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The Health Disparities of Same-Sex Cohabitors at the Intersection of Race-Ethnicity and Gender

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A long-standing body of research shows that different-sex marriage promotes mental and physical health relative to other union statuses, such as different-sex cohabitation and unpartnered singlehood (Burman and Margolin 1992; Carr and Springer 2010; Robles and Kiecolt-Glaser 2003; Umberson and Montez 2010; Waite and Gallagher 2000). This social fact is gendered and raced, wherein different-sex marriage is more beneficial for men than it is for women and more advantageous for whites than it is for racial-ethnic minorities (Carr and Springer 2010; Liu and Reczek 2012). Recent research shows that same-sex cohabitators experience general health disadvantages relative to both their same-sex and different-sex married counterparts (Buffie 2011; Cherlin 2013; Herek 2006; Reczek, Liu and Spiker 2013). Yet, what is unknown is how these factors — gender, race-ethnicity, sexual minority status, and union status — intersect with one another to shape the health outcomes of U.S. adults. This empirical gap is echoed by recent calls by leading scholars for the use of both intersectional theory (Crenshaw 1991; Schutlz and Mullings 2006) and minority stress theory (Meyer 2003) to draw attention to how “health is distributed by multiple social status categories simultaneously” (Williams and Sternthal 2010: S16). Intersectional and minority stress approaches point to the need to look at potential disadvantage for same-sex cohabitators at the intersection of gender and race-ethnicity.

Despite inroads in our understanding of how union status differences in health vary across gender, race-ethnicity, or sexual minority status, previous research is limited in that it either examines these factors in isolation or focuses on the intersection of only two factors at a time (e.g., gender along with race-ethnicity, sexual minority status along with gender, or union status along with gender or race) (e.g., Gorman, Denney, Dowdy, and Medeiros 2015; Read and Gorman 2006; Reczek, Liu, and Brown 2014). Veenstra (2011, 2013) examines the intersection of gender, race and sexual minority status in producing health outcomes and

finds significant evidence for the intersectional processes of these statuses, yet these studies did not consider the important context of union status. In order to address this important gap, we use pooled data from the Integrated National Health Interview Surveys 1997–2014 to examine how same-sex cohabitators differ from different-sex union status groups on a wide range of health outcomes (e.g., self-rated physical health, psychological distress, and health behaviors) across gender and race-ethnicity. Assessing multiple health outcomes in the same study is important in order to fully understand health disparities (Williams and Sternthal 2010). We draw on minority stress and intersectional theories to detail how structural opportunities and constraints comingle at the intersection of gender, race-ethnicity, sexual minority status, and union status to affect well-being (Collins 2000; Greenman and Xie 2008; Schulz and Mullins 2006). Results from the present study may also serve to improve the effectiveness of health policy by illuminating the specific segments of the sexual minority population at risk for disadvantaged health.

BACKGROUND

A Minority Stress Perspective on Marital Advantage: Sexual Minority Status and Union Status

A growing body of work has begun to explore how health differentials by union status (i.e., someone's marital status, including legally married, cohabiting, or non-married) extend to sexual minorities. This area of study is guided by the minority stress paradigm, developed to link higher rates of stigma and homophobia to chronically high levels of stressors faced by sexual minorities (Lick, Durso, and Johnson 2013; Meyer 2003). According to minority stress theory, sexual-minority status is a fundamental cause of discrimination because it is a socially stigmatized status (Meyer 2003). Institutional and interpersonal stigma, discrimination, and homophobia faced by sexual minorities directly arouse minority stress and in turn lead to negative health outcomes such as psychological distress, unhealthy behaviors (e.g., smoking, drinking, overeating and obesity), and poor physical health (Institute of Medicine 2011; Lick et al. 2013). Additionally, stigma, discrimination, and homophobia limit sexual minorities' access to valuable resources (e.g., economic resources and social support) to combat stress (Institute of Medicine 2011; Lick et al. 2013; Meyer 2003). Such resources are presumed to be accrued in different-sex marriages but inaccessible to the same degree for different-sex or same-sex cohabiting and single households — representing a different-sex “marital advantage” (Becker 1993; Reczek et al. 2013; Waite and Gallagher 2000).

Research has begun to demonstrate how sexual minority stressors intersect with union status to disadvantage same-sex cohabitators (e.g., Liu, Reczek and Brown 2013). Although it is likely that people with greater access to economic and psychosocial resources are more likely to select into marriage (Fu and Goldman, 1996; Musick, Brand and Davis, 2012), different-sex marriages have long been argued to provide increased access to economic (e.g., pooled income and health insurance through the spouse's employment) and social-psychological resources (e.g., spouse providing support, love, advice, and care) that are generally inaccessible to unmarried people, including same-sex cohabitators who have historically been unable to marry (Reczek et al. 2013). All these factors may further lead to

health disparities across union status groups (Liu et al. 2013), with an advantage of different-sex married people relative to other unmarried groups, including same-sex cohabitators, in a wide range of health outcomes (Becker 1993; Reczek et al. 2013; Waite and Gallagher 2000).

An Intersectional Approach on Minority Stress: Sexual Minority Status, Union Status, Race-ethnicity, and Gender

The minority stress perspective, which drives most previous research on sexual minority status and health, draws on intersectional theory (Crenshaw 1991), which suggests that there are multiple, interlocking dimensions of disadvantage that simultaneously come together to influence life conditions (Collins 2000; Parent, DeBlaree, and Moradi 2013). While a minority stress approach focuses on sexual minority stressors, an intersectional approach advocates for simultaneously considering “the meaning and consequences of multiple categories of identity, difference and disadvantage” (Cole 2009: p170). When scholars only examine the relationship between union status and health, for example, they are missing the ways in which the relationship between union status and health is influenced by differences across individuals — most notably gender, race-ethnicity, and sexual minority status. For example, previous studies show that the different-sex marital advantage in health is more pronounced for men than for women (Williams and Umberson 2004); a study on race-ethnicity and health/longevity show that whites benefit more from marriage than blacks (Liu and Reczek 2012). However, these studies fail to show how sexual minorities may experience a union status health benefit or detriment differently depending on the intersection of multiple identity categories such as gender and race. This is a major gap in the literature that we aim to address in the present study.

