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Self-Rated Health at the Intersection of Sexual Identity and Union Status

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Abstract

There is a well-established relationship between union status and health within the general population, and growing evidence of an association between sexual identity and well-being. Yet, what is unknown is whether union status stratifies health outcomes across sexual identity categories. In order to elucidate this question, we analyzed nationally representative population-based data from the National Health Interview Surveys 2013–2014 (N = 53,135) to examine variation in self-rated health by sexual partnership status (i.e., by sexual identity across union status). We further test the role of socioeconomic status and gender in these associations. Results from logistic regression models show that union status stratifies self-rated health across gay, lesbian, and heterosexual populations, albeit in different ways for men and women. Socioeconomic status does not play a major role in accounting for these differences. Findings highlight the need for specific interventions with lesbian women, who appear to experience the most strident disadvantage across union status categories.

Keywords

Sexual Minorities; Self-rated Health; Gender; Union Status

A long-standing body research demonstrates significant union status gradients in health among the general population, wherein the heterosexual married experience advantaged health over the heterosexual cohabiting, previously-married, and in some cases the never-married at the population level (Liu & Umberson, 2009; Liu & Reczek, 2011); these advantages are stronger for men than women and in part are due to socioeconomic differentials across union status (Waite & Gallagher, 2000). A growing body of work shows that gay and lesbian identified individuals experience worse self-rated health and health behavior than heterosexuals in the United States today (Institute of Medicine, 2011). Yet, to date, the authors know of no studies examining whether a union status gradient in health extends to gay and lesbian identified adults.

We merge these two robust research areas in order to test whether union status stratifies self-rated health across heterosexual, gay, lesbian identified groups with population-based nationally representative data from the National Health Interview Survey (NHIS); this

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dataset is among the first datasets in the United States that allows for the comparison of self-rated health across sexual partnership status at the population-based level (Ward et al., 2013). We examine self-rated health because it is an inclusive, robust, and independent predictor of subsequent disability, mortality, and well-being; research indicates that self-rated health is an irreplaceable dimension of health status and thus is central to population health concerns (Idler & Benyamini, 1997). Identifying disparities in self-rated health at the intersection of sexual identity and union status (i.e., sexual partnership status) is critical for understanding health stratification among sexual minorities, particularly given recent changes in same-sex marriage laws in the U.S. Notably, research suggests that the union status gradient in the general population is in large part due to socioeconomic status differentials (Liu & Umberson, 2008). Thus, beyond testing the basic association between sexual identity and self-rated health by union status we further test the role of socioeconomic status in accounting for these associations. Moreover, a long-standing body of research shows that the relationship between union status and health is gendered (Waite & Gallagher, 2000), and that gay men and lesbian women are differentially positioned in health outcomes relative to heterosexuals and to one another (Hequembourg and Brallier, 2009; IOM 2011; Meyer, 2003); thus, we additionally test whether union status differentials in self-rated health are gendered across gay, lesbian, and heterosexual populations.

Previous Research on Sexual Minority Health Across Union Status

A small but growing body of research has begun to examine whether union status gradients occur across sexual minority populations as they do across the general population. A handful of recent national, population-based studies show that same-sex cohabitators experience similar self-rated health when compared to the different-sex cohabiting and disadvantaged health relative to the different-sex married (Boehmer, 2002; Denney, Gorman, & Barrera, 2013; Liu, Reczek, & Brown, 2013). In addition, recent research from state-level data in California shows that married and partnered gay, lesbian, and bisexual persons show less psychological distress than the unmarried gay, lesbian, and bisexual persons (Wight, LeBlanc, & Badgett, 2012; Wight, LeBlanc, De Vries, & Detels, 2012). While these studies lay a critical foundation for the present study, significant gaps in this body of work remain.

Previous population-based studies do not compare same-sex or gay/lesbian married populations with gay/lesbian unmarried populations, missing an important group of sexual minorities that is increasing in prevalence due to changing laws in the U.S. today. Same-sex couples attain more affordable, broader access to healthcare through same-sex marriage or civil unions (Gonzales and Blewitt, 2014; Hatzenbuehler, O'Leirigh, Grasso, Mayer, Safren, and Bradford, 2012), and thus same-sex marriage opens up pathways through which same-sex couples can achieve higher quality healthcare. Although recent state-level data suggests that, prior to national legalization of same-sex marriage, same-sex couples residing in states with legal same-sex marriage experienced better health than those in states without legal same-sex marriage (Kail, Acosta, and Wright, 2015), we are unaware of any national studies that compare lesbian or gay married individuals to lesbian or gay unmarried individuals. Other state-level studies contain data on both married and unmarried lesbian or gay individuals (e.g., Cochran and Mays, 2007; Conron et al., 2010) but to our knowledge do not make comparisons across union status. Notably, a far smaller proportion of gay and lesbian

identified individuals are legally married than are heterosexual individuals due to historical restrictions on this status (Lau and Stroh, 2011; Reczek, Elliot, and Umberson, 2009). Thus, there may be important compositional differences across these groups that may account for a unique relationship between self-rated health and sexual partnership status. Moreover, the existing body of population-based research does not test differences across the entire range of union statuses including the non-married. Research shows that the unpartnered experience unique health outcomes—and in fact may be advantaged in some cases (Liu & Reczek, 2011; Liu & Umberson, 2008; Urquia et al., 2013). For example, cohabitators report better self-rated health than the previously-married, but worse self-rated health than the never-married in the general population (Liu & Reczek, 2011; Williams & Umberson, 2013).

