6,181	1,239	10,188	93
									1,694
									10,531

Table 2: Weighted Descriptive Statistics By Union Status and Race-Ethnicity for Women

	White women (n=103,614)			Black women (n=28,443)			Hispanic women (n=32,598)		
	Same-sex cohabiting	Hetero married	Single cohabiting	Same-sex cohabiting	Hetero married	Single cohabiting	Same-sex cohabiting	Hetero married	Single cohabiting
Smoking (%)									
Never smoking	47.03	58.40	37.67	46.72	73.78	61.92	46.82	82.44	70.16
Current everyday smoker	23.24	16.67	38.59	34.63	11.86	25.72	21.81	5.56	12.14
Current some days smoker	3.67	3.08	6.38	4.37	3.09	5.15	10.55	2.87	5.29
Former smoker	26.06	21.85	17.36	14.28	11.27	7.20	20.82	9.13	12.41
Education (%)									
No high school diploma	4.38	7.46	12.91	17.11	12.94	18.83	24.44	40.18	39.86
High school graduate	20.82	29.75	32.83	28.93	29.04	34.16	23.42	25.65	26.87
Some college	24.54	31.15	33.73	29.46	35.00	35.14	40.20	20.92	24.66
College graduate	50.04	31.11	19.97	24.50	22.05	11.34	11.94	11.92	7.47
Unknown	0.22	0.53	0.56	0.52	0.96	0.52	0.00	1.33	1.14
Poverty status (%)									
Not in poverty	82.78	78.96	73.23	66.72	69.87	64.31	66.11	64.98	61.65
In poverty	3.47	3.40	8.97	14.23	8.74	14.77	18.27	14.31	18.58
Unknown	13.75	17.64	17.80	19.05	21.39	20.91	15.62	20.71	19.76
Nativity (%)									
U.S. born	96.51	95.10	97.54	94.93	86.88	92.36	61.83	34.00	46.35
Foreign born	3.49	4.84	2.41	5.07	13.00	7.64	38.17	65.84	53.52
Unknown	0.00	0.06	0.05	0.00	0.12	0.00	0.00	0.16	0.13
Mean Age	40.57	43.61	33.57	38.71	42.37	34.84	36.53	38.51	32.48
N	477	55,907	5,227	79	6,923	1,140	74	16,166	1,820
			42,003			20,301			14,538

Table 3. Estimated Odds Ratios of Smoking Status By Union Status by Race-Ethnicity for Men

	White men (N=89,418)			Black men (N=17,669)			Hispanic men (N=26,234)		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
Union status (0=same-sex cohabiting)									
Heterosexual married	0.3931***	0.6495	0.7677*	0.6829	0.2730*	0.7900	0.4734*	0.6564	0.8513
Heterosexual cohabiting	1.1483	1.3455	1.0772	1.7256	0.6557	0.9019	0.9470	0.9323	1.0391
Divorced	0.9006	1.3373	0.8190	1.2225	0.6441	0.8864	0.9679	1.0513	0.9472
Widowed	0.6898*	0.7867	0.7778	1.4755	0.3247	1.1634	0.8137	0.9001	0.6523
Never married	0.4142***	0.9426	0.5573***	0.8704	0.4703	0.6146	0.5891	0.6686	0.5259*
<b>Sociodemographic covariates</b>									
Age	1.0152***	0.9965	1.0594***	1.0385***	1.0243***	1.0774***	1.0278***	1.0005	1.0524***
Nativity (0=U.S born)									
Foreign born	1.0586	1.1957	1.2061***	0.4181***	0.6576**	0.5952***	0.5270***	0.7318***	0.7453***
Unknown	2.2953	1.2441	1.5166	0.2163	0.0000***	0.2317	0.3508	0.1301	1.2922
Survey year	0.9726***	0.9977	0.9701***	0.9667***	0.9883	0.9654***	0.9475***	0.9828*	0.9827**
Education (0=No high school diploma)									
High school graduate	0.5858***	0.9392	0.8514***	0.6954***	0.8716	0.8674	0.8619*	0.8108**	0.9304
Some college	0.3218***	0.8320*	0.7139***	0.4536***	0.6579***	0.8535	0.6172***	0.7059***	0.9229
College graduate	0.0857***	0.4819***	0.4234***	0.1694***	0.3594***	0.5864***	0.3631***	0.5256***	0.7740**
Unknown	0.3838***	0.4579*	0.6787*	0.6277	1.5447	0.6828	1.0597	1.0999	0.5615*
Poverty status (0=not in poverty)									
In poverty	1.2699***	1.1464	0.8859*	1.4601***	1.5041***	1.1220	1.1624*	1.1476	1.0447
Unknown	0.8306***	0.8746*	0.8319***	0.8954	0.9193	0.8552*	0.8356**	0.7693**	0.8351**
Constant	1.9949***	0.1827***	0.1039***	0.2208**	0.1783**	0.0238***	0.3797**	0.3347*	0.0714***

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Table 4. Estimated Odds Ratios of Smoking Status By Union Status by Race-Ethnicity for Women

	White women (N=103,614)			Black women (N=28,443)			Hispanic women (N=32,598)		
	A.	B.	C.	A.	B.	C.	A.	B.	C.
Union status (0=same-sex cohabiting)									
Heterosexual married	0.4228***	0.6352	0.5799***	0.1872***	0.3735	0.3588**	0.1553***	0.1798**	0.2611**
Heterosexual cohabiting	1.3005	1.7396	0.9346	0.5035*	0.8506	0.4257*	0.4265	0.3647	0.5113
Divorced	1.0146	1.4837	0.7268**	0.2891***	0.6112	0.4463*	0.3319*	0.3922	0.3896*
Widowed	0.6491**	1.0398	0.5902***	0.2096***	0.4594	0.3553*	0.2061**	0.2144**	0.2757**
Never married	0.3811***	0.8838	0.3960***	0.2660***	0.6388	0.3731*	0.2745**	0.2704*	0.2255***
<b>Sociodemographic covariates</b>									
Age	0.9959***	0.9864***	1.0296***	1.0282***	1.0354***	1.0662***	1.0291***	1.0051	1.0400***
Nativity (0 U.S born)									
Foreign born	0.6142***	0.9699	0.8106***	0.1331***	0.1799***	0.2477***	0.3585***	0.4432***	0.5276***
Unknown	0.3459*	0.2143	0.3669*	0.0000***	0.0000***	1.1434	0.7396	0.3137	0.6200
Survey year	0.9791***	0.9853**	0.9842***	0.9781**	0.9778*	0.9761**	0.9561***	0.9618***	0.9717***
Education (0= o high school diploma)									
High school graduate	0.6007***	0.7908**	0.9349	0.7306***	0.8980	0.8463*	1.0760	1.0956	1.3493***
Some college	0.3654***	0.7689***	0.9897	0.5263***	0.8310	0.9758	1.0741	1.1669	1.5519***
College graduate	0.1118***	0.5311***	0.7265***	0.2205***	0.4173***	0.7436**	0.5999***	0.7790	1.3682***
Unknown	0.4691***	0.4506*	0.4248***	0.9417	0.4622	1.0695	0.8837	0.4312	1.0009
Poverty status (0=not in poverty)									
In poverty	1.4897***	1.1295	0.8654**	1.5569***	1.6046***	1.0020	1.4652***	1.2525*	0.9865
Unknown	0.8339***	0.7548***	0.7995***	1.0190	1.0516	0.9122	0.9617	0.8214*	0.7956**
Constant	2.5549***	0.2409***	0.2324***	0.5833	0.0408***	0.0368***	0.3242*	0.3247	0.1299***

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05