Drawing on intersectional and minority stress theories, we theorize that gender and race-ethnicity intersect with sexual minority status and union status to disadvantage some same-sex cohabitators relative to different-sex cohabiting and married individuals more than others (Blosnich, Jarrett, and O’Horn 2011; Liu et al. 2013). In terms of race-ethnicity and gender differences, white men generally have better health outcomes, particularly self-rated physical health and psychological well-being, than all other gender and racial-ethnic groups; this is in part related to their privileged racial and gender markers (Schulz and Mullins 2006). White women generally report the highest levels of psychological distress, black women report the worst self-rated physical health across racial-ethnic and gender groups, and black men tend to engage in more risky health behaviors (such as drinking alcohol and smoking) than do other racial-ethnic and gender groups (Read and Gorman 2006; Schulz and Mullins 2006). Hispanic men and Hispanic women are similar to their white counterparts on a number of health outcomes (Palloni and Morenoff 2001). Such health disparities suggest different vulnerabilities across racial-ethnic and gender groups and clearly show that disadvantage depends on the configuration of various social statuses. However, how these gender and racial-ethnic dynamics play out among sexual minorities across union status is unclear. We argue that these health inequalities can only be understood at the intersection of multiple social status positions, given the aforementioned complexities (Bowleg 2008).

Empirical research on the intersection of gender, race-ethnicity, sexual minority status and union status is limited and primarily based on qualitative analyses using relatively small local or regionally based samples; these qualitative studies often focus on the unique life experiences of one specific group of sexual minorities, such as black lesbians (Bowleg 2008; Greene 1997) instead of comprehensively assessing relevant health disparities across multiple groups, which we aim to address in this study. To our knowledge, only one national population-based study has simultaneously considered gender, race-ethnicity, and sexual minority status when looking at health differences across union status (Liu et al. 2013). Liu and colleagues' examination of self-rated health showed that same-sex cohabiting black women, and to a lesser extent same-sex cohabiting Hispanic women, were significantly disadvantaged in self-rated health relative to their black and Hispanic women counterparts in all other different-sex union statuses (i.e., different-sex married, different-sex cohabiting, and unpartnered singles). However, same-sex cohabiting white women's self-rated health was not significantly different from that of different-sex cohabiting white women and was better than that of divorced white women, but it was worse than that of different-sex married white women (Liu et al. 2013). Surprisingly, this study showed that racial-ethnic variations in the relationship between same-sex union status and self-rated health were not significant among men.

Although informative, Liu and colleague's study (2013) had significant limitations. It only assessed self-rated health; leading health scholars have long emphasized the importance of assessing multiple health outcomes in order to fully understand population health disparities beyond a self-assessed and subjective measure of well-being (Williams and Sternthal 2010). It is likely that different health outcomes have different union status predictors; thus, it is critical to move beyond self-rated health to uncover whether there are other unknown dimensions of health disparity. More importantly, Liu and colleague's study (2013) did not use an intersectional approach or apply minority stress theory to view the health disparities among sexual minorities; rather, the study was one of the first studies in this line to document the general patterns of health disparities across same-sex union status. Thus, the present study makes significant contributions to this line of literature by not only testing research consensus across multiple health outcomes but also highlighting the theoretical significance of an intersectional approach merged with minority stress theory to guide the analysis of health disparities among sexual minorities.

Research Hypotheses

Taken together, both the intersectional perspective (Crenshaw 1991) and minority stress theory (Meyer 2003) require the examination of multiple categories of disadvantages to ascertain health disparities, and this study builds on these theoretical approaches to empirically examine how race-ethnicity, gender, sexual minority status, and union status combine to produce enhanced or diminished health outcomes. Because of their higher levels of stress from stigma, discrimination, and homophobia, we hypothesize:

H1: Same-sex cohabitators will have worse health outcomes than different-sex married individuals.

H2: The health disadvantages of same-sex cohabitators relative to different-sex married individuals will be more pronounced for racial-ethnic minorities and women than they are for white men.

When comparing same-sex cohabitators with different-sex cohabitators and unpartnered singles across gender and racial-ethnic groups, we have no clear prediction given the mixed empirical and theoretical evidence. For example, on the one hand, an intersectional perspective on minority stress suggests that the combination of sexual minority status and non-legalized cohabiting status faced by same-sex cohabitators, especially among gender and racial-ethnic minorities, represents the unequal distribution of life stressors in comparison to different-sex cohabitators and unpartnered singles. This may create elevated levels of psychological distress and lead to more risky health behaviors and worse physical health among gender and racial-ethnic minority same-sex cohabitators relative to different-sex cohabitators and unpartnered singles. On the other hand, different-sex cohabitators and unmarried singles, especially among gender and racial-ethnic minorities, appear to have fewer socioeconomic resources (Black et al. 2007; Liu et al. 2013; Meyer 2003) and are less likely to include longer-term cohabitators with higher levels of commitment compared to same-sex cohabitators (Reczek, Elliott and Umberson 2009); these factors suggest better health outcomes for same-sex cohabitators relative to different-sex cohabitators and unmarried singles. Therefore, we compare same-sex cohabitators with different-sex cohabitators and unpartnered singles in a more exploratory—versus hypothesis-driven—way.

METHODS

Data

We used pooled data from the 1997–2014 Integrated National Health Interview Surveys (NHIS) (Minnesota Population Center and State Health Access Data Assistance Center 2015). The NHIS is a cross-sectional household survey conducted annually by the National Center for Health Statistics. The NHIS is representative of the US civilian non-institutionalized population (NCHS 2000). We restricted our analyses to respondents ages of 18 and above who identified as non-Hispanic white, non-Hispanic black, and Hispanic; sample sizes for same-sex cohabitators in other racial-ethnic groups are too small in the data set to allow for statistical comparison.

