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Differences in How Spouses Influence Each Other's Alcohol Use in Same- and Different-Sex Marriages: A Daily Diary Study

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Abstract

Rationale.—Different-sex spouses influence each other's alcohol consumption, with women having more influence on their spouses than men. Because women drink less than men, this long-term influence partly explains why married men and women consume less alcohol than their unmarried peers. However, much less is known about possible gender differences in the ways spouses influence each other's alcohol use on a day-to-day basis in same- compared to different-sex marriages. Because sexual minority people are at higher risk for alcohol use disorders compared to their heterosexual counterparts, such knowledge could shed light on ways to reduce this risk and alcohol use disparities between sexual minority and heterosexual people.

Method.—We use 10 days of diary data collected in 2014–2015 in the United States from 157 female same-sex, 106 male same-sex, and 115 different-sex married couples in midlife (ages 35–65) to examine how one spouse's drinking influences how much the other spouse drinks on the following day.

Results.—Men reported higher levels of daily drinking than women; after including covariates, men in different-sex marriages reported drinking at the highest levels. Results from actor-partner interdependence models show that men in same- and different-sex marriages drink more, and women in different-sex marriages drink less, when their spouse drinks more the previous day. Female same-sex spouses did not change their drinking behaviors in response to their spouse's drinking.

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Conclusions.—Overall higher rates of drinking among men in same-sex marriages suggest an accumulation effect of drinking that may contribute to sexual minority health disparities. Women and men in different-sex marriages may be engaging in social control or navigating masculinity norms. Women in same-sex marriages may not feel the need to adjust to low levels of drinking by their spouse. Findings suggest that spousal influence over alcohol consumption unfolds differently in same-sex compared to different-sex marriages.

Introduction

Married couples report lower alcohol consumption and fewer alcohol use disorders than their unmarried counterparts (Dinescu, Turkheimer, Beam, Horn, Duncan, & Emery, 2016; Duncan, Wilkerson, & England, 2006; Evans et al., 2020). One reason for this benefit is that healthier people with better resources (e.g., higher education and income) are more likely to select into marriage and stay married than those with fewer resources (Tumin & Zheng, 2018). A second reason is that spouses influence each other's health behaviors (Homish & Leonard, 2008; Jackson, Steptoe, & Wardle, 2015), such as alcohol consumption (Muyingo et al., 2020), throughout their marriage (Di Castelnuovo, Quacquarello, Donati, De Gaetano, & Iacoviello, 2009; Meyler, Stimpson, & Peek, 2007; Rosenquist, Murabito, Fowler, & Christakis, 2010; Wilson 2002) with the intention of improving their partner's health. This potentially long-term influence unfolds over day-to-day interactions between spouses; for example, one spouse might decrease their drinking to deter their spouse's drinking because they believe that their partner drank too heavily the night before. Over time, such daily monitoring, modeling, and management of health behaviors contributes to better health in marriages (Umberson, 1992). These daily interactions to manage health behaviors can help explain why marriage becomes even more important to health as couples age (Williams & Umberson, 2004). If marriage contributes to lower rates of alcohol use, then it becomes important to understand the unfolding of spouses' influences on each other to drink more or less from one day to the next.

In the general population, men drink more, are more likely to binge drink, and more likely to be diagnosed with alcohol use disorders than women (Muthen & Muthen, 2000; Wagner, Lloyd, & Gil, 2002; Wilsnack, Vogeltanz, Wilsnack, & Harris, 2000). The impact of marriage on alcohol use tends to be stronger for men than women, with greater decreases in heavy use for newly married men (Duncan, Wilkerson, & England, 2006). At the same time, women are more likely to divorce because of their spouse's problematic drinking than men (Rodriguez, Neighbors, & Knee, 2014). Further, although marriage has long been viewed as protective against heavy drinking for different-sex spouses (Dinescu et al., 2016; Duncan et al., 2006), we know very little about marital dynamics and alcohol use for same-sex spouses. Understanding these dynamics is important because sexual minorities (people who experience same- or multiple-sex sexual and romantic attraction, report past or current same- or multiple-sex sexual behavior, and/or identify as non-heterosexual) are at higher risk for alcohol use compared to heterosexual people (Burgard, Cochran, & Mays, 2005; Cochran, Ackerman, Mays, & Ross, 2004; Drabble, Midanik, & Trocki, 2005; Stall et al., 2001) and alcohol use may contribute to observed disparities in mental and physical health between sexual minority and heterosexual populations (Institute of Medicine [IOM], 2011). Because marriage provides a key context in which alcohol use is negotiated, examining how same-

sex and different-sex spouses influence each other from one day to the next to decrease alcohol use may point to new strategies for the prevention and intervention of alcohol-use-related health consequences for groups who are most at risk (i.e., men and sexual minorities).

