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Marital Strain and Psychological Distress in Same-Sex and Different-Sex Couples

Objective: This study examines the association of marital strain—as reported by each spouse—with psychological distress and considers whether the associations vary for men and women in gay, lesbian, and heterosexual marriages.

Background: Prior studies show that marital strain is associated with psychological distress. However, most studies rely on only one spouse's perspective and do not consider how appraisals of strain from both spouses may contribute to distress. Moreover, possible gender differences in these associations have been considered only for heterosexual couples.

Method: The analyses are based on 10 days of dyadic diary data from 756 midlife U.S. men and women in 378 gay, lesbian, and heterosexual marriages. Multilevel modeling is used to examine the association of self- and spouse-reported marital strain with psychological distress; actor-partner interdependence models explore possible gender differences in these associations.

Results: Both self-reports and spousal reports of marital strain are associated with psychological distress, with notable gender differences. The associations of self- and spouse-reported marital strain with distress are stronger

for women in different-sex marriages when compared with men in same-sex and different-sex marriages. The association is also stronger for women in different-sex marriages when compared with women in same-sex marriages, but for self-reported strain only.

Conclusion: Marital appraisals by both spouses are important for psychological well-being and may be especially important for the well-being of women in different-sex marriages.

Marriage benefits physical and emotional well-being (Carr & Springer, 2010). However, it is not marital status alone that matters. Among the married, marital quality is also a key predictor of health and well-being, with substantial evidence showing that marital strain is strongly associated with psychological distress (Hawkins & Booth, 2005; Proulx, Helms, & Buehler, 2007). Although the association between marital strain and psychological distress is well-established, most studies have relied only on self-reports of marital strain in relation to distress and have not considered how a spouse's perception of marital strain might also contribute to distress (Cook & Kenny, 2005). For example, a spouse's dissatisfaction with the marriage could cause distress for an individual even if that individual is generally satisfied with the marriage. Dyadic data, with appraisals from both spouses, may provide unique insights into the association between marital strain and psychological distress. Prior research also suggests that the association between marital strain and distress may be stronger for women than for men (Proulx et al.,

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2007). Scholars have theorized about this gender difference, with some suggesting that women's greater interpersonal orientation may increase their awareness of and reactivity to relationship strain (Cross & Madson, 1997; Kiecolt-Glaser & Newton, 2001), whereas others emphasize gendered power dynamics as an explanation (Wanic & Kulik, 2011).

Although previous research suggests gender differences in the link between marital strain and distress, most studies include heterosexual couples only (Carr, Cornman, & Freedman, 2016; Proulx et al., 2007). Recent work has called for the inclusion of same-sex couples to explore whether the ways men and women interact with their spouse depend on whether they are in a same-sex or different-sex union (Umberson, Thomeer, Kroeger, Lodge, & Xu, 2015; West, Popp, & Kenny, 2008). Prior studies suggest that same-sex couples adhere less strongly to gendered cultural scripts and are more egalitarian than different-sex couples (Moore, 2008; Reczek & Umberson, 2016), which could have implications for marital processes related to both strain and psychological distress. Thus, we work from a gender-as-relational perspective to consider whether linkages of self- and spouse-reported marital strain with psychological distress operate differently for men and women in gay, lesbian, and heterosexual marriages. A gender-as-relational approach suggests that the ways men and women enact gender differ depending on whether they are interacting with a man or a woman (Connell, 2012; Springer, Hankivsky, & Bates, 2012). If women are more aware of interpersonal dynamics within marriage, they may be more susceptible than men to psychological distress resulting from self-reported and spouse-reported marital strain regardless of whether they are in a same-sex or different-sex union. Alternatively, if different-sex marriages are characterized by gendered power dynamics that place women in subordination to men whereas same-sex marriages are more egalitarian, women married to men may be especially vulnerable to distress from self-reported and spouse-reported marital strain.

The present study considers the perspective of both spouses within same- and different-sex marriages by analyzing 10 days of dyadic diary data from 756 midlife U.S. men and women. Specifically, we ask whether and how self-reported marital strain and spouse-reported

marital strain are associated with psychological distress, and whether these associations differ for men and women in gay, lesbian, and heterosexual marriages. Dyadic diary data are particularly useful for exploring the linkages between marital dynamics and well-being in everyday contexts (Bolger, Stadler, Paprocki, & DeLongis, 2009). Daily diaries allow the day-to-day experiences of marital strain and distress to be reported shortly following their occurrence, whereas the dyadic nature of the data allows us to explore how appraisals of marital strain, as independently reported by each spouse, are associated with psychological distress. A comparison of same- and different-sex couples can provide unique insights into gendered dynamics that influence psychological well-being within marital relationships and also builds on our relatively limited understanding of linkages between marital processes and well-being within same-sex couples. The inclusion of same-sex couples in studies of marriage and well-being is especially important in light of higher levels of minority stress and psychological distress among sexual minority populations (Meyer, 2013) and the potential of marital relationships to ameliorate distress.

BACKGROUND

Marital Strain and Psychological Distress

Marital quality—that is, levels of strain and support within marital unions—affects both physical and emotional health (Carr & Springer, 2010). Prior studies consistently show that higher marital quality enhances well-being (Carr, Freedman, Cornman, & Schwarz, 2014), whereas lower marital quality is associated with more psychological distress (Kiecolt-Glaser & Newton, 2001; Hawkins & Booth, 2005). Although both positive (e.g., social support) and negative (e.g., marital strain and conflict) dimensions of marital quality are associated with psychological well-being, marital strain seems to have stronger effects on well-being than does marital support (Carr et al., 2016; Proulx et al., 2007).