The NHIS includes an in-depth file (named the “sample adult files”) that contains a wide range of health information (e.g., psychological distress and health behaviors) on only one randomly selected adult in each family, and a full sample file (named the “person files”) that includes less comprehensive health information (e.g., self-rated physical health) on every individual in the household (NCHS 2000). To make full use of the data, we analyzed both the sample adult and person files, depending on the availability of the health outcome variables. We used data from the sample adult files for the analysis of psychological distress and health behaviors, and we used data from the person files for the analysis of self-rated physical health. We excluded a small proportion (about 5%) of observations with missing values on union status. Thus, we obtained a total sample of 1,108,950 respondents in the person files and 505,116 respondents in the sample adult files. Table 1 shows the detailed sample size by union status, race-ethnicity and gender. In the final models, we also excluded

cases with missing values (less than 2% for all health outcomes except for BMI, which has about 9% missing values) on the specific health outcome variable analyzed in that model. As a result, the sample size in various models differs slightly across dependent variables.

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 “svy” commands in Stata were used to account for the complex nature of the NHIS sampling design (StataCorp LP 2007). We emphasize that the NHIS is currently the best available data set for the purpose of current analysis because it allows us to identify a relatively large number of individuals in same-sex cohabitation unions across gender and racial-ethnic groups. Moreover, it provides high quality health and sociodemographic information for nationally representative U.S. samples, which is essentially important for studying population health disparities.

Measures

Same-sex union status—Our major independent variable was same-sex union status. We utilized the household survey nature of the NHIS data that provided sociodemographic information of each household member. Within each household, one person was identified as the reference person; interviewers recorded the relationship of each household member to the reference person. Using the information on legal marital status, we identified individuals in a same-sex cohabiting/married relationship if a household member with the same sex as the reference person was listed as a “spouse” or “unmarried partner” of the reference person. Notably, this approach increases the potential risk of misclassification bias due to miscoded sex. However, because the NHIS is collected via face to face interviews, the potential for sex miscodes should be lower in the NHIS than other national data sources that identify same-sex cohabiters (e.g., Census) (Liu et al. 2013).

Union status was categorized into four categories: same-sex cohabiting/married, different-sex married, different-sex cohabiting, and unpartnered singles. We used the same-sex cohabiting/married (for ease, we call them “same-sex cohabiters” hereafter) as the reference group so that we could better understand how same-sex cohabiters are similar to or different from other union status groups — the question of the greatest interest to the present study. Although we were able to identify respondents in same-sex marriages in the NHIS, our analyses combined same-sex married and same-sex cohabiting respondents for two primary reasons. First, the sample size of same-sex married individuals in gender and racial-ethnic minority groups is relatively small. Our additional analysis (results not shown but available upon request) suggested that excluding the same-sex married from the analysis revealed similar results as we reported in this paper with the combined group. Moreover, including the same-sex married as a separate category revealed few significant differences between the same-sex married and same-sex cohabiters — likely due to the small sample size of the same-sex married. Second, the social and legal meaning — and therefore health implications — of marriage for these individuals was unclear as same-sex marriage was allowed only in a minority of states and not legally recognized at the federal level during the study period. For example, it may be that cohabiters in this sample define themselves as married as a symbolic act (Reczek et al. 2009), or were legally married in a state that allows same-sex marriage

(e.g., Massachusetts), but lived in another state and receive no institutional benefits from this marriage (Rosenfeld 2007). This implies a possible conflation of the same-sex married and cohabiting; thus, we follow previous studies (e.g., Denney et al. 2013; Liu et al. 2013; Reczek et al. 2014) to combine them into one group. Notably, the NHIS did not collect data on sexual orientation until 2013, so we are unable to identify gay and lesbian respondents who are not in cohabiting relationships for a majority of the study years.

Health outcomes—Health is multidimensional. We analyzed three types of health outcomes that are available in our data: self-rated physical health, psychological distress, and health behaviors. *Self-rated physical health* was assessed on a five-point scale ranging from one (poor health) to five (excellent health). This measure demonstrates sound reliability and validity and predicts mortality (Idler and Benyamini 1997). *Psychological distress* was measured using the Kessler-6 (K6) scale, which is an unweighted sum of six items: “During the past 30 days, how often did you feel: (1) so sad that nothing could cheer you up, (2) nervous, (3) restless or fidgety, (4) hopeless, (5) that everything was an effort, and (6) worthless” (Kessler et al. 2010). The response options ranged from “none of the time” (coded 0) to “all of the time” (coded 4). Respondents with higher scores on the K6 had higher levels of nonspecific psychological distress (Range: 0–24). We used the log transformed scale in the final analysis to adjust the skewed distribution. Health behaviors included measures of *currently smoking* (1 = Yes; 0 = No) and *currently drinking alcohol* (1 = Yes; 0 = No). We also considered *body mass* as an indicator for health behavior because it directly reflects eating and exercise behaviors (Umberson, Liu, and Reczek 2008). BMI was calculated based on the self-reported weight and height using the formula: [(Weight in pounds) ÷ (Height in inches, squared)] multiplied by 703. BMI was categorized into four categories: underweight (< 18.5), normal weight (>= 18.5 and < 25, the reference), overweight (>= 25 and < 30), and obese (>= 30) (World Health Organization 1995).

Gender, race-ethnicity, and other sociodemographic covariates—We considered six gender and racial-ethnic subgroups: non-Hispanic white men (hereafter “white men”), non-Hispanic black men (hereafter “black men”), Hispanic men, non-Hispanic white women (hereafter “white women”), non-Hispanic black women (hereafter “black women”), and Hispanic women. Other demographic covariates included *age* (in years), *education* (no high school diploma, high school graduate (the reference), some college, and college graduate), *nativity status* (foreign born, native born (the reference)), and *geographic region* (Northeast (the reference), Midwest, South, and West). We also controlled for economic factors, including *employment status* (currently employed (the reference), not employed, and not in labor force), *health insurance coverage* (have any private/public insurance or not), and *poverty status*. Poverty status was based on federal poverty thresholds published annually by the US Census Bureau. The variable was constructed by National Center for Health Statistics (NCHS) and took into account self-reported total family income, family size, and the ages and number of children present. Persons who had a total family income below the poverty threshold for families of a given size and age composition were considered “in poverty.” Missing cases on sociodemographic covariates were flagged as a separate missing category in the analysis. Because the analytic sample involves pooled data from multiple years of NHIS, we controlled for *survey year* in all of the analyses. Table 2 shows

descriptive statistics of the analyzed health outcomes and sociodemographic covariates for the total sample and by gender and race-ethnicity, suggesting variations across groups.