Prior work based on different-sex spouses shows that there are gender differences in how spouses shape each other's alcohol use (Muyingo et al., 2020), and the direction of this influence changes over the life course. Among different-sex newlyweds, husbands' drinking before marriage predicts wives' drinking in the first year of marriage (Leonard & Mudar, 2003); after this first year, however, wives' alcohol use behaviors are more predictive of how much their husbands drink (Leonard & Das Eiden, 1999; Leonard & Homish, 2008). As couples enter midlife, the influence of wives on their husbands' drinking likely strengthens; research on different-sex couples finds that significant efforts by wives to regulate their husbands' drinking explain reduced alcohol use among married men compared to unmarried men in mid- to late-life (Reczek, Pudrovska, Carr, Thomeer, & Umberson, 2016). This pattern likely emerges because women in different-sex marriages tend to use a range of strategies to influence their spouse's health habits (including alcohol use)—efforts referred to as social control—whereas men tend to be the targets of these social control efforts (Rook, August, Stephens, & Franks, 2011; Umberson, 1992).

Both the marriage benefit in reducing alcohol use and the persistence of higher alcohol use among men compared to women reflect gendered interactions between spouses in different-sex marriages. Alcohol use is considered a masculine behavior, even for married men (Connell & Messerschmidt, 2005; Heise et al., 2019; Nolen-Hoeksema, 2004; Ragonese, Shand, & Barker, 2019). Men and women internalize expectations that men are supposed to drink more and enjoy drinking more than women (McDonald, 1994); at the same time, femininity norms result in expectations that women act as caretakers, nurturers, and health promoters in their relationships (Thomeer, Reczek, & Umberson, 2015). Lower levels of alcohol use among married men may be explained by women's greater social control efforts to decrease their husband's alcohol use, especially over time (Reczek et al., 2016). We might expect a man to increase his drinking when his wife drinks to conform to masculinity norms. Along the same lines, we might expect that women will decrease their drinking when their husbands drink more as an effort to indirectly control their drinking (Umberson, 1992).

Differences in the social and behavioral experiences of marriage for men and women result in different consequences for health because men and women tend to influence each other's health in different ways (Williams & Umberson, 2004). However, prior research based on different-sex spouses precludes a comparison of daily alcohol use across same-sex and different-sex married couples. Indeed, some research shows that spousal influences on marital processes may unfold in different ways for men and women in same-sex compared to different-sex marriages (Behler, Donnelly, & Umberson, 2019). For example, midlife women are more likely to attempt to influence their partner's drinking behaviors than midlife men, but this pattern is stronger in different-sex compared to same-sex marriages (Umberson, Donnelly, & Pollitt, 2018), suggesting that the extent to which spouses influence their partners' drinking may differ depending on gender as well as whether spouses are in a same- or different-sex marriage. To understand these dynamics and their implications for

alcohol use in marriages, we use a gender-as-relational perspective. This perspective goes beyond theories of gender socialization which argue that inequalities in different-sex relationships arise out of fundamental, socialized, and static aspects of femininity and masculinity (Ferree, 2010). A gender-as-relational perspective argues that there are few true differences between women and men; instead, people internalize broader cultural expectations about gender and play out these expectations within their relationships (Thebaud, 2010; Umberson, Thomeer, & Lodge, 2015). This is a “doing gender” perspective (West & Zimmerman, 1987) which holds that gender is constructed, negotiated, and performed within relationships and, most importantly, how men and women enact gender will depend on whether they are interacting with a man or a woman (i.e., a same-sex or different-sex spouses).

Same-sex relationships are an ideal context for applying the gender-as relational perspective because both partners are the same gender (Umberson & Kroeger, 2016). If gender is enacted differently depending on whether one is in a relationship with a man or a woman, then social interactions between spouses should unfold differently for men in relationships with men, men in relationships with women, women in relationships with men, and women in relationships with women. Overall, we might expect reports of greater alcohol use in same-sex couples as a reflection of sexual minority health disparities (IOM, 2011). However, the gender-as-relational perspective would suggest a more nuanced pattern of alcohol use in the context of a same-sex marriage. Research shows that there are fewer inequalities in same-sex marriages than different-sex marriages, including in alcohol use, because partners are more similar in their behaviors (Holway, Umberson, & Donnelly, 2018). For men married to men, this might result in higher alcohol use because men are more likely to drink (Muthen & Muthen, 2000; Wagner, Lloyd, & Gil, 2002; Wilsnack, Vogeltanz, Wilsnack, & Harris, 2000) and less likely to engage in social control efforts (Rook, August, Stephens, & Franks, 2011; Umberson, 1992); however, responses to a spouse’s drinking might not be as heightened for men married to men compared to men married to women because there is less need for the former to meet masculinity norms (Courtenay, 2000). Similarly, although women are expected to act as health promoters in relationships (Thomeer et al., 2015), research shows that midlife women in same-sex marriages are less likely to make attempts to change their spouse’s health behaviors than midlife women in different-sex marriages (Umberson et al., 2018). Thus, we might expect that women married to women would be less responsive to their wife’s drinking. Although a gender-as-relational perspective allows us to theorize differences in marital dynamics across same- and different-sex spouses, the present study empirically tests these differences and contributes to a paucity of research on daily interactions among same-sex spouses.