Additionally, most population-based studies have significant measurement issues in identifying gay and lesbian populations. Most rely on a household measure of being in a same-sex family structure rather than *sexual identity*, yet, the Institute of Medicine (2011) emphasizes the importance of looking at multiple dimensions of sexual orientation including identity, as household-based measures may capture couples with miscoded sex (DiBennardo and Gates, 2013; IOM 2011; Miller and Ryan, 2011). Finally, previous population-based studies used pooled data over a decade long period in order to obtain enough sample size of sexual minorities to test differences. Yet, major changes have occurred over the past decade in terms of legal union status, and more recent data is required to fully test these differences in the contemporary U.S. today. These changes may alter who is able to legally marry and divorce in the gay and lesbian population, the stability of gay and lesbian unions, as well as differential accrual of health advantages among this population who has had uneven access to marital resources.

Taken together, these limitations prevent previous research from providing a clear consensus on the potential union status gradient among sexual minority identified individuals, nor a clear consensus on whether gay and lesbian identified individuals will have similar health as their heterosexual-identified counterparts in the same union status category. Notably, two sociological factors may play a role in these associations: Socioeconomic status (SES) and gender. We outline the potential roles of SES and gender in the relationship between partnership status and self-rated health below.

Socioeconomic Status

Fundamental cause theory suggests that socioeconomic status is a key factor linking union status and health (Link & Phelan, 1995; Light, 2004). According to fundamental cause theory, the health disparities of gay and lesbian individuals are due, in part, to social stigma and historically unequal access to legal and institutional benefits of marriage that contribute to socioeconomic disadvantage; socioeconomic disadvantage is in turn associated with increased stress, psychological distress, and worse self-rated health (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010; Meyer, 2003a,b). Several studies show that SES also appears to play a role in differences between same-sex cohabiting couples and their different-sex married and cohabiting counterparts on both self-rated health and health behavior (Denney et al., 2013; Liu et al., 2013; Reczek, Liu, & Brown, 2014; Reczek, Liu, &

Spiker, 2014). For example, Liu and colleagues found that the same-sex cohabiting were disadvantaged in health relative to the different-sex married, but that the same-sex cohabiting's higher SES actually protected them from even worse relative self-rated health. Yet, the role of SES in the link between sexual partnership status and self-rated health remains unclear, particularly among un- and formerly-partnered individuals who may be more likely to be socioeconomically disadvantaged than their married and cohabiting counterparts. Therefore, in addition to testing the basic relationship between sexual identity and union status on self-rated health, we test whether socioeconomic status contributes to self-rated health differences across sexual partnership status.

Gender

The relationship between union status and health is strongly gendered (Liu et al., 2013; Light, 2004), although this appears less true today than it has been over the past 25 years as the health advantage to marriage has diminished among men (Liu & Umberson 2008). Straight men benefit more clearly from the social and emotional support mechanisms found in marriage, as well as via women's social control of their health (Umberson 1987, 1992). Some research shows that lesbians appear to experience greater health disadvantage relative to their heterosexual counterparts and gay men (Liu et al., 2014; Light, 2004); this is in part due to lesbian women's lower socioeconomic status relative to gay men's. Given these bodies of work, it may be that gay men may experience a similarly robust union status gradient, while lesbian women may experience a less severe union status gradient at the population level. Alternatively, because lesbian women are particularly at risk for disadvantaged self-rated health, it is likely that marriage plays a central role for women gaining in resources and thus improves health for lesbians. In this sense, the union status gradient may be stronger for lesbian women. We explore this possibility in the present study.

METHODS

We used the most recently released data from the pooled 2013–2014 Integrated National Health Interview Survey (NHIS) (Minnesota Population Center 2013). This data set presents a unique opportunity to explore the intersection of sexual identity and union status (i.e., “sexual partnership status”) at the population level. The NHIS is a cross-sectional household survey conducted annually in the United States by the National Center for Health Statistics (NCHS); it is representative of the United States civilian non-institutionalized population (NHIS, 2012). We limited our analyses to respondents between the ages of 18 and 65. We also excluded about 0.9% of respondents because of missing values on key variables included in the analysis. Our final analytic sample ($N = 53,135$) contained 141 individuals identified as gay/lesbian married, 221 individuals identified as gay/lesbian cohabitators, 586 individuals identified as gay/lesbian never-married, and 87 individuals identified as gay/lesbian previously-married. We note that because our data is from 2013 and 2014, some lesbian/gay respondents may report being married but may not be legally married in the state that they currently reside, which may shape access to resources and thus health outcomes (Reczek et al., 2009).