Statistical Models

Scholars have long recognized the difficulty in conceptualizing and modeling intersectional theory quantitatively (Parent et al. 2013). Most previous quantitative studies take the strategy of an interaction approach (e.g., applying interaction terms or generating multiple interaction categories) to operationalize the concept of intersectionality (e.g., Gorman et al. 2015; Veenstra 2011, 2013). However, scholars on intersectionality have clearly distinguished intersectionality and interaction (Shields 2008) and emphasize the importance of perceiving each group separately in relation to one another (Worthen 2013). Therefore, to fully consider health differences by union status at the intersections of sexual minority status, gender and race-ethnicity, we stratified the analysis by the six gender and racial-ethnic subgroups that lie at the foundation of our theoretical approach. We used t-tests to assess the statistical significance of group differences (Agresti and Finley 2009), and results (not shown) suggested that all key findings were significantly different between white men and other racial-ethnic and gender subgroups. The statistical models we used varied across specific dependent variables. For self-rated physical health and BMI, we used ordinal logistic regression models. For psychological distress, we used Ordinal Least Squares regression models with the log transformed dependent variable. For smoking and drinking, we used binary logistic regression models. In all models, we controlled for all sociodemographic covariates.

RESULTS

Regression Results: Same-Sex Cohabitators versus Different-Sex Married

Table 3 shows the estimated effects of same-sex union status on health outcomes from the regression models by gender and racial-ethnic groups, as well as for the total sample. We first compare same-sex cohabitators with different-sex married individuals to test our focal research questions. Table 3 shows that different-sex married individuals have higher odds of reporting better categories of health (hereafter “better health”) ($OR > 1$) and lower odds of drinking alcohol and smoking ($OR < 1$) than do same-sex cohabitators across all gender and racial-ethnic groups except for Hispanic men. For Hispanic men, the differences in self-rated health, drinking and smoking between same-sex cohabitators and different-sex married individuals are not statistically significant. In terms of psychological distress, different-sex married individuals have lower levels of psychological distress ($b < 0$) than do same-sex cohabitators across all gender and race-ethnicity groups except for black women and Hispanic women. The differences in psychological distress between same-sex cohabitators and different-sex married individuals are not statistically significant for black women and Hispanic women. The results on BMI are more mixed across groups; BMI levels are not significantly different between same-sex cohabitators and different-sex married individuals in the total sample, yet different-sex married individuals have higher BMI levels ($OR > 1$) than same-sex cohabitators among white men and Hispanic men; different-sex married individuals have lower BMI levels ($OR < 1$) than same-sex cohabitators among white women and Hispanic women.

Regression Results: Same-Sex Cohabitors versus Different-Sex Cohabitors

Next, we compare same-sex cohabitators with different-sex cohabitators. Results in Table 3 suggest that different-sex cohabiting white men have worse self-rated health ($OR = .87, p < .05$) than their same-sex cohabiting white men counterparts, but different-sex cohabiting black women have better self-rated health ($OR = 1.45, p < .01$) than their same-sex cohabiting black women counterparts. For all other racial-ethnic and gender groups, the self-rated health of same-sex cohabitators and different-sex cohabitators are not different from each other. There is more variation in BMI between these two groups, dependent on gender and race-ethnicity. For white women and Hispanic women, different-sex cohabitators have lower BMI levels ($OR < 1$) than same-sex cohabitators; for men, in particular white men, different-sex cohabitators weigh more ($OR > 1$) than their same-sex cohabiting counterparts. Little difference is found among other racial-ethnic and gender groups between the cohabitators in other health outcomes including psychological distress, smoking, and drinking with a few exceptions: different-sex cohabiting white men report lower levels of psychological distress than their same-sex cohabiting white men counterparts ($b = -.47, p < .01$); and different-sex cohabiting white women are more likely to drink ($OR = 1.44, p < .001$) and smoke ($OR = 1.30, p < .01$) than do their same-sex cohabiting white women counterparts.

Regression Results: Same-Sex Cohabitors versus Unpartnered Singles

Finally, we compare same-sex cohabitators with unpartnered singles. Results in Table 3 show that unpartnered singles are similar to same-sex cohabitators in terms of self-rated health for men across all racial-ethnic groups. Unpartnered single white women and black women report better health than their same-sex cohabiting women counterparts ($OR > 1$). Unpartnered singles are similar to same-sex cohabitators in terms of psychological distress for women across all racial-ethnic groups, while unpartnered single men report lower levels of psychological distress than their same-sex cohabiting men counterparts ($b < 0$) across all racial-ethnic groups. Although BMI is not different between unpartnered single men and same-sex cohabiting men across all racial-ethnic groups, unpartnered single women, especially white women and Hispanic women, weigh less ($OR < 1$) than their same-sex cohabiting women counterparts. Unpartnered singles are less likely to drink ($OR < 1$) than are same-sex cohabitators across all racial-ethnic and gender groups except for Hispanic men. Unpartnered singles are less likely to smoke ($OR < 1$) than are same-sex cohabitators across all racial-ethnic and gender groups except for black men and Hispanic men.

DISCUSSION

Sexual minorities experience disadvantaged health in comparison to heterosexuals, in part, according to minority stress theory, because of stress caused by social discrimination and stigma (Meyer, 2003). This is particularly true for sexual minorities in same-sex unions due to their relative lack of access to other legal privileges, such as marriage (Denney et al. 2013; Liu et al. 2013). Yet, an intersectional approach on minority stress suggests that attention must be paid to the intersection of other disadvantaged statuses alongside sexual minority status. Given that both union status and health patterns vary by race-ethnicity and gender, an intersectional approach suggests that any disadvantages for same-sex cohabitators likely vary by race-ethnicity and gender. However, nearly all previous studies consider same-sex

cohabitators as a whole without considering the gender and racial-ethnic heterogeneity of this group. In this study, we merge two leading theoretical frameworks — intersectional theory and minority stress theory — to highlight the health and health behavior heterogeneity of sexual minority union status groups at the intersection of gender and race-ethnicity. In doing so, we provide empirical, theoretical, and policy-based insight into long-standing questions of potential health disparities across multiple axes of inequality.