In the current study, we use multilevel actor-partner independence models with dyadic daily diary data from midlife married couples (ages 35–64) to test the following hypotheses about patterns of daily alcohol use among same-sex and different-sex spouses. Based on a gender-as-relational perspective and prior research showing that men drink more than women (Muthen & Muthen, 2000; Wagner et al., 2002), we expect men will report greater daily drinking than women (Hypothesis 1a). Men and women in same-sex marriages will report greater daily drinking than men and women in different-sex marriages (Hypothesis 1b) because of elevated rates of alcohol use among sexual minorities (Burgard et al., 2005;

Cochran et al., 2004; Drabble et al., 2005; Stall et al., 2001). Lower levels of previous day daily drinking by spouses will predict less daily drinking by respondents (Hypothesis 2). Given research showing that men are more likely to adjust their behaviors in response to their spouse's efforts to regulate (Umberson, 1992), we expect that, compared to women, men will report less alcohol use when their spouse drinks less the previous day (Hypothesis 3a). Men are less likely than women to regulate their spouse's drinking (Umberson et al., 2018) and same-sex couples are more concordant on health behaviors (Holway et al., 2018); thus, we expect the association between previous day spousal drinking and respondent daily drinking will be weaker for men and women in same-sex marriages than men and women in different-sex marriages (Hypothesis 3b). Specifically, we expect that men in different-sex marriages will report the lowest levels of daily drinking when their spouse drinks less the previous day compared to men in same-sex marriages. Following this logic, spouses' influences on alcohol use will be stronger for women in same-sex marriages than women in different-sex marriages.

Method

Data

Data come from a daily dyadic survey collected in 2015 in the United States from 157 female same-sex, 106 male same-sex, and 115 different-sex married couples in midlife. We focused on midlife married couples because the health consequences of marriage become more important with advancing age (Williams & Umberson, 2004), making midlife a key point in the life course for understanding how spouses influence each other's alcohol use on a daily basis. Study procedures were approved by the Institutional Review Board at the University of Texas at Austin. To participate in the study, spouses had to be between the ages of 35–65, legally married, and living together for at least three years. Average relationship duration (years cohabiting and married) of the sample was 15.14 years and average age was 47.86 years. Responses from spouses were collected separately. Spouses completed a baseline survey that took about 45 minutes to complete. Then, over 10 days spouses were asked to complete a short 5 to 10-minute survey at the end of each day with questions about their health that day as well as other daily measures. Participants were recruited in a systematic and purposeful way to create comparable groups of same-sex and different-sex couples on demographics such as relationship duration, age, and place of residence. Massachusetts was selected as the initial study site because it was the first state to legalize same-sex marriage in 2004; thus, a substantial number of same-sex couples were married in the state and their data were recorded at the Massachusetts Registry of Vital Records. We identified same-sex couples aged 35–65 years old who married between 2004 and 2012 through the Registry of Vital Records and mailed letters inviting spouses to participate in the study to the address on their marriage license. About 70% of same-sex spouses in the sample were recruited through vital records. Restrictions at the Registry of Vital Records prevented the identification of different-sex spouses this way. Instead, we used publicly available demographic data collected from Massachusetts residents to identify households with two different-sex adults between the ages of 35 and 65 and mailed participation letters to their address. About 40% of different-sex couples were recruited using these city lists. We then asked participating same-sex and different-sex spouses to refer other married couples

meeting the study criteria; the remaining couples (30% of same-sex couples and 60% of different-sex couples) were recruited through referrals.

Though many couples resided in Massachusetts ($n = 165$, 43.65%), the majority of couples lived in other states in the U.S. ($n = 213$, 56.35%). The majority of the sample identified as white ($n = 681$, 90.08%). Average household income was between \$75,000–99,999 and the majority of participants had at least a college education ($n = 608$, 80.42%). A majority of couples did not have children in their household ($n = 438$, 57.94%) though different-sex couples were more likely to have children in and out of the home. Respondents had to complete at least 6 days of surveys to be included in the study; we received 7,396 out of a possible 7,560 daily diary responses (756 respondents $\times$ 10 days) for a response rate of 97.8%.

Measures

Both spouses were asked to report their daily drinking by responding to the open-ended question, “Over the past 24 hours, how many alcoholic drinks did you consume (a glass of wine, a 12-ounce beer, or a shot of liquor each equal 1 drink)?” Responses ranged from 0 to 10 drinks. The dependent variable is respondent drinking (on day n) and the primary independent variable is spouse’s drinking on the previous day (day $n - 1$).