Measures

Sexual Partnership Status—We construct our measure of sexual partnership status with two primary components. The first aspect of sexual partnership status is sexual identity. All adults in the NHIS were asked, “Which of the following best represents how you think of yourself?” Five response options were provided. For male respondents, they were: (1) Gay, (2) Straight, that is, not gay, (3) Bisexual, (4) Something else, and (5) I don’t know the answer. For female respondents, response option (1) was worded “Lesbian or gay,” and response option (2) was worded “Straight, that is, not lesbian or gay.” Our analysis was restricted to respondents who identify as either “gay/lesbian” or “straight, that is, not gay/lesbian.” We did not include bisexual (N = 474), “something else” (N = 123), and “I don’t know answer” (N = 227) categories in our analysis due to small numbers in these categories across some union status categories. The second component of sexual partnership status is union status. In terms of union status, we categorize respondents as: *currently married*, *previously-married* (includes widowed, separated, and divorced individuals), *never-married*, and *currently cohabiting*. We considered the intersection of union status and sexual identity and categorized these intersections into eight sexual partnership status categories: straight married (the reference), straight cohabiting, straight never-married single, straight previously-married, gay/lesbian married, gay/lesbian cohabiting, gay/lesbian never-married single, and gay/lesbian previously-married.

Self-rated health—Our dependent variable was self-rated health. Respondents rated their overall health as excellent, very good, good, fair, or poor. We recoded self-rated health into a dichotomous variable (1 = poor or fair health; 0 = excellent, very good, or good health).

Socioeconomic Status—We examined three measures of socioeconomic status (SES) as potential mediators: poverty status (0 = at or above federal poverty threshold, 1 = below federal poverty threshold), insurance status (0 = no health insurance coverage during the past 12 months (reference), 1 = covered by at least one public or private health care insurance program during the past 12 months), and employment status (employed (reference), employed but not in work, unemployed, not in labor force). We also included education (0 = less than high school, 1 = high school or equivalent, 2 = some college, 3 = Associate’s degree, 4 = Bachelor’s degree, and 5 = graduate/professional degree) as a socioeconomic covariate, treated categorically in our model (we ran it both as a continuous and categorical variable with similar results). We included education as a socioeconomic covariate instead of an control measure; our preliminary analyses and other analyses suggested that education functioned in a similar way to other socioeconomic variables. Our additional analysis (not shown) of adding education as a sociodemographic measure, and putting it into a model on its own between the sociodemographic and SES models, revealed similar results as we reported. To account for a large amount of missing data, we also used multiply imputed poverty data available from the NHIS. The data contained 5 imputations of the poverty status variable and prevented the loss of 4.9% of our total cases. We used Stata’s MI commands (StataCorp 2013) to account for the multiply imputed data.

Other demographic covariates—Models also controlled for several demographic characteristics (Rosenfeld, 2007) including: race-ethnicity (non-Hispanic white, non-

Hispanic black, Hispanic white, Hispanic black, and other with white as the reference), age in years, nativity status (0 = Born in US or US territory, 1 = Born outside US or US territory), and region of residence (Northeast (reference), Midwest/north central, south, west). Due to the pooling of samples in the analysis, we controlled for survey year (0 = 2013, 1 = 2014).

Analytic Strategy

We estimated three nested binary logistic regression models. The first model regresses poor or fair self-rated health across sexual partnership status, controlling age, race-ethnicity, nativity status, region, and survey year. This model establishes whether there are differences across sexual partnership status groups net of basic demographic controls. In the second model, we added additional controls for poverty status, employment status, education, and health insurance coverage to examine the extent to which of these SES factors contribute to differences in self-rated health between same-sex cohabitators and other union status groups. Finally, our third model introduces a series of interaction terms for gender by sexual partnership status in order to explore whether significant gender variations exist in the association between sexual partnership status and self-rated health. The heterosexual married are the reference group for the primary analysis; however, we rotated reference groups across all categories to test differences across all sexual partnership status groups. We also created predicted probabilities from our final gender interaction models to represent differences in probability of reporting poor or fair self-rated health across all relationship statuses. All analyses were weighted to account for the inverse probability of selection into the sample and post-stratification based on age, race-ethnicity, and gender; the analyses also used multiple imputation methods to account for the imputed poverty variable. The “svy” and “mi” commands in Stata were used to account for these data features, respectively (StatCorp, 2013).

RESULTS

Descriptive Results

Table 1 shows descriptive statistics of all analyzed variables by sexual partnership status. Due to space limitation, our discussion is focused on self-rated health. Descriptive results in Table 1 suggest that the straight never-married (8.3%) are the group least likely to report poor/fair health, followed by straight married (9.6%), straight cohabiting (11.3%), gay/lesbian cohabiting (12.5%), gay/lesbian married (12.8%), gay/lesbian never-married (13.3%), and gay/lesbian previously-married (19.0%). Straight previously-married (21.3%) are the most likely to report poor/fair health among all union groups.

Regression Results

Table 2 shows estimated regression coefficients from logistic regression models to predict poor/fair health. As presented in Model 1 (Table 2), all straight unmarried groups including straight cohabiting (OR = 1.88, $P < .001$), straight never-married (OR = 1.70, $P < .001$), and straight previously-married (OR = 2.02, $P < .001$) all had higher odds of reporting poor/fair health than the straight married after controlling for demographic covariates. The gay/lesbian never-married (OR = 2.16, $P < .001$) were the only gay/lesbian group significantly

different from the straight married in reporting poor/fair health. The gay/lesbian married, gay/lesbian cohabiting, and gay/lesbian previously married are not significantly different from the straight married in terms of self-reported health.