Dyadic Processes Within Marriage

Past research has also highlighted the importance of evaluating the perspectives of both partners when studying individuals in close relationships (Beach, Katz, Kim, & Brody,

2003; Carr & Springer, 2010). By using data collected from both partners (i.e., dyadic data), researchers are able to assess whether and how each partner's perceptions, behaviors, and reports may independently impact a given outcome for one or both spouses (Cook & Kenny, 2005). This has proven especially important when exploring marital processes, with prior studies finding that spousal characteristics significantly affect individual-level marital functioning (Iveniuk, Waite, McClintock, & Teidt, 2014; Wong & Hsieh, 2017). Dyadic approaches have highlighted how processes within and beyond couples can impact both spouses' individual functioning via spillover and crossover effects (Craig & Brown, 2017; Neff & Karney, 2007). Spillover is a process by which stress and conflict in one domain inhibit individual functioning in another domain whereas stress crossover refers to the transmission of stress from one individual to another (Neff & Karney, 2007). Thus, both spouses' appraisals of marital strain have potentially important implications for individual well-being such that an individual's self-reports of strain may spill over into psychological distress, whereas their spouse's reports may cross over to also influence distress.

Prior studies using dyadic data to explore the impact of spousal reports of marital strain on psychological well-being have produced mixed results. A study of heterosexual married couples found that an individual's report of marital strain independently impacted their spouse's depressive symptoms (Beach et al., 2003), whereas a recent study of older heterosexual couples found that husbands' appraisals of strain were associated with higher levels of frustration among their wives (Carr et al., 2016). Other studies have found no evidence for partner effects for newlyweds (Fincham, Beach, Harold, & Osborne, 1997) and older couples (Carr et al., 2014), however these studies used composite measures reflecting both positive and negative dimensions of marital quality. Because prior studies suggest that negative dimensions of marital quality are more salient for well-being, the association of spousal reports of marital strain with distress are more likely to be evident. Therefore, we test the following specific hypotheses:

Hypothesis 1a: Higher levels of self-reported marital strain will be associated with higher levels of psychological distress.

Hypothesis 1b: Higher levels of spouse-reported marital strain will be associated with higher levels of psychological distress.

Gender, Marital Strain, and Psychological Well-Being

Potential gender differences in the link between marriage and health have received substantial attention, with evidence based on different-sex couples suggesting that men benefit more from being married (i.e., their marital status) than do women (Rendall, Weden, Favreault, & Waldron, 2011). However, some studies suggest that marital quality may be more important to the well-being of women than men. In a meta-analysis of 93 studies, Proulx et al. (2007) found that gender was a significant moderator for the concurrent association between marital quality and well-being, whereas Whisman, Uebelacker, Tolejko, Chatav, and McKelvie (2006) found that the relationship between marital strain and life satisfaction was stronger for women than men. Other studies report marginal (Beach et al., 2003; Carr et al., 2016) or no gender differences (Carr et al., 2014; Williams, 2003) in the association between marital quality and psychological well-being. However, these studies generally rely on composite measures reflecting both positive and negative dimensions of marital quality.

We consider two possible explanations for potential gender differences in the association of marital strain with psychological distress. The relational-interdependence view (Cross & Madson, 1997; Kiecolt-Glaser & Newton, 2001) asserts that women are more affected by marital strain because of their more relationally interdependent self-representations. That is, in addition to their own behaviors and feelings, women are more likely than men to incorporate the behaviors and feelings of their spouses in their conception of self. This view is complemented by research showing that women carry the responsibility of emotion regulation within marriage (Bloch, Haase, & Levenson, 2014), are more aware of the emotional climate of the relationship (Croyle & Waltz, 2002), are more likely to monitor the relationship's emotional quality (Loscocco & Walzer, 2013), and are more cognitively and emotionally sensitive to marital distress (Kiecolt-Glaser & Newton, 2001). Taken together, prior studies point to women's greater relational-interdependence as

a reason why women may be more affected by marital strain than men. If women are more aware of interpersonal dynamics and more likely to incorporate them in their self-representations, we would expect the association of marital strain with psychological distress to be stronger for women than men regardless of whether women are in a same- or different-sex union.

A second perspective, the subordination-reactivity hypothesis (Wanic & Kulik, 2011), focuses on gendered power differentials within different-sex marriages to account for possible gender differences in the association of marital strain with psychological distress. According to this view, women may experience greater psychological reactivity to marital strain because of their subordinate societal position relative to men; differences in household responsibilities reinforce this inequality within different-sex marriages, with women shouldering more responsibility for household maintenance and child care, whereas men hold more power over finances, decision-making, and conflict-resolution strategies (Tichenor, 2005). This gendered power differential may cause women to experience more psychological distress from marital strain than men. This may occur because those with less power tend to be more sensitive and responsive to the feelings and needs of more powerful others within relationships (see Wanic & Kulik, 2011). Because women typically hold less power within marriage relative to men (Bulanda, 2011), they may be more attuned to and affected by marital strain. Moreover, threats to the relationship in the form of marital strain may be more distressing for those who lack status and resources. If gendered power dynamics increase women's vulnerability to psychological distress from marital strain, we would expect the association of marital strain with distress to be particularly salient for women in different-sex unions, as different-sex unions tend to be characterized by less equality between partners in comparison to same-sex couples (Moore, 2008; Reczek & Umberson, 2016). Notably, past research on the role of gendered power differentials within marriage are premised only on different-sex marriages.

Same-Sex Couples and a Gender-as-Relational Perspective

Recently, researchers have called for studies to include same-sex couples when exploring

gendered relationship dynamics and their consequences for well-being (Umberson et al., 2015; West et al., 2008). The inclusion of same-sex couples means that gendered relationship dynamics can be considered both within and across marriages. As such, the present study uses a gender-as-relational perspective to explore the associations between gender, marital strain, and psychological distress. A gender-as-relational perspective views gender as an ongoing and negotiated process that is institutionalized and stratified to signify power in ways that structure interactions between and among different genders (Connell, 2012; Springer et al., 2012). In turn, the enactment of gender will vary depending on the gender and sexuality of oneself in relation to one's spouse (Umberson et al., 2015).