Same-Sex Cohabitators versus Different-Sex Married

Consistent with previous research, minority stress theory, and our hypothesis, findings show that same-sex cohabitators generally face a health disadvantage relative to different-sex married individuals (Denney et al. 2013; Liu et al., 2013). This finding is remarkably consistent across gender and race-ethnicity. For most racial-ethnic and gender groups, same-sex cohabitators report worse health, suffer higher levels of psychological distress, and are more likely to smoke and drink than their different-sex married counterparts. These broad-strokes findings point to potentially significant implications for public policy on same-sex marriage, as union status appears to play an important role in health across sexual minority groups regardless of race-ethnicity and gender. In this way, minority stress theory may be more relevant than the intersectional theory when comparing the most-disadvantaged to the least-disadvantaged groups, as it appears sexual minority stress trumps other disadvantages related to race-ethnicity and gender that may stratify groups.

However, our findings also reveal important gender and racial-ethnic differences that provide evidence of differential trends at the intersection of gender, sexual identity, and race-ethnicity — highlighting the importance of intersectional theory for at least some comparison groups. Consistent with an intersectional approach on minority stress, the magnitude of the self-rated health disadvantage of same-sex cohabitators relative to their different-sex married counterparts is largest among black women followed by Hispanic women. In this sense, same-sex cohabitation interacts with additional social statuses to impact self-rated health, especially when both gender *and* racial-ethnic disadvantage are at play together. But, surprisingly, same-sex cohabiting black and Hispanic women are not significantly disadvantaged in terms of psychological distress relative to black and Hispanic women in different-sex marriages. It may be that black and Hispanic women's psychological well-being does not benefit as strongly from different-sex marriage, as suggested in some previous research (Liu and Reczek 2012), and therefore same-sex cohabiting women in these racial-ethnic minority groups may not experience a relative disadvantage.

Similarly, same-sex cohabiting white and black men are at a disadvantage relative to their different-sex married counterparts in terms of self-assessing their health status, drinking, and smoking, yet same-sex cohabiting Hispanic men are no different in these health outcomes relative to their different-sex married counterparts. This may be because Hispanic men in different-sex relationships do not benefit as strongly from marriage as their white male counterparts, who experience significant advantages from marriage (Angel and Angel 2009). In this sense, access to same-sex marriage might do little to affect the health of Hispanic men in same-sex relationships relative to their different-sex married counterparts as they are already relatively similar on a number of health outcomes. It is also likely that there is a

stronger incentive for socially advantaged Hispanic men to be selected into same-sex cohabitation (as opposed to different-sex marriage) relative to white and black men, due to the reportedly high levels of homophobia in the Hispanic community (Hames-García and Martínez 2011); this effect would also serve to reduce their differences from different-sex married Hispanic men.

Same-Sex Cohabitors versus Different-Sex Cohabitors

In line with the intersectional perspective on minority stress, our findings reveal some important gender and race-ethnicity differences when comparing same-sex and different-sex cohabitators. On some unique dimensions, same-sex cohabiting white men and women are advantaged relative to their different-sex cohabiting counterparts. For example, same-sex cohabiting white men report better self-rated health and BMI than different-sex cohabiting white men. This is consistent with previous research that suggests that white gay men tend to be more conscious of their weight status and general physical health than white heterosexual men (Katz-Wise et al. 2014). This is likely to be especially true relative to different-sex cohabiting white men who are selected into different-sex cohabitation rather than marriage in part on their disadvantaged health status (Horwitz and White 1998). Moreover, we find that same-sex cohabiting white women have lower odds of smoking and drinking than do different-sex cohabiting white women. We suspect that this is partially a function of the selection of white heterosexual women who are more likely to be drinkers and smokers into different-sex cohabitation rather than different-sex marriage (Reczek and Umberson 2012). Yet, this finding is somewhat surprising given sexual minority women's higher substance use rate (Green and Feinstein 2012), suggesting a potential protective effect of cohabitation for sexual minority white women. Qualitative research also shows that white women entering into a different-sex cohabiting union may increase their substance use substantially in response to their male partners' higher rates of substance use due to convergence processes, while same-sex cohabiting white women do not have male partners' influence on increasing substance use (Reczek and Umberson 2012). Moreover, same-sex cohabiting white women are likely to include more "married-like" same-sex couples than their different-sex cohabiting counterparts due to historically restricted access to legal marriage during our study period; the "married-like" may be less likely to use substances (Reczek and Umberson 2012). In this sense, we find that the unique combination of having a privileged racial-ethnic status and a disadvantaged sexual minority status creates significant differences in health effects for both men and women when holding union status constant. This finding highlights the specific way that the intersection of some disadvantaged statuses — alongside some advantaged statuses — matter for well-being across union status in somewhat surprising ways.

In contrast, some same-sex cohabiting men and women appear to be disadvantaged relative to their different-sex cohabiting counterparts on other dimensions — in line with the minority stress theory. For example, same-sex cohabiting white men (but not other racial-ethnic and gender groups) have higher levels of psychological distress than different-sex cohabiting white men. Minority stress processes may be felt most among a generally advantaged white male population (Meyer 2003), as white men have more room to decline in psychological distress because they begin with a greater advantage due to their gender and