Time-varying controls included diary response day (range 1 to 10), whether or not participants were responding on a weekend day (0 = no, 1 = yes), and number of hours in the past 24 hours spent with spouse that did not include sleeping (range 0 to 24). We also controlled for a number of baseline time-invariant controls. Baseline number of drinks per week (range 0 to 42.25) was measured as the product of two items: the average number of days that participants drink per week and the average number of drinks consumed on days that they drink. Household income was included where no household income = 0, \$1–24,999 = 1, \$25,000–49,999 = 2, \$50,000–74,999 = 3, \$75,000–99,999 = 4, \$100,000–149,999 = 5, and \$150,000 or above = 6 (adults with higher incomes are more likely to drink; Hobfoll, [2001]). We controlled for physical health—which is strongly and positively correlated with alcohol use (Hingsom & Rehm, 2013)—with an item that asked, “Has a doctor ever diagnosed you with any of the following (please check all that apply)?” with response options that included high blood pressure, diabetes, cancer (or malignant tumor), lung disease, heart problems, stroke, arthritis, HIV, and an open-ended option to report other chronic illnesses (range 0–5). We also included relationship duration in years at the couple-level (range 3.5 to 45). These continuous baseline predictors were grand mean-centered. Dichotomous controls were effect coded and included variables shown to be related to alcohol use (Diala, Muntaner, & Walrath, 2004): race (−1 = White, 1 = non-White), education (−1 = no college education, 1 = college education or greater), whether there were children currently living in the household (at the couple-level; −1 = no, 1 = yes), and employment (−1 = not fulltime employed, 1 = fulltime employed). Thus, regression coefficients of baseline predictors, whether continuous or dichotomous, are interpreted as above or below the sample average. Daily predictors (i.e., previous day respondent drinking, previous day spouse drinking, and time spent with spouse) were centered on each person’s

average across the 10 days and these regression coefficients are interpreted as above or below each person's weekly average.

Analysis plan

In the current study, we use actor-partner interdependence models (APIM) with novel dyadic daily diary data—in which we analyze data on alcohol use from both spouses rather than from only one member of the dyad (Carr & Springer, 2010; Rodriguez et al., 2014)—to directly examine how one spouse's drinking influences the other's drinking on the following day. One of the strengths of dyadic data is that they allow for examination of how each spouse influences the other's outcomes. Further, by using daily diary data, we can examine both average between-couple effects (e.g., the effect of having a spouse that drinks more than other couples), as well as within-person/within-couple fluctuations in effects (e.g., the effect of a spouse's drinking above or below their average drinking level). Another strength of dyadic daily diary data is that we can include predictors that are time lagged to examine day-to-day changes in drinking. Examining previous day spouse drinking as a predictor of respondent daily drinking provides better evidence of day-to-day changes in drinking in response to a spouse's alcohol use than analyses of same-day associations (Totenhagen, Randall, Cooper, Tao, & Walsh, 2017). Finally, with dyadic diary data, we can examine how men and women in both same-sex and different-sex marriages shape each other's daily alcohol use. We are not aware of prior studies that have examined this association with married same-sex couples.

Data management and descriptive and statistical analyses were conducted in Stata 15. We conducted actor-partner interdependence models in a multilevel modeling framework with crossed random effects. We specified respondents and days as nested within couples and "crossed" with one another (Kenny, Kashy, & Cook, 2006). This approach allowed for the estimation of effects when dyadic samples include both distinguishable (i.e., different-sex) and indistinguishable (i.e., same-sex) dyads. We specified the covariance structure for spouses as exchangeable (i.e., we estimated covariability between spouses but constrained error variances to be equal for both spouses) to model non-independence in the dyad (Kenny et al., 2006; West, Popp, & Kenny, 2008). We included a lagged respondent drinking variable as an independent variable in the models rather than use an autoregressive error structure to model the interdependence of time within respondents; this method allows us to interpret the estimates as day-to-day changes in drinking. We conducted linear mixed models despite the non-normal distribution of daily alcohol use. Zero inflated negative binomial mixed models would not provide improvements over the linear model because of the complexity (and restrictions) of longitudinal dyadic models; specifically, the negative binomial overdispersion, the zero inflation overdispersion, and the within-dyad overdispersion are all highly correlated. We allowed the full information maximum likelihood (FIML) estimation procedures of the multilevel models to handle missing data. FIML uses all present data to estimate and correct both model parameters and standard errors during analysis and produces similar results as other modern techniques for handling missing data, such as multiple imputation (Collins, Schafer, & Kam, 2001; Enders, 2010).