The inclusion of same-sex couples builds on our understanding of marital dynamics and well-being beyond heterosexual couples while disentangling how gendered relational contexts shape such processes. When compared with different-sex couples, same-sex couples have been theorized as having more fluid gender dynamics and scripts, with less emphasis on power disparities between partners and greater egalitarianism (Moore, 2008; Reczek & Umberson, 2016). Prior studies show that same-sex couples share more equitable divisions of labor surrounding child care and housework (Goldberg, Smith, & Perry-Jenkins, 2012) as well as emotion work (Umberson, Thomeer, Kroeger, Reczek, & Donnelly, 2017). Thus, same-sex couples may differ from different-sex couples in terms of power dynamics and relational-interdependence, both of which have implications for the link between marital strain and psychological distress. If same-sex couples show greater egalitarianism, with less emphasis on power disparities, this may help buffer the impact of marital strain on psychological distress. Moreover, by having more fluid gender dynamics and scripts, women in same-sex marriages may be less likely to incorporate the behaviors and feelings of their spouse in their self-representations than is predicted by the relational-interdependence view, whereas men in same-sex marriages may be more likely to do so. Conversely, same-sex couples are subject to unique stressors related to their position within a stigmatized social category known as minority stress (Hatzenbuehler, 2009; Meyer, 2013). Although detrimental to health and well-being

at the individual level, minority stress may also proliferate between spouses, which may result in higher levels of both marital strain and psychological distress (LeBlanc, Frost, & Wight, 2015).

We expect the relationship between marital strain and psychological distress to vary across men and women in same-sex and different-sex couples. If women experience more psychological distress from marital strain than men due to their greater relational-interdependence, then the association of self- and spouse-reported marital strain with psychological distress will be stronger for women regardless of whether they are in a same-sex or different-sex marriage. Conversely, if gendered power dynamics shape vulnerability to psychological distress from marital strain as suggested by the subordination-reactivity hypothesis and same-sex couples adhere less to such dynamics, then the association of self- and spouse-reported strain with psychological distress will be stronger for women married to men. Therefore, we test the following competing hypotheses:

Hypothesis 2: Under the relational-interdependence view, the association of (a) self-reported and (b) spouse-reported marital strain with psychological distress will be stronger for women in same- and different-sex marriages when compared with men in same- and different-sex marriages.

Hypothesis 3: Under the subordination-reactivity hypothesis, the association of (a) self-reported and (b) spouse-reported marital strain with psychological distress will be stronger for women in different-sex marriages when compared with women in same-sex marriages and men in same- and different-sex marriages.

METHOD

Data and Sample

For the present study, we analyze dyadic data from both spouses in each marriage. The data are drawn from a baseline survey and from daily diary questionnaires completed for 10 days. All questionnaires were completed online, and spouses completed questionnaires separately. The baseline survey took about 45 minutes to complete, and the diary questionnaire took 5 to 10 minutes to complete at the

end of each day. For inclusion in the sample, both spouses had to complete at least 6 of the 10 diary questionnaires, with 90% of participants completing all 10 days. The analytic sample for this study includes both spouses in 378 couples ($N = 756$ individuals) and consists of 106 male same-sex couples, 157 female same-sex couples, and 115 different-sex couples. Participants ranged in age from 35 to 65 years, were legally married for at least 3 years at the time of survey administration (2014–2015), and have been living together (cohabitating and married) for an average of 15 years (ranging from 3.5–45 years).

Recruitment for the sample took place in several stages. First, Massachusetts vital records were used to identify gay and lesbian couples who met age requirements and had been married between 2004 and 2012. Couples were invited to participate via letters mailed to the address on record. As the first U.S. state to legalize same-sex marriage in 2004, Massachusetts was chosen as the original research site to allow for the recruitment of a significant number of legally married, midlife gay and lesbian couples. Participating couples were asked to refer both same- and different-sex married couples within their social networks. The recruitment of different-sex couples took place by mailing letters to heterosexual couples from zip codes corresponding to neighborhoods with significant numbers of gay and lesbian study participants; potential respondents were identified through publicly available Massachusetts city lists that provided addresses and demographic information on household members. Overall, about 70% of same-sex couples were recruited through vital statistic records, with the remaining 30% recruited through referrals. Approximately two thirds of different-sex couples were recruited through referrals from study participants, with the remaining one third recruited through city lists. A portion of referred couples lived outside of Massachusetts, with 55% of gay couples, 62% of lesbian couples, and 51% of heterosexual couples living in other states at the time of recruitment. Although not representative of the U.S. population, the sample was derived to analyze midlife same- and different-sex couples who were comparable on measures of relationship duration, age, and place of residence. Demographically, the sample is similar to nationally representative data from midlife same- and different-sex couples on age,

income, and percent of couples with children in the household (Gates, 2015).

Measures

Psychological Distress. Psychological distress is measured using a subset of seven items from the daily diary questionnaire adapted from the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) and Affects Balance Scale (Derogatis, 1975). The respondents were asked the following: “Over the past 24 hours, to what extent did you feel: 1) frustrated, 2) worried, 3) tired, 4) sad, 5) irritated, 6) upset, and 7) angry?” Each question had five response categories ranging from 1 (*not at all*) to 5 (*extremely*). The responses were summed such that higher values indicate higher psychological distress, with a theoretical range of 7 to 35 ($\alpha = .85$). Observations with missing data on any of the seven items were omitted from analyses.

Marital Strain. Marital strain is based on four questions from the daily diary questionnaire adapted from previous measures assessing strain in relationships (House, 2018; Walen & Lachman, 2000). The respondents were asked the following: “Over the past 24 hours, how much did your spouse 1) let you down, and 2) act inconsiderate towards you?” “Over the past 24 hours, how much did you 3) feel bothered or upset with your spouse, and 4) want your spouse to listen to you more than they did?” Each question had five response categories ranging from 1 (*not at all*) to 5 (*a great deal*). The responses were summed and grand-mean centered to create an overall marital strain scale, with higher values indicating higher strain ($\alpha = .78$). The dyadic nature of the data allows us to obtain measures of marital strain as reported independently by each spouse. Thus, each respondent has a measure of self- and spouse-reported marital strain, referred to in the results as respondent and spouse marital strain, respectively.