racial privilege. Thus, this finding suggests that as same-sex cohabiting white men are advantaged on some physical health outcomes relative to their different-sex cohabiting counterparts, they still experience relatively higher amounts of psychological distress; this is likely due to their experiences of minority stress related to sexual minority discrimination and stigma (IOM 2011; Meyer 2003). Moreover, white and Hispanic same-sex cohabiting women have higher BMIs than their different-sex cohabiting counterparts, while same-sex cohabiting black women have similar BMIs (although poorer self-rated health) as different-sex cohabiting black women. These findings are in line with 1) an intersectional framework that suggests that multiple axes of difference will disadvantage racial-ethnic and gender minorities as well as 2) recent research showing that sexual minority women have higher BMIs and are less likely to exercise than their straight counterparts (Rothblum and Solovay 2009). Black women may not experience a BMI disadvantage relative to their different-sex counterparts because high BMI is more common in this group relative to whites and Hispanics (Flegal et al. 2010). The relatively lower BMIs of Hispanic and white women (in comparison to black women) suggest sexual minority status is a more salient contributor to BMI among these groups. Moreover, higher levels of stress faced by white and Hispanic sexual minority women in comparison to their different-sex counterparts are manifested in the eating of higher fat foods, increasing BMI. In turn, black women, regardless of their sexual minority status, may exhibit a similar behavioral response in regard to overall higher levels of stress (Laitinen, Ek, and Sovio 2002; Ng and Jeffery 2003). Thus, while same-sex cohabiting white women appear to be advantaged on substance use practices in comparison with their different-sex cohabiting counterparts, same-sex cohabiting white women's general disadvantage on BMI suggests that they may experience important well-being disadvantages.

Same-Sex Cohabitors versus Unpartnered Singles

When comparing same-sex cohabitators with the unpartnered single groups, we find that same-sex cohabiting men in all racial-ethnic groups have higher levels of psychological distress than do their single men counterparts — more in line with the minority stress theory than the intersectional theory. Moreover, in terms of other health outcomes, both black and white men (but not Hispanic men) experience differences between same-sex cohabitators and unpartnered singles: same-sex cohabiting white men are more likely to smoke and drink alcohol than unpartnered single white men, while cohabiting black men are also more likely to drink than are unpartnered single black men. It appears that being either a white or black cohabiting man in a same-sex union may be related to increased stress caused by homophobia and stigma relative to their single counterparts; men's propensity to engage in substance use as reaction to stress increases the likelihood of smoking and drinking (Meyer 2003). Hispanic same-sex cohabiting men may not experience this disadvantage relative to their single counterparts because their ethnic disadvantage may level substance use patterns across sexual minority union status.

Similarly, again more in line with the minority stress theory than the intersectional theory, sexual minority union status appears important for women of all racial-ethnic groups in comparison to being single. Same-sex cohabiting white, black, and Hispanic women are more likely to drink alcohol and smoke than single women of the same racial-ethnic group.

Both same-sex cohabiting white women and black women report poorer self-rated health than their unpartnered single women counterparts; white and Hispanic same-sex cohabiting women also have higher levels of BMI than their unpartnered single counterparts. There is a growing body of research that suggests that the single experience advantaged health compared with different-sex cohabitators; some studies even place single groups on par with different-sex married groups (Umberson, Williams, and Thomeer 2013), especially among women. These patterns appear to extend to same-sex cohabitators, wherein single groups have better health than same-sex cohabiting groups as a result of selection and resources. In addition, higher rates of substance use among same-sex cohabiting women across all racial-ethnic groups than their unpartnered single counterparts may reflect the overall higher rates of substance use among those in the lesbian community (Reczek et al. 2014; Rothblum and Solovay 2009); relative to single women, who appear healthier, all racial-ethnic same-sex cohabiting groups may experience a disadvantage. Same-sex cohabiting women's greater substance use may also be exacerbated by being in a same-sex cohabiting relationship as a result of convergence processes (Reczek et al. 2014), wherein partners of the same sex promote unhealthy behavior in one another.

LIMITATIONS AND CONCLUSION

Several study limitations should be considered. First, the NHIS is one of the best national population-based data sets to study sexual minority health disparities, yet data challenges exist. Our sample contains a relatively small number of black and Hispanic same-sex cohabiting/married men and women. This may result in low statistical power to detect population differences between groups, potentially explaining some of our insignificant findings across these groups. More data-collection projects that specifically target these understudied segments of the population with multiple disadvantaged minority statuses are needed. Second, given research suggesting that blacks and Hispanics express higher levels of disapproval toward homosexuality than their white counterparts (Bonillia and Porter 1990; Herek et al. 2010; Lewis 2003; Loftus 2001; Ramirez-Valles 2010), it is possible that our sample is more selective of black and Hispanic same-sex cohabitators from privileged social classes who are able or willing to cross social boundaries and publicly enter into same-sex cohabiting relationships. This suggests that our findings of the disadvantages of same-sex cohabitators from the racial-ethnic minority groups are indeed conservative. Third, because of the cross-sectional nature of our data, we are unable to determine causality; future longitudinal data collection efforts should be undertaken to fully examine both causality and selection processes in these associations for same-sex cohabitators. Fourth, we pooled the NHIS data from 1997 to 2014 to increase the sample size of same-sex cohabitators but may also introduce biases related to heterogeneity of the same-sex cohabitators. The NHIS did not collect data on sexual minority identity until 2013, thus, we are unable to identify gay and lesbian self-identified respondents who are not in cohabiting relationships in the majorities of our study years. Research suggests gay and lesbian identified people have worse health and higher rates of risky health behaviors than heterosexuals (Austin, et al. 2013; Burgard, Cochran and Mays 2005; IOM 2007; Meyer 2003), and future work should attempt to understand how these health outcomes of individuals in same-sex unions compare with that of the single sexual minority population (IOM 2011). It is also noteworthy that social norms

and attitudes on sexual orientation and especially same-sex marriage have changed remarkably during 1997–2014. Before 2004, no same-sex marriage was legally allowed in any state of the U.S. In 2014, our last survey year, 35 states legalized same-sex marriage. Our strategy of combining the same-sex married and same-sex cohabitants may further introduce biases related to heterogeneity of the same-sex groups given the documented differences between marriage and cohabitation in heterosexual population (Brines and Joyner 1999; Fields and Clark 1999). Finally, we only include whites, blacks, and Hispanics in our sample because of the small sample size for other racial-ethnic groups. However, we note the need for consideration of the health disparities of sexual minorities from other racial-ethnic groups as well as variation within these heterogeneous racial-ethnic groups.