Socioeconomic Status—As presented in Model 2 of (Table 2), after controlling for SES, all significant differences by union status groups in Model 1 remain significant, although their magnitudes all reduce to some extent. Specifically, after controlling for SES the differences between the straight cohabiting, straight never married, straight previously-married and gay/lesbian never married in comparison to the straight married were reduced in magnitude by about 20%, 33%, 20% and 17% respectively, but remained statistically significant. In contrast, in Model 2, adding controls of SES increased the difference between the gay/lesbian cohabiting and straight married. Indeed, after controlling SES, gay/lesbian cohabiters have higher odds of reporting poor/fair health than the straight married (OR = 1.97, $p < .05$). Additional analyses rotating reference groups (reported in Appendix A) show that when controlling for SES, the straight cohabiting (OR = 1.31, 95% CI = 1.11 – 1.55, $p < 0.01$), straight previously-married (OR = 1.42, 95% CI = 1.25 – 1.62, $p < 0.001$), and gay/lesbian never-married (OR = 1.58, 95% CI = 1.07 – 2.33, $p < 0.05$) all experienced higher odds of poor/fair health than the straight never-married. There were no significant differences between the other union statuses when using rotating reference groups.

Gender—As presented in Model 3 (Table 2) we added gender interactions with sexual partnership status. The significant interaction of gender with gay/lesbian cohabiting status suggests the health differences by union status and sexual identity groups are different for men and women. Specifically, straight never married men did not differ significantly from straight married men in odds of reporting poor health (OR = 0.96, $p > .05$), while straight never-married women tended to have higher odds of reporting poor health compared to straight married women (OR = $0.96 * 1.39 = 1.33$, additional tests showed this difference is significant at $p < 0.001$); the difference between straight previously married and straight married is greater for women (OR = $1.46 * 1.22 = 1.78$, significant at $p < 0.001$) than for men (OR = 1.46, $p < .001$). Cohabiting gays do not significantly differ from straight married men (OR = 0.54, $p > 0.05$). This is in contrast with the results showing that cohabiting lesbians have much higher odds of reporting poor or fair health than straight married women (OR = $0.54 * 6.35 = 3.42$, additional tests showed this difference is significant at $p < 0.001$). Our additional analysis of using different reference groups (shown in Tables A1 and A2 in appendix) suggests that for both genders, the straight previously married experienced significantly higher odds of reporting poor or fair health than the straight never married (men's OR = 1.51, $p < 0.001$; women's OR = 1.33, $p < 0.01$). Moreover, cohabiting lesbian women also have higher odds of reporting poor or fair health than straight cohabiting women (OR = 2.16, $p < 0.05$), and straight never married women (OR = 2.56, $p < 0.01$). Lesbian previously married women have lower odds of reporting poor or fair health than straight previously married women (OR = 0.42, $p < 0.05$), lesbian cohabiting women (OR = 0.22, $p < 0.01$), and lesbian never married women (OR = 0.31, $p < 0.05$). All reported gender differences were statistically significant at least at the $p < 0.05$ level.

To better interpret these gender interactions, we calculated predicted probabilities of reporting poor/fair health for men and women in each union status and sexual identity group based on results from Model 3 of Table 2. Significance levels shown in figures are based on results from rotating the reference groups of the regression models. Clearly, as shown in Figure 1, the health difference between the straight married and other union status and sexual minority groups is greater among women than among men. It is mostly striking that cohabiting and married gay men do not significantly differ in the probability of reporting poor or fair health than straight married men, while cohabiting lesbian women along with never married lesbian women have higher probability of reporting poor or fair health than straight married women. This suggests that the significant differences between gay/lesbian cohabiting and straight married people in Models 1 and 2 were driven primarily by lesbian women's health disadvantage.

DISCUSSION

There are clear sexual identity gradients in health, wherein gays and lesbians experience worse health than heterosexual individuals (IOM, 2013; Cochran & Mays, 2007), and robust union status gradients in health wherein the married experience advantaged health over unmarried (Liu & Reczek, 2012). We merge these two research areas to explore self-rated health disparity at the intersection of sexual identity and union status. In doing so we add to the scientific literature which asks if basic marriage theory applies to sexual minorities; we also contribute to a large research area that identifies unique disadvantage in sexual minority populations across union status. The 2013–2014 National Health Interview Surveys (NHIS) is among the first population-based, nationally representative datasets in the United States that allows for the comparison of self-rated health across sexual partnership status at the population-based level (Ward et al., 2013) and is thus ideal for the present study. Our analyses show a strong union status gradient among heterosexuals, while the gradient among sexual minorities is less clear and appears to primarily exist among women. We describe these findings and their implications, with attention to the role of SES and gender, below.

First, strong gradients exist across union status categories for heterosexuals prior to adding controls for SES (Waite & Gallagher, 2000), while fewer differences appear when comparing the gay/lesbian partnership categories to heterosexuals or when comparing across gay/lesbian partnership status categories. For example, without controlling for SES we find that only the gay and lesbian never-married experience a disadvantage in health relative to the straight married; gay/lesbian previously-married, gay/lesbian cohabiting, and gay/lesbian married report similar health to the straight married groups as well as one another. These findings suggest that there may be less union status stratification within gays/lesbians. Because of unequal access to the resources legal marriage, union status categories may not hold the same weight among gays and lesbians as they do among heterosexuals. Combined with the findings of Kail and colleagues (2015) that suggest same-sex couples report *better* self-rated health in states with legal same-sex marriage, the present study suggests that the broader social acceptance of same-sex relationships and a tolerant environment may matter more than legal status itself. These findings together may be the result of potential ambiguities in the meaning of marriage and cohabitation for gay and lesbian identified adults due to the lack of consistent state-level definition of marriages as well as the role of