Covariates. We control for covariates that are likely associated with both psychological distress and marital strain including respondent age, education, and employment status (Mirowsky & Ross, 2003), spouse health status (Kiecolt-Glaser & Wilson, 2017), relationship duration (Proulx et al., 2007), and children in household (Mirowsky & Schieman, 2008).

Aside from the day of survey, covariates are drawn from the baseline portion of the study and are time-invariant. Both age and relationship duration are measured in years. Due to past legal restrictions on marriage for same-sex couples, relationship duration is based on the number of years cohabiting and married combined. *Employment status* refers to whether the respondent is working outside the home, with respondents who are unemployed, disabled, retired, or homemakers designated as not working. Due to the relatively high educational attainment of the sample, the measure for education refers to respondents as obtaining a postgraduate degree versus a college degree or less. *Spouse health status* refers to the self-assessed physical health status as reported by the spouse with categories ranging from “excellent” to “poor.” The responses were dichotomized such that 1 indicates fair or poor health, and 0 indicates good, very good, or excellent health. Children in household is measured using a binary variable where 1 = “yes.” Because repeated interactions with survey instruments may affect responses, we also include day of survey (day 1–day 10) to control for habituation to the daily diary survey while accounting more broadly for unmeasured variables linked to time. Controls for race/ethnicity, although important to consider, are not included due to the limited variation within our sample, with 90% of respondents identifying as white.

Analytic Strategy

To explore the associations of respondent- and spouse-reported marital strain with psychological distress, we employ multilevel modeling with crossed random effects using the mixed procedure in Stata 15 (StataCorp LLC, College Station, TX). This approach incorporates both fixed and random effects to assess between-subject differences in psychological distress while accounting for the complex structure of dyadic diary data. Although couple-level data can be used to assess individual outcomes through structural equation modeling as well, this approach is better suited when analyzing heterosexual couples only because partners within dyads can be distinguished by gender. Conversely, same-sex couples represent indistinguishable dyads such that partners cannot be meaningfully differentiated. As such, multilevel modeling “provides a more accessible

framework” for performing analyses comparing distinguishable (i.e., different-sex) and indistinguishable (i.e., same-sex) dyads (Kroeger & Powers, 2019, p. 159). The estimation of crossed random effects are necessary because although partners and days are nested within couples, they are “crossed” with one another such that both partners have observations at the same time point (Bolger & Laurenceau, 2013; Kenny & Kashy, 2010). Thus, our approach allows us to assess differences in the association of marital strain with psychological distress across individuals, conditional on random effects for dyad and day. To explore whether respondent and spouse marital strain are associated with respondent psychological distress, we estimate the following models:

Model 1

$$\begin{aligned} \text{Level 1: } y_{ij}(\text{respondent psychological distress}) \\ = \beta_0 + \beta_{ij}x_{ij1}(\text{respondent marital strain}) \\ + \beta_i x_{i2}(\text{respondent is woman}) + \beta_i x_{i3}(\text{spouse is woman}) \\ + \beta_j x_{j4}(\text{day}) + \beta_i x_{i5}(\text{age}) + \beta_i x_{i6}(\text{education}) \\ + \beta_i x_{i7}(\text{employment status}) + \beta_i x_{i8}(\text{spouse health status}) \\ + \beta_i x_{i9}(\text{relationship duration}) \\ + \beta_i x_{i10}(\text{children in household}) \\ + \epsilon_{ij} \end{aligned}$$

$$\text{Level 2: } \beta_0 = \gamma_0 + P_{0i} + D_{0j}$$

Model 2

$$\text{Level 1: Model 1} + \beta_i x_{i11}(\text{spouse marital strain})$$

$$\text{Level 2: } \beta_0 = \gamma_0 + P_{0i} + D_{0j}$$

where Model 1 estimates the associations between respondent psychological distress, respondent marital strain, and covariates, whereas Model 2 adds spouse marital strain. The Level 2 equation in each model illustrates how random effects are incorporated into the intercept at Level 1. The intercept (β_0) is calculated by including the fixed subject-specific intercept (γ_0) plus random effects for partner (P_{0i}) and day (D_{0j} ; see Kroeger & Powers, 2019). The covariance structure for P_{0i} is modeled as exchangeable and as autoregressive for D_{0j} . Due to the centering of the predictors of respondent and partner marital strain, the intercept represents the average psychological distress across all respondents at average levels of respondent strain (Model 1) and both respondent and spouse strain (Model 2) on Day 0.

Next, to explore how the association of respondent and spouse marital strain with

psychological distress may differ across individual gender (respondent and spouse) and dyad gender (i.e., same- or different-sex partner), we build on the multilevel models with crossed random effects with the factorial method (West et al., 2008), an extension of the actor-partner interdependence model (Cook & Kenny, 2005). The factorial method extends the analysis of gender effects beyond one measure to three, allowing for the examination of how both respondent gender and spouse gender may impact the linkages of respondent and spouse marital strain with psychological distress. Thus, we estimate a series of interaction models, each estimating a gender effect on the intercept, with the final model including a three-way interaction for respondent gender, spouse gender, and marital strain. We do this separately for respondent and spouse marital strain to explore how the gender of the respondent, the gender of their spouse, and the gendered relational context of the marriage may affect the association of respondent and spouse marital strain with psychological distress. For each table, the following Level 1 models are estimated with the Level 2 equation remaining the same as noted previously:

Panel A (respondent marital strain) and Panel B (spouse marital strain).