Despite limitations, this study makes important policy and scholarly contributions on health disparities at the intersections of gender, race-ethnicity, sexual minority status, and union status. Our study is among the first to merge minority stress and intersectional theories with the aim to examine nationally representative health disparities across union status at the intersection of sexual minority status, race-ethnicity, and gender. Our use of multiple health outcomes and multiple dimensions of diversity demonstrates the complexity of disadvantage that sexual minorities face: some outcomes follow an intersectional approach in that they vary at the intersection of race-ethnicity, gender, sexual minority status and union status, while others show more robust sexual minority disadvantages regardless of gender or race-ethnicity. Our findings highlight the importance of public debates about the recent legalization of same-sex unions, wherein for some groups — but not all groups — the legalization of same-sex unions may enhance health for same-sex cohabiting couples (Buffie 2011; Cherlin 2013; Herek 2006). Findings from the present study highlight the complexity of improving the potential effectiveness of health policy among sexual minorities by demonstrating those segments of minority statuses that are associated with highest risk of health problems.

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Unweighted Sample Size by Union Status, Gender and Race-ethnicity, NHIS 1997–2014

Table 1

"Person files" for analysis of self-rated health									
	All	White		Hispanic		Black		Hispanic	
		Men	Women	Men	Women	Men	Women	Men	Women
Union status									
Same-sex cohabiting	5,570	2,049	236	414	2,140	359	372		
Different-sex married	609,113	217,720	28,972	59,006	216,559	26,875	59,981		
Different-sex cohabiting	66,725	19,764	5,787	8,047	20,468	4,772	7,887		
Unpartnered single	427,542	105,054	33,178	42,315	136,272	59,413	51,310		
"Sample adult files" for analysis of other health outcomes									
	All	White		Hispanic		Black		Hispanic	
		Men	Women	Men	Women	Men	Women	Men	Women
Union status									
Same-sex cohabiting	2,152	832	90	143	827	122	138		
Different-sex married	225,061	79,488	9,941	19,065	85,682	9,338	21,547		
Different-sex cohabiting	24,755	7,213	1,942	2,711	8,139	1,765	2,985		
Unpartnered single	253,148	65,238	17,826	16,981	91,962	36,068	25,073		

Table 2

Weighted Descriptive Statistics of Analytic Variables, NHIS 1997–2014 ^a

	All	White Men	Black Men	Hispanic Men	White Women	Black Women	Hispanic Women
Self-rated health (%)							
Excellent	29.85	32.30	28.14	30.45	29.51	22.72	26.26
Very good	31.87	32.87	27.73	29.13	33.31	27.66	28.13
Good	26.05	24.15	28.79	29.02	25.40	30.77	30.58
Fair	9.17	7.84	11.71	9.08	8.76	14.38	11.83
Poor	3.06	2.85	3.63	2.33	3.04	4.48	3.20
Psychological distress ^b							
Mean (standard deviation)	2.39 (3.79)	2.10 (3.50)	2.11 (3.70)	1.93 (3.57)	2.64 (3.89)	3.77 (4.17)	2.84 (4.36)
BMI (%)							
< 18.5 (Underweight)	1.06	0.32	0.36	0.15	1.99	1.10	1.17
18.5 – 24.9 (Normal weight)	33.88	28.80	28.03	23.34	42.72	25.73	33.41
25 – 29.9 (Overweight)	33.38	41.64	37.03	41.59	25.34	27.95	29.60
30 (Obese)	22.69	22.72	25.79	24.59	19.79	33.07	24.61
Missing	8.99	6.53	8.79	10.36	10.17	12.15	11.30
Drink (%)							
Yes	62.99	71.03	57.90	65.88	62.27	43.90	42.95
No	35.29	27.12	39.53	32.10	36.26	54.15	55.80
Missing	1.72	1.85	2.58	2.02	1.47	1.94	1.26
Smoke (%)							
Yes	20.99	23.70	25.36	19.61	20.43	17.81	10.10
No	78.44	75.68	73.69	79.84	79.08	81.50	89.52
Missing	0.57	0.62	0.95	0.55	0.49	0.69	0.38
Age							
Mean (standard deviation)	45.98 (17.71)	46.62 (17.41)	42.03 (16.38)	38.81 (15.10)	48.41 (18.25)	43.56 (17.15)	40.71 (16.16)
Nativity (%)							
Native-born	87.68	95.36	89.22	40.29	95.23	90.94	41.63
Foreign-born	12.25	4.58	10.68	59.48	4.73	8.97	58.23
Missing	0.07	0.05	0.10	0.23	0.04	0.09	0.15

	All	White Men	Black Men	Hispanic Men	White Women	Black Women	Hispanic Women
Region (%)							
Northeast	18.45	19.18	15.44	13.66	19.76	17.26	15.08
Midwest	24.83	28.72	18.29	9.43	28.48	18.63	8.29
South	37.01	33.90	57.61	36.00	33.99	56.82	35.84
West	19.70	18.21	8.67	40.90	17.76	7.29	40.78
Education (%)							
No diploma	15.81	11.50	19.98	38.77	11.05	20.04	37.87
High school	28.74	28.62	33.00	26.28	29.24	28.97	25.06
Some college	29.76	29.29	30.08	22.41	31.68	33.18	24.43
College graduate	25.02	30.08	15.98	11.14	27.49	16.90	11.50
Missing	0.67	0.52	0.96	1.40	0.54	0.90	1.14
Employment status (%)							
Employed	63.31	70.11	63.87	76.63	57.26	57.90	53.05
Unemployed	3.89	3.50	8.16	5.79	2.63	6.69	5.34
Not in labor force	32.67	26.30	27.70	17.48	40.00	35.20	41.49
Missing	0.12	0.09	0.27	0.10	0.11	0.22	0.12
Poverty (%)							
At or above poverty line	73.69	78.67	68.74	68.35	75.11	59.38	61.44
Below poverty line	10.13	6.34	14.99	16.62	7.91	22.35	21.59
Missing	16.18	15.00	16.27	15.03	16.98	18.28	16.97
Health insurance coverage (%)							
Not covered	83.95	86.92	76.50	60.02	89.56	81.22	66.48
Covered	12.76	22.64	39.56	10.15	18.08	33.11	15.67
Missing	0.37	0.32	0.86	0.42	0.29	0.70	0.41

^a Statistics are calculated based on 505,116 respondents in the "sample adult files" for psychological distress, smoking, and drinking, and on 1,108,950 respondents in the person files for all other variables.