informal commitment ceremonies (Reczek et al., 2009). For example, there are possible differences in union status by sexual identity, wherein gays and lesbians are less likely to marry than their heterosexual counterparts (Anjani, Mosher, Copen, and Sionean 2011). Moreover, these unions tend to be more egalitarian in household division of labor (Giddings, Nunley, Schneebaum, & Zietz, 2014; Jepsen & Jepsen, 2015; Solomon, Rothblum, & Balsam, 2005), of a slightly lower marital duration (Andersson, Noack, Seierstad, & Weedon-Fekjær, 2006; Kurdek, 2004; Lau, 2012; although see Rosenfeld, 2014 for evidence that duration is the same for different-sex and same-sex couples), and similar or slightly better levels of quality as their heterosexual counterparts (Balsam, Beauchaine, Rothblum, and Solomon, 2008). This suggests that gay and lesbian union status categories may take on dimensions and consequences that are unique to the those found in analogous heterosexual union status categories.

Additionally, given the small sample size and the enormous heterogeneity in the meaning of marriage among the gay and lesbian population, our finding of fewer differences by union status among the gay and lesbian population may be due to low statistical power. Future research should continue to address variation across these sexual partnership status groups in order to provide a clearer picture of population health trends. Notably, the different findings between the present study and the Kail and colleagues (2015) may be the result of two different measures of same-sex relationships; the present study uses an identity-based sexual orientation measure whereas Kail and colleagues used a household-based measure. Household based measures are shown to be more susceptible to measurement error and the inclusion of different-sex people in the same-sex category, which may make the same-sex category appear to be healthier than they are relative to other groups.

Second, fundamental cause theory suggests that socioeconomic status is a key factor that links union status and health (Link & Phelan, 1995; Light, 2004). SES controls (i.e., employment, poverty status, educational attainment, and health insurance coverage) partially (but do not fully) explain the difference between the straight married and other straight union status groups. That is, it is higher levels of employment and health insurance and lower poverty status are associated with union status, and it is these factors that partially underlie the health disparity found for disadvantaged union status groups among the heterosexual population (Waite & Gallagher 2000). Yet, controlling for SES *increases* the difference between the straight married and the gay/lesbian cohabiting. Moreover, controlling for SES actually revealed new significant differences not found before controlling for SES—suggesting a suppressing role of SES in these relationships. For example, the gay/lesbian cohabiting report worse self-rated health than the straight married groups and the gay/lesbian never married report worse self-rated health relative to the straight never married after controlling for SES. This is consistent with research on the same-sex cohabiting in other population-based studies (e.g., Liu et al., 2012), yet, this finding is contrary to research showing that the never-married in the general population are somewhat advantaged to other unions status groups (Liu & Umberson 2012).

These findings are consistent with previous work (Liu et al., 2013) in revealing that the SES of gay/lesbian adults may actually suppress union status gradients in health outcomes. It appears, then, that lesbian/gay cohabitators' and never marrieds' relatively high SES actually

protects those groups to some degree at the population level; without their current SES advantages, gay and lesbian cohabitators, and perhaps also the gay/lesbian never married, would experience even greater self-rated health disadvantage (Denney et al., 2013; Liu et al., 2013). This health disadvantage that is protected by SES may be the result of minority stress factors, including lack of access to same-sex marriage historically, lack of social support, and increased discrimination and stigma due to a sexually stigmatized status (Meyer, 2003a, b). With this finding in mind, future research and public policy should work to identify the specific mechanisms that disadvantage gay and lesbian cohabitators—especially those with low SES—to attempt to ameliorate potentially negative effects. Taken together, these findings suggest that lower SES gay and lesbian identified cohabiting individuals likely have unique health concerns to be explored in subsequent research.

Third and finally, because research suggests the relationship between union status and health is gendered and because lesbians appear to experience a health disadvantage relative to heterosexual women and gay men (Liu et al., 2013; Light, 2004), we examine gender differences in health disparities across sexual partnership status. Indeed, we find that the effects of sexual partnership status across gay/lesbian and straight identified individuals do vary by gender. While the union status gradient is clear among heterosexual men, no such differences exist among gay men—either relative to one another or their heterosexual counterparts. In contrast, cohabiting lesbian women report worse self-rated health than the straight married, straight cohabiting, straight never married, and lesbian previously married women; lesbian never married women also report worse self-rated health than straight married women. This gendered pattern suggests a new complexity to the gendered union status gradient that does not necessarily fit with the broader findings on heterosexuals. Here, it appears that sexual minority status and gender combine in unique ways to produce self-rated health.