We first examined differences in daily drinking by gender and couple type (Hypothesis 1a–b) by including main effects of respondent gender (0 = male, 1 = female) and spouse gender (0 = male, 1 = female), and the interaction between respondent gender and spouse gender (i.e., dyad gender). We then included spouse's previous day drinking as a predictor of respondent's daily drinking to test Hypothesis 2. Then, we examined heterogeneity in the association between spouse's previous day drinking and respondent's daily drinking by adding three interaction terms: previous day spouse drinking with respondent gender, previous day spouse drinking with spouse gender, and previous day spouse drinking with dyad gender (Hypothesis 3a–b). We used regression estimates from this model to calculate predicted scores of daily drinking and the association between previous day spouse drinking with respondent's daily drinking for four groups: men in same-sex marriages, men in different-sex marriages, women in different-sex marriages, and women in same-sex marriages. We tested for differences across these groups using post-estimation Wald tests of equality of the predicted simple slopes and at high and low values of previous day spouse drinking.

Results

Descriptive results

Descriptive statistics and differences by couple type are shown in Table 1. On average, same-sex couples were older, spent more time with their spouses, and reported higher household income than different-sex couples. Men in same-sex marriages reported higher baseline and daily drinking compared to all other couple types, followed by men in different-sex marriages, whereas women in same- and different-sex marriages did not differ from one another.

Hypothesis 1: gender and couple type differences in daily drinking

Contrary to Hypothesis 1a, respondent gender was not significant in the multilevel models (Table 2: Model 1) such that women and men did not differ in their levels of daily drinking. The interaction between respondent gender and spouse gender was significant; we decomposed this interaction by conducting Wald tests that tested differences in the predicted estimates of drinking by each respondent gender by spouse gender group (see Figure 1). Consistent with Hypothesis 1b, men in same-sex marriages had lower predicted estimates of daily drinking than men in different-sex marriages ($z = 6.31, p = .01$) and higher predicted estimates compared to women in same-sex marriages ($z = 5.73, p = .02$), but did not differ from women in different-sex marriages ($z = 1.29, p = .26$). Men in different-sex marriages had higher predicted estimates of daily drinking than women in different-sex marriages ($z = 16.54, p < .001$) and women in same-sex marriages ($z = 24.35, p < .001$). There were no differences in daily drinking between women in same- and different-sex marriages ($z = 0.05, p = 0.82$).

Hypothesis 2: the association between previous day spousal drinking and respondent daily drinking

We show the results for the association between previous day spouse drinking and respondent's daily drinking in Table 2: Model 1. Consistent with hypothesis 2, lower

previous day respondent and spouse drinking predicted decreases in daily drinking for all couple types. Weekend days, higher number of hours spent with spouse, greater baseline drinks per week, and higher household income were associated with increases in daily drinking above respondents' weekly averages.

Hypothesis 3: gender and couple type differences in the association between previous day spousal drinking and daily drinking

We next included interactions between respondent gender, spouse gender, and previous day spouse drinking (Table 2: Model 2). In support of Hypothesis 3a, we found that women, compared to men, reported decreases in daily drinking when their spouses reported more previous day drinking. We show the interaction between respondent gender, spouse gender, and previous day spouse drinking in Figure 2 (Hypothesis 3b). Men in same-sex marriages are the reference group for this interaction. Due to the zero-inflated distribution of daily drinking, we probed this interaction at low and high average previous day spouse drinking: values at the 10th percentile (-0.96) and 90th percentile (2.04), respectively. Simple slopes testing revealed significant slopes for men in same-sex marriages ($b = 0.04$, $SE = 0.02$, $p = 0.02$) as well as men ($b = 0.09$, $SE = 0.03$, $p < 0.001$) and women ($b = -0.06$, $SE = 0.02$, $p = 0.02$) in different-sex marriages. That is, for each additional alcohol drink above their 10-day average reported by spouses in the previous day, men in same-sex marriages reported 0.04 more alcohol drinks, men in different-sex marriages reported 0.09 more alcohol drinks, and women in different-sex marriages reported 0.06 fewer alcohol drinks the next day. Contrary to Hypothesis 3b, men in same-sex marriages did not differ from men in different-sex marriages (the interaction between spouse is a woman $\times$ previous day drinking; $b = 0.05$, $p = 0.09$) or women in same-sex marriages (the interaction between respondent is a woman $\times$ spouse is a woman $\times$ previous day spouse drinking; $b = 0.02$, $p = 0.61$); however, men in same-sex marriages had a significantly steeper slope compared to women in different-sex marriages (the interaction between respondent is woman $\times$ previous day spouse drinking; $b = -0.10$, $p < .001$). Further post-estimation Wald tests of the simple slopes revealed that slopes were significantly different for men in different-sex marriages compared to women in different- ($z = 19.29$, $p < .001$) and same-sex marriages ($z = 4.81$, $p = 0.03$), as well as women in different-compared to women in same-sex marriages ($z = 6.24$, $p = 0.01$).