Model 3: Model 2

$$+ \beta_i x_{i12}(\text{respondent is woman} \times \text{spouse is woman})$$

Model 4: Model 2

$$+ \beta_i x_{i12}(\text{respondent is woman} \times \text{marital strain})$$

Model 5: Model 2

$$+ \beta_i x_{i12}(\text{spouse is woman} \times \text{marital strain})$$

Model 6: Model 2

$$\begin{aligned} + \beta_i x_{i12}(\text{respondent is woman} \times \text{spouse is woman}) \\ + \beta_i x_{i13}(\text{respondent is woman} \times \text{marital strain}) \\ + \beta_i x_{i14}(\text{spouse is woman} \times \text{marital strain}) \\ + \beta_i x_{i15}(\text{respondent is woman} \times \text{spouse is woman} \\ \times \text{marital strain}) \end{aligned}$$

Model 3 tests the main effect for respondent and spouse marital strain, respondent gender (“respondent is woman”), and spouse gender (“spouse is woman”) from Model 2 and adds the dyad gender interaction (“respondent is woman \times spouse is woman”). This interaction tests whether the associations of respondent and spouse gender with psychological distress differ if both spouses are women. Model 4 adds the

interaction of respondent gender and marital strain. Model 5 includes the interaction of spouse gender and marital strain, whereas Model 6 adds a three-way interaction of respondent gender, spouse gender, and marital strain. The interaction terms in Model 4 and Model 5 show whether the association of marital strain with psychological distress differs by respondent (Model 4) and spouse (Model 5) gender, whereas the three-way interaction in Model 6 tests the differences in the association of marital strain with distress by dyad gender (i.e., same-sex vs. different-sex partner). The series of interactions in Model 6 allows for the calculation of the predicted coefficient for the association of marital strain with psychological distress for the following four groups: men with women, women with men, women with women, and men with men. All models include previously noted controls for day of survey, age, education, employment status, spouse health status, relationship duration, and children in household.

RESULTS

Descriptive Analyses

Descriptive data are shown in Table 1. On average, the respondents were 48 years old and had been with their partners for approximately

15 years. The sample was highly educated, with 50% of respondents having a postgraduate degree. A majority of respondents were working outside the home, with only 17% not working. To explore the significant differences across the four groups, we performed post hoc pairwise comparisons following analysis of variance (ANOVA) with Bonferroni correction. The results show that the women in different-sex marriages reported more psychological distress than the men (in same- and different-sex marriages) and women in same-sex marriages. Men in the same-sex marriages reported less distress than the men in different-sex marriages and women in same-sex marriages. The men in different-sex marriages and women in same-sex marriages did not significantly differ on reported distress. For marital strain, different-sex couples reported more strain than same-sex couples. Within different-sex marriages, the women reported more strain than the men. Intraclass correlations between partners for marital strain were calculated by union type. Because couples are omitted from estimations of intraclass correlations if either or both spouse(s) are missing on one day or more, we calculated intraclass correlations for a single day in which all couples completed the survey (day 1). Correlations for marital strain were strongest within different-sex couples (0.33; $p < .001$),

Table 1. *Descriptive Data for Sample by Gender Composition of the Couple*

Variable	Total sample (<i>n</i> = 756)		Men with men (<i>n</i> = 212)		Men with women (<i>n</i> = 115)		Women with men (<i>n</i> = 115)		Women with women (<i>n</i> = 314)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Individual level										
Psychological distress	11.22	4.17	10.62 ^{h,c,d}	3.79	11.06 ^{a,c}	3.88	12.01 ^{a,h,d}	4.48	11.40 ^{a,c}	4.33
Marital strain	5.38	2.28	5.24 ^{h,c}	2.21	5.51 ^{a,c,d}	2.22	5.79 ^{a,h,d}	2.68	5.28 ^{h,c}	2.17
Age (years)	48.20	8.42	49.74 ^{h,c,d}	8.45	46.47 ^{a,c,d}	8.08	45.02 ^{a,h,d}	7.55	48.96 ^{a,h,c}	8.41
Education (% postgraduate degree)	50.80		48.99 ^{h,d}		37.60 ^{a,c,d}		49.16 ^{h,d}		57.47 ^{a,h,c}	
Employment status (% not working)	17.24		16.06 ^c		18.48 ^{c,d}		24.80 ^{a,h,d}		14.81 ^{h,c}	
Spouse health status (% fair/poor)	12.83		7.07 ^{h,c,d}		23.47 ^{a,c,d}		15.02 ^{a,b}		12.04 ^{a,b}	
Couple level										
Relationship duration (years)	15.08	7.95	16.26 ^g	7.78	15.87 ^g	8.19	15.87 ^g	8.19	13.70 ^{c,f}	7.67
Children in household (% yes)	41.83		12.21 ^{f,g}		71.11 ^{c,g}		71.11 ^{c,g}		40.44 ^{c,f}	

Note: Significant differences from post-hoc pairwise comparisons following analysis of variance (ANOVA) with Bonferroni correction are reported ($p < .05$).

^aSignificantly different from men with men.

^bSignificantly different from men with women.

^cSignificantly different from women with men.

^dSignificantly different from women with women.

^eSignificantly different from gay couples.

^fSignificantly different from heterosexual couples.

^gSignificantly different from lesbian couples.

Table 2. Estimates From Multilevel Regression Models Testing Respondent- and Spouse-Reported Marital Strain on Respondent Psychological Distress (n = 756 Individuals, 378 Couples)

Variable	Model 1		Model 2	
	B	SE	B	SE
Respondent marital strain	0.62***	0.02	0.59***	0.02
Spouse marital strain			0.16***	0.02
Covariates				
Respondent woman	0.70***	0.19	0.73***	0.19
Partner woman	-0.04	0.19	-0.05	0.19
Day	-0.15***	0.01	-0.14***	0.01
Age	-0.03 ⁺	0.01	-0.03 ⁺	0.01
Education (postgraduate degree)	-0.23	0.18	-0.25	0.18
Employment status (not working)	0.33	0.23	0.36	0.24
Spouse health status (fair/poor)	0.06	0.26	0.04	0.27
Relationship duration	-0.01	0.02	-0.00	0.02
Children in household	0.34	0.23	0.26	0.23
Constant	12.92***	0.69	13.01***	0.68
Random-effects parameters				
Partner variance	5.21		5.18	
Partner covariance	1.77		1.53	
Daily variance	1.65		1.69	
Residual variance	6.88		6.74	

⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

followed by men within same-sex couples (0.29; $p < .01$) and women within same-sex couples (0.22; $p < .05$). We then used Fisher's r to z transformation to explore whether the correlations varied across union types and found no significant differences.