Being a woman and a sexual minority may indicate “double jeopardy” for lesbian women, especially, cohabiting lesbian women; while gay men may suffer less from such experiences due to their privileged status as men. For example, due to their unmarried and sexual minority status, lesbian cohabiting women are far less likely than women in different-sex relationships to have health insurance, have a checkup in the past year, and have unmet medical needs (Buchmueller & Carpenter, 2010; Conron et al., 2010; Heck, Sell, & Sheinfeld-Gorin, 2005). At the same time, cohabitation may also increase stress among lesbian women due to a lack of institutional benefits but the stressors of being in a presumably visible lesbian relationship, which may be related to worse self-rated health among this population. Additionally, it may be the case that lesbian women have fewer buffers against sexual minority and gender-based stress relative to gay men, making them more susceptible to union status effects on health than men. Moreover, we do not control for all SES factors; women with men as partners and men with men as partners may have access to more resources due to men’s average SES advantage. For example, lesbian women may experience lower returns to education than gay men or heterosexual women (Rothblum, Balsam, Solomon, & Factor, 2007); controlling for factors like education and poverty status may not capture the full influence and variability of resources at the intersections of sexual orientation and gender. Lower returns to education and access to fewer relationships through

a partnership may more greatly stratify women's self-rated health by union status in ways not found for men.

This finding adds to a growing body of work suggesting that not all sexual minorities experience health disadvantage; rather, there are important points of variation—in this case, gender—that drive sexual minority disadvantages in self-rated health across union status. We suggest that future research and policy should take into account the intersection of not only sexual identity and union status but also gender in attempts to uncover and most effectively ameliorate health disparities. It is important not to omit the possibility of health-based selection when interpreting these results. For example, healthier lesbians may be more likely to select into marriage, while less healthier lesbian women select into cohabitation and never-married statuses. Given that, at the population level, lesbian women experience several health disadvantages compared to lesbian women (Buchmueller & Carpenter, 2010; Cochran & Mays, 2007; Conron et al., 2010; Heck, Sell, & Sheinfeld-Gorin, 2005), it is possible that health-based selection may explain the different patterns by gender and sexuality. Future research should look into collecting and analyzing longitudinal data to address the problem of health-based selection.

Limitations and Conclusion

This study is among the first to explore whether the union status gradient holds true across gay, lesbian, and straight identified people at the population level, finding that there are some important sexual partnership status differences that vary by gender. However, limitations exist. First, we did not include measures of bisexual men and women because of too few cases in our sample. We expect that with additional forthcoming waves of data we will be able to report the effects of union status on self-rated health among bisexual women; this is an important endeavor as research shows that bisexual women are disadvantaged relative to lesbian and straight women (Fredriksen-Goldsen, 2010; Przedworski et al., 2014). Second, a gay/lesbian previously married status could indicate having a prior same-gender partnership or a prior different-gender partnership, or both. While we are unable to identify and disentangle the impact of different types of prior marriages, past research suggests that most of these previous marriages were to of people of a different sex (Black, Gates, Sanders, and Taylor, 2000). This may shape the self-rated health of lesbian women and gay men in important ways; for instance, being divorced from different-sex spouse may suggest increased stress as one transitions into a sexual minority category from a previously privileged category or decreased stress if one transitions from an undesirable heterosexual marriage into a life more true to oneself. Future research should explore this previously married category to understand the differences on previous status on self-rated health. Third, there is also likely race and age variation in the relationship between union status and self-rated health across sexual identity; however, sample size prohibits us from testing race and age interactions. We were also unable to address issues of causality with our cross-sectional data. Finally, although the pooled data from the 2013–2014 population-based nationally representative National Health Interview Surveys (NHIS) has many advantages for the purpose of this study, it is limited by sample size of the gay and lesbian respondents especially across union statuses. Because NHIS is collected annually, more years of data collection of NHIS will certainly help to make the analysis stronger.

The present study, in spite of limitations, provides the first population-based study of how union status matters for self-rated health by sexual identity and gender. We believe this study opens new research questions to be addressed on this topic by providing novel and robust evidence on the importance of one's sexual partnership status; union status appears to be an important marker of inequality in the gay/lesbian population, protecting some gay and lesbian adults and disadvantaging others. It may be that new access to same-sex marriage will shape the nature of self-rated health across the gay and lesbian population, possibly ameliorating some of the negative consequences of the gay/lesbian cohabiting—particularly lesbian cohabiting—relative to the straight married and straight never-married in the US (Mays & Cochran, 2001). Future efforts to increase access to socioeconomic resources that boost well-being among disadvantaged gay/lesbian union status groups is critical, especially as we show that SES protects gay/lesbian cohabitators from having even worse relative health (Buffie, 2011; Mayer, 2008). It will also be important to target other modifiable factors, such as increased discrimination and victimization, which are strongly correlated with poorer health among gay/lesbian populations in past research (Meyer, 2003a, b). Findings point to the need for attention to diversity of health risk within the category of sexual minorities (IOM, 2013); in this case, policy and intervention attention is needed towards lesbian women in cohabiting relationships who are disadvantaged relative to other groups even after controlling for SES.