^b Based on the raw (i.e. without log transformation) Kessler-6 scale.

Table 3

Estimated Effects of Same-sex Union Status on Health Outcomes by Gender and Race-ethnicity

	All	White Men	Black Men	Hispanic Men	White Women	Black Women	Hispanic Women
Self-Rated Health ^a	Different-sex married	1.26*** (1.18 – 1.35)	1.13* (1.01 – 1.27)	1.39* (1.07 – 1.81)	0.96 (0.76 – 1.21)	1.61*** (1.24 – 2.10)	1.44** (1.12 – 1.87)
	Different-sex cohabiting	0.96 (0.89 – 1.02)	0.87* (0.77 – 0.97)	1.24 (0.95 – 1.62)	0.85 (0.67 – 1.08)	1.45** (1.11 – 1.90)	1.17 (0.90 – 1.52)
	Unpartnered single	1.09* (1.01 – 1.16)	1.02 (0.91 – 1.14)	1.31 (1.00 – 1.70)	0.92 (0.72 – 1.17)	1.47** (1.13 – 1.91)	1.14 (0.88 – 1.48)
	N = 1,108,950	N = 344,587	N = 68,173	N = 109,782	N = 375,439	N = 91,419	N = 119,550
Psychological Distress ^b	Different-sex married	-0.88*** (-1.07 – -0.70)	-0.90*** (-1.21 – -0.58)	-1.47** (-2.51 – -0.43)	-1.52** (-2.50 – -0.54)	-0.62*** (-0.94 – -0.30)	-0.75 (-1.57 – 0.08)
	Different-sex cohabiting	-0.27** (-0.46 – -0.07)	-0.47** (-0.80 – -0.13)	-1.02 (-2.06 – 0.01)	-0.82 (-1.83 – 0.20)	0.02 (-0.29 – 0.34)	-0.05 (-0.91 – 0.81)
	Unpartnered single	-0.38*** (-0.56 – -0.19)	-0.51** (-0.83 – -0.20)	-1.14* (-2.18 – -0.11)	-1.14* (-2.13 – -0.16)	-0.05 (-0.37 – 0.26)	-0.42 (-1.24 – 0.41)
	N = 497,342	N = 150,204	N = 29,296	N = 38,353	N = 183,793	N = 46,569	N = 49,127
BMI ^a	Different-sex married	1.06 (0.95 – 1.17)	1.86*** (1.58 – 2.18)	1.29 (0.73 – 2.29)	1.99** (1.18 – 3.34)	0.62*** (0.52 – 0.73)	0.76 (0.48 – 1.20)
	Different-sex cohabiting	0.87** (0.78 – 0.97)	1.41*** (1.18 – 1.68)	1.08 (0.60 – 1.95)	1.65 (0.98 – 2.78)	0.50*** (0.42 – 0.59)	0.63 (0.40 – 1.01)
	Unpartnered single	0.80*** (0.72 – 0.89)	1.12 (0.95 – 1.31)	0.83 (0.47 – 1.47)	1.13 (0.67 – 1.91)	0.53*** (0.44 – 0.62)	0.63 (0.40 – 1.00)
	N = 458,301	N = 143,013	N = 27,264	N = 34,812	N = 167,523	N = 41,566	N = 44,123
Drink ^c	Different-sex married	0.70*** (0.62 – 0.79)	0.68*** (0.56 – 0.83)	0.45** (0.26 – 0.78)	0.79 (0.45 – 1.37)	0.81* (0.66 – 0.99)	0.44*** (0.29 – 0.67)
	Different-sex cohabiting	1.16* (1.02 – 1.32)	1.20 (0.97 – 1.47)	0.86 (0.48 – 1.52)	1.25 (0.71 – 2.21)	1.44*** (1.17 – 1.78)	0.95 (0.61 – 1.46)
							0.51** (0.33 – 0.79) 0.78 (0.50 – 1.22)

	All	White Men	Black Men	Hispanic Men	White Women	Black Women	Hispanic Women
Unpartnered single	0.59 *** (0.52 – 0.66) N = 496,378	0.64 *** (0.52 – 0.77) N = 149,931	0.49 * (0.28 – 0.84) N = 29,030	0.64 (0.37 – 1.11) N = 38,097	0.70 *** (0.58 – 0.86) N = 183,839	0.46 *** (0.30 – 0.70) N = 46,367	0.48 *** (0.31 – 0.74) N = 49,114
Different-sex married	0.50 *** (0.44 – 0.56)	0.47 *** (0.39 – 0.56)	0.50 * (0.27 – 0.92)	0.66 (0.42 – 1.04)	0.57 *** (0.47 – 0.68)	0.32 *** (0.20 – 0.52)	0.32 *** (0.17 – 0.58)
Different-sex cohabiting	1.08 (0.96 – 1.22)	1.06 (0.88 – 1.28)	1.13 (0.60 – 2.12)	1.23 (0.77 – 1.97)	1.30 ** (1.08 – 1.57)	0.70 (0.43 – 1.14)	0.64 (0.35 – 1.16)
Unpartnered single	0.62 *** (0.55 – 0.70) N = 502,194	0.63 *** (0.53 – 0.76) N = 151,820	0.66 (0.35 – 1.23) N = 29,524	0.92 (0.58 – 1.45) N = 38,670	0.71 *** (0.59 – 0.86) N = 185,683	0.40 *** (0.25 – 0.64) N = 46,953	0.48 * (0.26 – 0.86) N = 49,544

* p < 0.05,
 ** p < 0.01,
 *** p < 0.001.

The reference group is same-sex cohabitators. 95% confidence intervals in parentheses.

^a Ordered logistic regression; displaying odds ratios.

^b Ordinary least squares regression; displaying unstandardized coefficients.

^c Binary logistic regression; displaying odds ratios.

In all models, we control for age, education, nativity status, geographic region, employment status, health insurance coverage, poverty status and survey year.