Multivariate Analyses

Marital Strain and Psychological Distress: The Role of Self- and Spouse-Reported Strain. We first explored how respondent and spouse marital strain are associated with respondent psychological distress for the full sample (Table 2). Multilevel regression results from Model 1 showed a positive association between respondent marital strain and respondent psychological distress ($p < .001$), with each unit increase in respondent marital strain associated with a 0.62 unit increase in distress. The results from Model 2 indicated that spouse marital strain was also significantly associated with respondent psychological distress ($b = 0.16$; $p < .001$). The coefficient for respondent marital strain decreased slightly with the inclusion of spouse strain ($b = 0.59$; $p < .001$). The significant coefficient for respondent gender ("respondent

woman") in Model 2 indicated that women reported more psychological distress than men ($b = 0.73$; $p < .001$). We also found that day of survey ($b = -0.14$; $p < .001$) and respondent age ($b = -0.03$; $p < .10$) were negatively associated with respondent psychological distress. Overall, these results provide support for Hypothesis 1, with higher levels of both respondent-reported (H1a) and spouse-reported (H1b) marital strain associated with higher levels of respondent psychological distress.

Gender Differences in the Role of Self- and Spouse-Reported Marital Strain. We also considered whether the associations of respondent and spouse marital strain with psychological distress vary for men and women in same- and different-sex marriages (Table 3). The potential gender differences were considered separately for respondent (Panel A) and spouse marital strain (Panel B).

Respondent Marital Strain. Using the results from Model 2 as a baseline, Model 3 explored whether the significant association of respondent gender with respondent psychological distress differed if both partners were women, whereas

Table 3. Estimates From Multilevel Regression Models Testing Respondent and Spouse Marital Strain on Respondent Psychological Distress (n = 756 Individuals, 378 Couples)

Variable	Model 3		Model 4		Model 5		Model 6	
	B	SE	B	SE	B	SE	B	SE
Panel A: Respondent marital strain								
Respondent strain	0.59***	0.02	0.59***	0.03	0.65***	0.03	0.59***	0.04
Spouse strain	0.16***	0.02	0.16***	0.02	0.16***	0.02	0.16***	0.02
Respondent woman	0.67*	0.33	0.73***	0.19	0.71***	0.19	0.62+	0.33
Spouse woman	-0.12	0.33	-0.05	0.19	-0.04	0.19	-0.12	0.33
Respondent Woman × Spouse Woman	0.12	0.50					0.16	0.50
Respondent Woman × Respondent Strain			0.00	0.04			0.12*	0.05
Spouse Woman × Respondent Strain					-0.10**	0.04	-0.00	0.06
Respondent Woman × Spouse Woman × Respondent Strain							-0.18*	0.08
Constant	13.03***	0.69	13.01***	0.68	12.99***	0.69	13.00***	0.69
Panel B: Spouse marital strain								
Respondent strain	0.59***	0.02	0.59***	0.02	0.59***	0.02	0.59***	0.02
Spouse strain	0.16***	0.02	0.12***	0.03	0.16***	0.03	0.12**	0.04
Respondent woman	0.67*	0.33	0.72***	0.19	0.73***	0.19	0.66*	0.33
Spouse woman	-0.12	0.33	-0.03	0.19	-0.05	0.19	-0.09	0.33
Respondent Woman × Spouse Woman	0.12	0.50					0.10	0.50
Respondent Woman × Spouse Strain			0.08*	0.04			0.11+	0.06
Spouse Woman × Spouse Strain					-0.00	0.04	-0.00	0.05
Respondent Woman × Spouse Woman × Spouse Strain							-0.04	0.08
Constant	13.03***	0.69	13.03***	0.68	13.01***	0.68	13.05***	0.69

Note: Controls are day, age, education, employment status, spouse health status, relationship duration, and children in household (omitted from table).

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

Models 4 to 6 examined whether the association of respondent marital strain with respondent distress was moderated by respondent gender (Model 4), spouse gender (Model 5), and the interaction of respondent and spouse gender (Model 6). The significant interaction term in Model 5 indicated that the association of respondent strain with respondent distress was weaker for the respondents married to women when compared with the respondents married to men ($b = -0.10$; $p < .01$). With the series of interaction terms in Model 6, the reference group became men married to men and was represented by the main effect of respondent marital strain ($b = 0.59$; $p < .001$). The interaction between respondent gender and respondent strain represented the added effect for women married to men ($b = 0.59 + 0.12 = 0.71$), whereas the interaction between spouse gender and respondent marital strain represented the added effect for men married to women

($b = 0.59 - 0.00 = 0.59$). The effect for women married to women can be obtained by summing the main effect of respondent marital strain and each of the final three interaction terms ($b = 0.59 + 0.12 - 0.00 - 0.18 = 0.53$).

With regard to gender differences, the significant interaction between respondent gender and respondent strain in Model 6 indicated that the association of respondent marital strain with respondent distress was stronger for women married to men when compared with men married to men (difference = 0.12; $p < .05$). The nonsignificant interaction between spouse gender and respondent strain indicated that the association of respondent marital strain with distress was similar for men in same- and different-sex marriages. The significant three-way interaction between respondent gender, spouse gender, and respondent marital strain indicated a dyad gender effect, suggesting that the association of respondent strain with

distress differed by the gender composition of couples (i.e., same-sex vs. different-sex) rather than respondent or spouse gender alone.