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Appendix

Table A1

Comparisons of Odds Ratios from Final Binary Logistic Regression Models of Self-Rated Health on Relationship Status for Men with Different Reference Group (N = 53,135)

	Straight Married	Straight Cohabiting	Straight Never Married	Straight Previously Married	Gay Married	Gay Cohabiting	Gay Never Married
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Straight Married	1.00	0.72 **	1.04	0.68 ***	0.58	1.85	0.68
Straight Cohabiting	1.39 **	1.00	1.44 **	0.95	0.80	2.57	0.94

	Straight Married	Straight Cohabiting	Straight Never Married	Straight Previously Married	Gay Married	Gay Cohabiting	Gay Never Married
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Straight Never Married	0.96	0.69 ***	1.00	0.66 ***	0.56	1.78	0.65
Straight Previously Married	1.46 ***	1.05	1.51 ***	1.00	0.84	2.69	0.99
Lesbian/Gay Married	1.73	1.25	1.80	1.19	1.00	3.20	1.18
Lesbian/Gay Cohabiting	0.54	0.39	0.56	0.37	0.31	1.00	0.37
Lesbian/Gay Never Married	1.47	1.06	1.53	1.01	0.85	2.72	1.00
Lesbian/Gay Previously Married	2.01	1.44	2.08	1.37	1.16	3.70	1.36

Note: * p < 0.05, two-tailed.

** p < 0.01, two-tailed.

*** p < 0.001, two-tailed.

Table A2

Comparisons of Odds Ratios from Final Binary Logistic Regression Models of Self-Rated Health on Relationship Status for Women with Different Reference Group (N = 53,135)

	Straight Married	Straight Cohabiting	Straight Never Married	Straight Previously Married	Lesbian/Gay Married	Lesbian/Gay Cohabiting	Lesbian/Gay Never Married
Relationship Status	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
Straight Married	1.00	0.63 ***	0.74 ***	0.56 ***	0.29	0.29 ***	0.42 ***
Straight Cohabiting	1.60 ***	1.00	1.19	0.89	0.46	0.46 *	0.67
Straight Never Married	1.34 ***	0.84	1.00	0.75 ***	0.38	0.39 **	0.56 **
Straight Previously Married	1.79 ***	1.12	1.33 **	1.00	0.51	0.52	0.75
Lesbian/Gay Married	3.50	2.19	2.60	1.96	1.00	1.02	1.47
Lesbian/Gay Cohabiting	3.44 ***	2.16 *	2.56 **	1.93	0.98	1.00	1.44
Lesbian/Gay Never Married	2.38 ***	1.49	1.77 *	1.33	0.68	0.69	1.00
Lesbian/Gay Previously Married	0.74	0.46	0.55	0.42 *	0.21	0.22 **	0.31 *

Note: * p < 0.05, two-tailed.

** p < 0.01, two-tailed.

*** p < 0.001, two-tailed.

Figure 1.

Predicted Probabilities of Reporting Poor or Fair Health

Note: All significance tests are based on within-gender pairwise comparisons. * differs from straight married ($p < 0.05$); † differs from straight cohabiting ($p < 0.05$); ^a differs from straight never married ($p < 0.05$); ^b differs from straight previously married ($p < 0.05$); ^c differs from lesbian/gay married ($p < 0.05$); ^d differs from lesbian/gay cohabiting ($p < 0.05$); ^e differs from lesbian/gay never married ($p < 0.05$)

The figure was drawn based on results from Model 3 of Table 2. The significant levels for women are based on additional tests comparing the groups within women and not shown in Table 2.

Table 1

Descriptive Statistics by Sexual Partner Status

Variable	Straight Married	Straight Cohabiting	Straight Never Married	Straight Previously Married	Lesbian or Gay Married	Lesbian or Gay Cohabiting	Lesbian or Gay Never Married	Lesbian or Gay Previously Married
Health (Percent)								
Excellent/Very Good	90.4	88.7	91.7	78.7	87.2	87.5	86.7	81.0
Poor/Fair	9.6	11.3	8.3	21.3	12.8	12.5	13.3	19.0
Sex (Percent)								
Male	49.8	49.8	52.6	39.5	49.2	43.6	63.5	44.9
Female	50.2	50.2	47.4	60.5	50.8	56.4	36.5	55.1
Race (Percent)								
NH White	67.7	60.2	54.2	64.4	72.3	76.0	58.4	65.3
NH Black	7.6	12.3	19.6	16.0	8.9	4.7	20.2	8.8
Hispanic White	14.8	19.5	16.2	12.4	13.5	13.9	9.8	19.0
Hispanic Black	0.5	1.0	0.8	0.6	--	1.0	1.0	0.6
Other	9.3	7.0	9.2	6.5	5.3	4.4	10.6	6.2
Education (Percent)								
Less than High School	10.9	15.1	14.3	14.2	7.3	3.5	7.5	9.8
High School or GED Equivalent	23.0	30.7	26.6	27.3	16.7	14.7	22.9	25.8
Some College	16.8	21.5	28.4	21.3	13.0	23.2	24.1	20.1
AA Degree	12.2	11.2	8.6	14.2	9.8	17.8	11.3	16.4
BA Degree	23.5	16.5	16.8	14.6	25.7	24.2	23.3	9.5
Graduate or Professional	13.8	5.0	5.4	8.5	27.5	16.6	10.8	18.5
Foreign Born (Percent)								
No	76.8	84.1	86.1	85.0	84.4	91.9	91.4	90.9
Yes	23.2	15.9	13.9	15.0	15.6	8.1	8.6	9.1
Region (Percent)								
Northeast	16.7	15.7	18.9	14.9	19.3	22.5	15.3	8.4