At low levels of previous day spouse drinking, men in different-sex marriages had higher predicted estimates of daily drinking than women in same-sex marriages ($z = 15.05$, $p < .001$). There were no other significant comparisons between gendered couple types at low levels of previous day spouse drinking. At high levels of previous day spouse drinking, men in different-sex marriages had lower drinking compared to men in same-sex marriages ($z = 10.57$, $p < .001$) and higher drinking compared to women in different- ($z = 8.64$, $p = .003$) and same-sex marriages ($z = 4.91$, $p = 0.03$). Men in different-sex marriages had higher drinking compared to women in different- ($z = 35.85$, $p < .001$) and same-sex marriages ($z = 24.43$, $p < .001$) at high levels of previous day spouse drinking. Women in same- and different-sex marriages did not differ from one another ($z = 1.14$, $p = 0.29$).

Discussion

Previous research shows that spouses have considerable influence over each other's health behaviors, including alcohol use (Homish & Leonard, 2008; Jackson et al., 2015; Kehayes et al., 2019). Most of this research has focused on different-sex couples and indicates that wives typically have more influence on their husband's drinking, especially over time (Leonard & Eiden, 1999; Leonard & Homish, 2008; Reczek et al., 2016). The ways that men and women in different-sex relationships regulate and manage their spouse's health behaviors raise questions about how men and women in same-sex marriages influence their spouse's drinking behaviors—questions that have not been examined in prior research. For example, because men are less likely than women to influence their spouse's drinking behaviors in different-sex relationships (Rook et al., 2011; Umberson, 1992; Umberson et al., 2018), will men in same-sex relationships be less likely than women in same-sex relationships to influence their spouse's drinking? Because men drink more than women (Muthen & Muthen, 2000; Wagner et al., 2002; Wilsnack et al., 2000), will men in same-sex relationships facilitate higher levels of alcohol consumption in their partner from day today? Understanding whether there are differences in how spouses influence each other's drinking from one day to the next depending on gender as well as whether someone is in a same- or different-sex relationship is important in light of sexual minority disparities in alcohol use (IOM, 2011). To address these questions, we examined how spouses influence each other's day-to-day drinking with attention to differences for women and men in same- and different-sex marriages. This study is one of the first to show that the association between previous day spouse drinking and respondent drinking differs for men and women in same-sex and different-sex marriages.

Based on research on sexual minority health disparities (e.g., Burgard et al., 2005; Cochran et al., 2004; Drabble et al., 2005; Stall et al., 2001; Ward et al., 2014), we expected that women and men in same-sex marriages would report higher levels of alcohol use than other groups. Contrary to this hypothesis, the descriptive results showed that women in same-sex marriages had lower alcohol use than men in same- and different-sex marriages but did not differ from women in different-sex marriages (see Table 1). Moreover, we found that although men in same-sex marriages reported higher levels of drinks per week on average, after including demographic variables and other controls, men in different-sex marriages reported higher daily drinking (see Figure 1). Overall, the couples in our data were older, mostly white and highly educated, and, among same-sex couples, less than half had children in the household. Research shows that these characteristics predict greater alcohol use (Diala, Muntaner, & Walrath, 2004; Evans et al., 2020). Further, same-sex couples had higher incomes, spent more time with their spouses, and were less likely to have children in their households than different-sex couples, suggesting that the same-sex couples had higher financial capital and opportunities for drinking (Hobfoll, 2001). It is also important to highlight that differences in levels of drinking among men in same- and different-sex marriages depended on whether we examined average weekly levels of alcohol use or levels of alcohol use on a daily basis (see Table 1). We found evidence that although men in same-sex marriages consume higher levels of alcohol than men in different-sex marriages, men in different-sex marriages may be more likely to drink on a daily basis. This higher level of

drinking among men in same-sex marriages could reflect disparities in sexual minority men's alcohol use and could also be a significant contributing factor to alcohol-related disease disparities. Prior research shows that high volumes of drinking have stronger impacts on all alcohol-related diseases than do overall patterns of alcohol consumption, such as drinking every day (Shield, Parry, & Rehm, 2013).

A gender-as-relational perspective argues that women and men interact with their relationship partners in ways that meet expectations of femininity and masculinity. Consistent with this perspective, we found that men in different-sex marriages drink more when their wives consume more alcohol on the previous day (see Table 2; Figure 2). On the other hand, we found that wives drink *less* when their husbands consume high amounts of alcohol on the previous day. These findings align with prior research on different-sex couples that shows differences in health behaviors, including alcohol use, between women and men (Holway et al., 2018). Men are more likely than women to be influenced by their partner's alcohol use (Umberson, 1992); men whose wives are drinking at high levels may be increasing their drinking to match their spouse's levels in alignment with masculinity norms (Connell & Messerschmidt, 2005; Heise et al., 2019; Nolen-Hoeksema, 2004; Ragonese et al., 2019) or feel that they have "permission" to drink when their wives drink more. In comparison, women tend to monitor their own and their spouse's health (Reczek & Umberson, 2012) and they may be responding to their husband's high alcohol use by reducing their own alcohol use—a form of subtle social control that women often employ (Umberson et al., 2018).