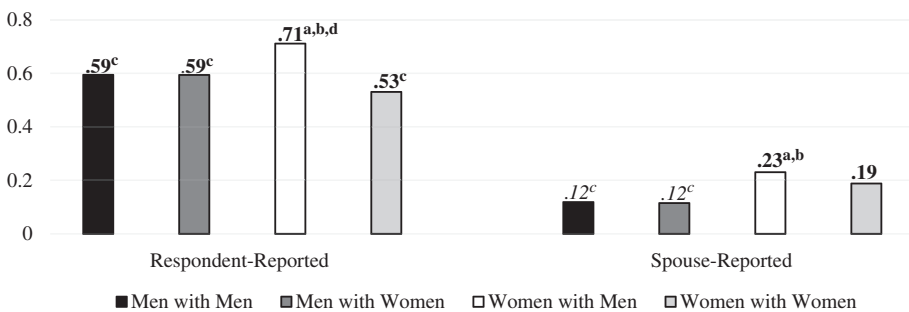
The results in Model 6 of Panel A can also be used to calculate the predicted coefficients of the association of marital strain with psychological distress for each of the four groups, which are presented in Figure 1. The results indicated that the association of respondent marital strain with respondent distress was significant for all four groups, providing further support for Hypothesis 1a. To test for gender differences beyond the comparison of men married to men, we performed additional postestimation pairwise comparisons of the respondent marital strain coefficients to explore how the association between respondent marital strain and respondent distress varied across the remaining groups. The results indicated that the association of respondent marital strain with respondent distress was also stronger for women married to men when compared with men married to women (difference = 0.12; $p < .05$) and women married to women (difference = 0.18; $p < .001$). Overall, the results provided support for Hypothesis 3a, with the association of respondent marital strain with psychological distress stronger for women in different-sex marriages when compared with women in same-sex marriages and men in same- and different-sex marriages.

Spouse Marital Strain. Turning to the association of spouse marital strain with respondent

psychological distress (Table 3, Panel B), the significant interaction between respondent gender and spouse strain in Model 4 indicated that the association was stronger for women when compared with men ($p < .05$). This interaction remained marginally significant in the final model. As noted previously, the series of interaction terms in Model 6 changes the reference group to men married to men. As such, the positive interaction term between respondent gender and spouse strain indicated that the association of spouse strain with respondent distress was stronger for women married to men when compared with men married to men (difference = 0.11; $p < .10$).

The results from Model 6 of Panel B were used to calculate the predicted coefficients for spouse marital strain for each group (Figure 1). The results showed that the association of spouse marital strain with respondent psychological distress was significant for all four groups, with the association strongest for women married to men ($b = 0.23$; $p < .001$), followed by women association strongest for women married to men ($b = 0.23$; $p < .001$), followed by women married to women ($b = 0.19$; $p < .001$), men married to men ($b = 0.12$; $p < .01$), and men married to women ($b = 0.12$; $p < .01$). These results provided further support for Hypothesis 1b, with the association of spouse marital strain with respondent distress significant across all union types. Additional postestimation pairwise comparisons indicated that the association was also

FIGURE 1. ADJUSTED PREDICTED COEFFICIENT FOR THE ASSOCIATION OF MARITAL STRAIN WITH RESPONDENT PSYCHOLOGICAL DISTRESS BY GROUP.



Note: Predicted coefficients are derived from Model 6 of Table 3 (Panel A for respondent strain; Panel B for spouse strain). Estimates are net of controls for day of survey, age, relationship duration, education, employment status, spouse health status, and children in household. Significant coefficients are italicized ($p < .01$) or in bold ($p < .001$). Significant differences across groups are marked with superscripts. ^aSignificantly different from men with men. ^bSignificantly different from men with women. ^cSignificantly different from women with men. ^dSignificantly different from women with women.

stronger for women married to men when compared with men married women (difference = 0.11; $p < .05$), but not women married to women (difference = 0.04; $p = .43$). These results provided partial support for Hypothesis 3b, with the association of spouse marital strain with respondent psychological distress stronger for women in different-sex marriages when compared with men in same- and different-sex marriages.

Sensitivity Analyses.

Previous-Day Self- and Spouse-Reported Marital Strain. We also considered whether the effects of previous-day respondent and spouse marital strain carried over to impact respondent psychological distress on the next day (results available upon request). Lagged models included all previously noted variables and added controls for same-day respondent and spouse marital strain as well as previous-day respondent psychological distress. The addition of these controls allowed us to explore whether previous-day marital strain predicted a change in psychological distress from one day to the next (Larson & Almeida, 1999) while accounting for the associations of same-day respondent and spouse strain with distress.

The results for the full sample indicated a significant association of both previous-day respondent and spouse marital strain with respondent psychological distress, but in the opposite direction than that for same-day strain and distress. Each unit increase in previous-day respondent strain was associated with a 0.11 decrease in distress on the next day ($p < .001$), whereas each unit increase in spouse marital strain was associated with a 0.06 unit decrease in respondent distress ($p < .01$). The associations of same-day respondent ($b = 0.61$; $p < .001$) and spouse marital strain ($b = 0.15$; $p < .001$) with psychological distress remained positive and significant. The predicted coefficients indicated that the effect of previous-day respondent marital strain on psychological distress was significant for all groups, with the effect largest for women married to men ($b = -0.16$; $p < .001$), followed by women married to women ($b = -0.11$; $p < .001$), men married to women ($b = -0.09$; $p < .10$), and men married to men ($b = -0.08$; $p < .05$). Postestimation pairwise comparisons indicated that these effects did not differ across groups. The predicted coefficients for previous-day spouse marital strain indicated

that the effect was only significant for men in same-sex marriages ($b = -0.10$; $p < .01$) and women in same-sex marriages ($b = -0.07$; $p < .05$) and that these effects did not significantly differ. Although unanticipated, these findings were consistent with prior diary studies on heterosexual married couples that suggested that recovery from daily strains and stressors can occur quickly, resulting in a "rebound effect" wherein the end of a stressful experience on one day resulted in a significantly better mood the following day (Bolger, DeLongis, Kessler, & Schilling, 1989; DeLongis, Folkman, & Lazarus, 1988).