Variable	Straight Married	Straight Cohabiting	Straight Never Married	Straight Previously Married	Lesbian or Gay Married	Lesbian or Gay Cohabiting	Lesbian or Gay Never Married	Lesbian or Gay Previously Married
North Central/Midwest	22.9	25.8	22.8	21.9	16.0	17.0	20.0	18.7
South	37.2	34.7	34.7	42.5	26.1	34.8	39.9	54.0
West	23.2	23.8	23.6	20.8	38.6	25.7	24.8	18.8
Insured (Percent)								
No	13.2	29.6	22.7	20.3	9.9	16.8	21.5	16.0
Yes	86.8	70.4	77.3	79.7	90.1	83.2	78.5	84.0
Employment Status (Percent)								
Employed	71.0	70.4	63.0	63.7	81.4	73.5	65.3	57.0
Employed, but not at work	2.9	2.9	1.7	2.2	3.8	3.1	1.7	1.2
Unemployed	3.4	7.5	10.7	5.5	4.3	5.4	7.9	9.8
NILF	22.6	19.1	24.6	28.7	10.5	17.9	25.1	32.0
Below Poverty Threshold								
No	91.8	83.5	76.7	79.2	96.2	95.5	80.4	79.4
Yes	8.2	16.5	23.3	20.8	3.8	4.5	19.6	20.6
Age (Mean)	45.4	35.3	29.7	49.8	44.0	42.6	35.9	50.2
Year (Mean)	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5
Total N	23,637	3,688	14,397	10,378	141	221	586	87

Table 2

Estimated Coefficients to Predict Poor/Fair Health (N = 53,135)

Variables	Model 1		Model 2		Model 3	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
<i>Relationship Status (Ref: Straight Married)</i>						
Straight Cohabiting	1.88***	0.13	1.50*** <i>b</i>	0.11	1.39*	0.18
Straight Never Married	1.70*** <i>c</i>	0.09	1.14* <i>acd</i>	0.07	0.96	0.08
Straight Previously Married	2.02*** <i>b</i>	0.09	1.62*** <i>b</i>	0.08	1.46***	0.10
Lesbian/Gay Married	1.56	0.63	2.51	1.31	1.73	1.35
Lesbian/Gay Cohabiting	1.58	0.43	1.97*	0.56	0.54	0.30
Lesbian/Gay Never Married	2.16***	0.38	1.80*** <i>b</i>	0.35	1.47	0.40
Lesbian/Gay Previously Married	1.62	0.57	1.31	0.41	2.01	0.88
<i>Gender (Ref: Male)</i>						
Female	1.04	0.04	0.87***	0.03	0.76***	0.04
<i>Race/ethnicity (Ref: Non-Hispanic White)</i>						
Non-Hispanic Black	1.69***	0.08	1.38***	0.07	1.36***	0.07
Hispanic White	1.81***	0.10	1.21**	0.08	1.20**	0.08
Hispanic Black	1.68*	0.37	1.24	0.28	1.23	0.28
Other Race	1.35***	0.11	1.27**	0.11	1.27**	0.11
<i>Nativity Status (Ref: Native Born)</i>						
Foreign Born	0.80***	0.05	0.76***	0.05	0.76***	0.05
<i>Region (Ref: Northeast)</i>						
North Central/Midwest	1.16*	0.08	1.08	0.08	1.08	0.08
South	1.29***	0.08	1.20**	0.08	1.21**	0.08
West	1.03	0.07	1.03	0.08	1.04	0.08
<i>Age (Single Years)</i>						
Age	1.05***	0.00	1.05***	0.00	1.05***	0.00
<i>Survey Year (Dichotomous)</i>						
Year	0.94	0.03	0.94	0.04	0.94	0.04

Variables	Model 1		Model 2		Model 3	
	Odds Ratio	SE	Odds Ratio	SE	Odds Ratio	SE
<i>Education (Ref: Less than High School)</i>						
High School or GED Equivalent			0.66***	0.04	0.66***	0.04
Some College			0.52***	0.03	0.52***	0.03
AA Degree			0.53***	0.04	0.53***	0.04
BA Degree			0.26***	0.02	0.26***	0.02
Postgrad/Professional			0.19***	0.02	0.19***	0.02
<i>Poverty Status (Ref: At or Above Poverty Threshold)</i>						
Below Poverty Threshold			1.96***	0.09	1.93***	0.09
<i>Insurance Status (Ref: Uninsured)</i>						
Insured			1.00	0.05	0.99	0.05
<i>Employment Status (Ref: Employed, at Work)</i>						
Employed, Not at Work			2.35***	0.28	2.36***	0.28
Unemployed			2.22***	0.17	2.23***	0.18
Not in Labor Force			4.52***	0.19	4.61***	0.20
<i>Interaction Terms</i>						
Straight Cohabiting * Female					1.15	0.21
Straight Never Married * Female					1.39**	0.15
Straight Previously Married * Female					1.22*	0.11
L/G Married * Female					2.02	2.13
L/G Cohabiting * Female					6.35***	4.19
L/G Never Married * Female					1.62	0.53
L/G Previously Married * Female					0.37	0.23

Note: * $p < 0.05$, two-tailed.

** $p < 0.01$, two-tailed.

*** $p < 0.001$, two-tailed.

Superscript letters in Model 2 represent rotated union status reference groups ($p < 0.05$).

(Lesbian/gay never married). Detailed breakdowns of rotated reference groups in Model 3 are available in Figure 1 and Tables A1 and A2.

p

(Straight previously married)
 c

(Straight never married)
 q

(Straight cohabiting)
 r

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