We found that, similar to men in different-sex marriages, men in same-sex marriages drink more when their husbands drink more, although this association was weaker for these men (see Table 2; Figure 2). These findings could be because men in same-sex marriages are drinking together as a shared activity, reflecting past research showing that male partners in same-sex relationships are more concordant in drinking behaviors than are same-sex female couples and different-sex couples (Umberson et al., 2018). This explanation is also supported by our finding that the higher amount of daily drinking among men in same-sex marriages was attenuated after including control variables such as time spent together (see Table 1). However, because men drink more alcohol than women, regardless of their spouse's gender, the long-term consequences of spousal drinking may be more severe for men in same-sex marriages because male spouses are more likely to consume high levels of alcohol on a regular basis. Though the magnitudes of these effects are small, if both husbands in a same-sex marriage are drinking at high levels, small increases in drinking in response to a partner's drinking can accumulate over the course of marriage and potentially have large impacts on alcohol use over time. These patterns highlight a concerning trend for the health of married men, especially men in same-sex marriages, and may be a contributing factor to observed alcohol use disparities between sexual minority and heterosexual men (IOM, 2011).

We expected to find a negative association between previous day spouse drinking and daily drinking among women in same-sex marriages that was stronger than the association for women in different-sex marriages. Instead, we found that women in same-sex marriages did not report changes in their drinking depending on how much their wives were drinking the

previous day (see Table 2; Figure 2). Women drink less than men on average (Muthen & Muthen, 2000; Wagner et al., 2002), so these women may not feel that they need to adjust their drinking behaviors as a social control strategy to reduce their partner's alcohol use as much as women in different-sex marriages (Umberson et al., 2018). It is also interesting that women in same- and different-sex marriages do not differ from one another in their levels of drinking at either low or high levels of spouse drinking despite having significantly different slopes (i.e., women have similar rates of drinking even though they respond differently to their partners' alcohol use, depending on spouse gender). This finding likely reflects both sexual minority alcohol use disparities and a gender-as-relational perspective. Thus, our comparison of same- and different-sex married couples sheds light on the different ways in which gendered health behaviors unfold.

Limitations and future directions

This study is an important step in understanding differences in daily alcohol use for men and women in same-sex and different-sex marriages. Still, some limitations should be noted. First, the sampling design may limit the generalizability of the results, because this study relies on data from educated midlife adults in long-term marriages; these couples are likely more similar in their drinking behaviors than those in younger marriages (Evans et al., 2020; Reczek et al., 2016) or those who might be more likely to divorce because of their spouses' alcohol use (Rodriguez et al., 2014). However, the demographic characteristics of the sample are consistent with characteristics of midlife same-sex and different-sex spouses based on nationally representative data. For example, we compared our sample to the American Community Survey in 2015 and found that the sample was consistent on income, age, and the percent of couples with children under age 18. The study results must be carefully considered in light of these demographics and any generalization must be limited. Second, the daily processes observed in the current study were short-term. Observing these trends over a longer period of observation may indicate similar trends as those found in the existing study, but might also highlight different effects. Last, our sample included long-term married couples; couples in other types of relationships (e.g., dating or cohabitation) may show different results. Because dating and cohabiting relationships tend to be associated with worse health outcomes than marriage (e.g., Umberson, Thomeer, & Williams, 2013)—and research shows that both same- and different-sex cohabiters report higher alcohol use than married same- and different-sex couples (Reczek, Liu, & Spiker, 2014)—researchers might observe stronger negative effects of partner's alcohol use on people in dating and cohabiting relationships, regardless of partner gender. Thus, our focus on married couples might explain our finding of lower levels of alcohol use among women married to women, which is inconsistent with research on sexual minority health disparities (e.g., Burgard et al., 2005; Cochran et al., 2004; Drabble et al., 2005; Stall et al., 2001; Ward et al., 2014).

Conclusions

Findings from this study suggest that differences in the rates of alcohol use between women and men influence levels of alcohol use in marriages, and the gender of one's spouse plays an important role in this process. Women in same- and different-sex marriages have similar average levels of drinking, but changes in their day-to-day drinking behaviors depend on

whether they are married to a man or a woman. Men—whether married to a man or a woman—tend to increase their day-to-day drinking in response to greater drinking by their spouse, but high levels of drinking among men compared to women may put men in same-sex marriages at greater risk for alcohol-related disorders and diseases. Our findings suggest that although past research finds that marriage is protective in terms of reducing excessive alcohol use, and may be particularly beneficial for men in different-sex marriages (Duncan et al., 2006; Uecker, 2012), these patterns of spousal influence on alcohol use vary not only for men and women but also depend on whether they are in a same- or different-sex relationship.

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Highlights

- Women in same-sex marriages drink less than men in same- and different-sex marriages.
- Men in same- and different-sex marriages have different patterns of drinking.
- Husbands drink more and wives drink less when their different-sex spouses drink more.
- Weak positive association between spouses' drinking among men in same-sex marriages.
- No changes in women's drinking depending on how much their same-sex spouses drank.