DISCUSSION

Prior research clearly shows that marital strain contributes to psychological distress (Hawkins & Booth, 2005; Proulx et al., 2007), but this research is typically limited by reliance on reports from one spouse and focuses only on heterosexual couples. Much less is known about how marital strain as perceived by each spouse may be independently associated with an individual's psychological distress and how these linkages may differ for men and women in same-sex marriages when compared with different-sex marriages. The present study explores how both self- and spouse-reported marital strain are associated with psychological distress and is the first to consider how these relationships may differ for men and women in same- and different-sex marriages. We highlight two important findings to emerge from this study. First, both self- and spouse-reported marital strain were positively associated with psychological distress. Second, these relationships varied considerably for men and women in same-sex and different-sex marriages.

The first major finding highlights the importance of including both spouses' reports of marital quality when considering the link between marital strain and psychological distress. Our findings indicate that both self- and spouse-reported marital strain were positively associated with psychological distress on the same day for all union types. Regardless of whether the respondents were in a same-sex or different-sex marriage, higher levels of self- and spouse-reported marital strain were independently associated with higher levels of psychological distress. Overall, this finding highlights the importance of using dyadic data

to consider the perspective of both spouses when exploring linkages between marital processes and well-being.

Our findings also suggest that the association of self- and spouse-reported marital strain with psychological distress differs for men and women in same-sex and different-sex marriages. Although previous research suggests that women may be more reactive to marital strain than men (Kiecolt-Glaser & Newton, 2001; Proulx et al., 2007), we found that the association of self- and spouse-reported marital strain with psychological distress was stronger only for women in different-sex marriages when compared with men in same- and different-sex marriages. Because same-sex couples are more egalitarian, engage in more fluid gender dynamics and scripts, and emphasize power disparities less than different-sex couples (Moore, 2008; Reczek & Umberson, 2016), this may account for why women in same-sex marriages exhibited levels of reactivity more similar to men in same- and different-sex marriages. These findings also lend support to the subordination-reactivity hypothesis (Wanic & Kulik, 2011), which points to gendered power differentials as the source of women's greater reactivity to marital strain. Power differentials within different-sex marriages may explain why the association of marital strain with psychological distress was stronger for women married to men, but not for women married to women, when compared with men in same- and different-sex marriages. The differences in educational attainment may inform such power differentials, especially in light of the rise in different-sex unions in which wives report higher educational attainment than their husbands (Schwartz & Han, 2014). Although the limited variation in educational attainment in the present study precludes further exploration of the role of educational advantage, future research should incorporate this, along with other direct measures of relationship power, to further explore how power may impact the relationship between gender, marital strain, and psychological distress.

These findings also highlight the importance of a gender-as-relational approach (Connell, 2012; Springer et al., 2012), as the relationships of self- and spouse-reported marital strain with psychological distress seem to unfold differently depending on the gender composition of marital dyads. Rather than women being more affected by marital strain than men, it appears

that being a woman in combination with being married to a man may lead to increased vulnerability to psychological distress from self- and spouse-reports of marital strain. We also found that the association of self-reported strain with distress was stronger for women in different-sex marriages when compared with women in same-sex marriages. These results point to a significant marital disadvantage for women married to men, providing additional support for a gender-as-relational approach as it appears that the gender of a spouse, in addition to own gender, plays an important role in understanding linkages between marital dynamics and well-being. Interestingly, men in same-sex marriages do not appear to face similar consequences of being married to a man as do women in different-sex marriages, perhaps underscoring the importance of gendered power differentials for understanding the link between marital strain and psychological distress.

We note several limitations of the present study. First, the analyses concerning the concurrent association of marital strain with psychological distress are cross-sectional in nature and thus preclude determination of causal ordering. It may be that higher levels of psychological distress lead to more strain within marriage. Indeed, previous research has emphasized the bidirectional association between marital strain and psychological distress (Davila, Karney, Hall, & Bradbury, 2003), although this association seems to be strongest when distress is treated as the dependent variable (Proulx et al., 2007). Selectivity concerning marital dissolution is also important to consider, with research noting that same-sex partnerships, and especially lesbian partnerships, are more likely to dissolve than different-sex partnerships (Balsam, Beauchaine, Rothblum, & Solomon, 2008; Kurdek, 2004). This may account for the relatively lower levels of psychological distress associated with self-reported marital strain for women in same-sex marriages. However, recent research points to differential rates of marriage as the source of same-sex couples' greater likelihood of dissolution while providing evidence that the association between marriage and couple longevity is similar across both same-sex and different-sex couples (Rosenfeld, 2014). Finally, purposive sampling was used to recruit a portion of the participating couples, which could lead to nonindependent measures. Because a portion of our sample of different-sex couples

were recruited by identifying neighborhoods with significant numbers of same-sex couples, they may be more progressive and thus more gender egalitarian than the average different-sex couple. As such, the differences in the association between marital strain and psychological distress found in the present study may in fact be a conservative estimate of differences between same-sex and different-sex couples. Despite these limitations, the data in this study represent an important first step in understanding marital dynamics, the perspectives of both spouses, and well-being within same-sex couples in addition to different-sex couples. Future research should insist on including same-sex couples when exploring mechanisms surrounding marriage, especially when considering how gender impacts these processes.

Overall, the present study illustrates the importance of including both spouses when examining the relationship between marital strain and psychological distress and highlights the need to consider same- and different-sex couples when exploring how gender shapes marital dynamics and well-being. Our findings suggest that both self- and spouse-reported marital strain are independently associated with psychological distress and that these associations are especially detrimental for the well-being of women married to men. These findings reinforce evidence that negative behaviors and emotions from both spouses within marriage play an integral role in shaping personal well-being and that these relationships unfold differently for men and women in same- and different-sex marriages.

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