Figure 1. Predicted Scores for Daily Respondent Drinking by Couple Type.

This figure shows the predicted scores for daily respondent drinking and p -values for statistically significant differences between men with men, men with women, women with men, and women with women.

Figure 2. Interaction between Previous Day Spouse Drinking, Respondent Gender, and Spouse Gender on Daily Respondent Drinking.

Visual representation of the effect of previous day spouse drinking on daily drinking for men with men, men with women, women with men, and women with women. “Low” and “high” refer to values at the 10th percentile (−0.96) and 90th percentile (2.04) of previous day spouse drinking, respectively

Table 1.

Descriptive Information of Demographic Characteristics and Study Variables and Differences by Respondent Gender and Gender of Spouse

	Men with Men (N = 212)	Men with Women (N = 115)	Women with Men (N = 115)	Women with Women (N = 313)
	M (SD) / n (%)	M (SD) / n (%)	M (SD) / n (%)	M (SD) / n (%)
Age	49.9 (8.3) ^{b,c}	46.9 (8.2) ^d	45.1 (7.7) ^{a,d}	49.4 (8.4) ^c
Hours spent with spouse	6.97 (4.51) ^b	6.53 (4.31) ^{a,d}	6.65 (4.41) ^d	7.12 (4.35) ^{c,d}
Baseline drinks per week	6.92 (8.41) ^{b,c,d}	3.57 (6.00) ^a	3.22 (5.79) ^a	3.40 (5.93) ^a
Household income	6.18 (1.15) ^{b,c,d}	4.98 (1.44) ^{a,d}	5.06 (1.38) ^{a,d}	5.66 (1.25) ^{a,b,c}
Relationship duration	16.23 (7.79) ^d	15.89 (8.18)	15.89 (8.18)	13.73 (7.69) ^a
Number of diagnosed chronic diseases	0.94 (0.99)	0.74 (0.77)	0.77 (0.94)	0.82 (0.95)
Non-white	27 (12.74%)	20 (17.39%)	22 (19.13%)	36 (11.46%)
College graduate or more	170 (80.19)	80 (69.57%)	87 (75.65%)	271 (86.31%)
Children live in household	27 (12.74%)	82 (71.30%)	82 (71.30%)	127 (40.45%)
Fulltime employed	162 (76.42%)	87 (75.65%)	65 (56.52%)	232 (73.89%)
Daily drinking	1.39 (1.77) ^{b,c,d}	1.02 (1.68) ^{a,c,d}	0.74 (1.34) ^{a,b}	0.74 (1.23) ^{a,b}

Note: SD = standardized deviation.

^a statistically different ($p < 0.05$) from men with men;^b statistically different ($p < 0.05$) from men with women;^c statistically different ($p < 0.05$) from women with men;^d statistically different ($p < 0.05$) from women with women.

Table 2.
Results of the Actor-Partner Interdependence Models Predicting Daily Respondent Drinking

	Model 1			Model 2		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
DV: Daily respondent drinking						
Intercept	0.80	0.06	<0.001	0.79	0.06	<0.001
Day	0.007	0.005	0.19	0.007	0.005	0.19
Weekend	0.37	0.03	<0.001	0.37	0.03	<0.001
Hours spent with spouse	0.03	0.004	<0.001	0.03	0.004	<0.001
Baseline drinks per week	0.12	0.004	<0.001	0.12	0.004	<0.001
Household income	0.07	0.02	<0.001	0.07	0.02	<0.001
Relationship duration	-0.0004	0.003	0.75	-0.0008	0.003	0.78
Number of diagnosed chronic diseases	0.007	0.02	0.89	0.006	0.02	0.79
Non-white	-0.009	0.03	0.76	-0.01	0.03	0.73
College graduate or more	0.003	0.03	0.90	0.005	0.03	0.86
Children live in household	0.02	0.03	0.51	0.02	0.03	0.57
Fulltime employed	-0.02	0.02	0.42	-0.02	0.02	0.50
Previous day respondent drinking	0.11	0.01	<0.001	0.10	0.01	<0.001
Previous day spouse drinking	0.02	0.01	0.03	0.04	0.02	0.03
Respondent is woman	-0.09	0.08	0.25	-0.07	0.08	0.32
Spouse is woman	0.19	0.08	0.01	0.21	0.08	0.005
Respondent is woman × spouse is woman	-0.23	0.11	0.04	-0.26	0.11	0.02
Respondent is woman × previous day spouse drinking	--	--	--	-0.09	0.03	0.001
Spouse is woman × previous day spouse drinking	--	--	--	0.05	0.03	0.09
Respondent is woman × spouse is woman × previous day spouse drinking	--	--	--	0.02	0.05	0.58

Note: Significant estimates ($p < 0.05$) are shown in bold.