

Copyright
by
Rachel Erin Donnelly
2015

**The Thesis Committee for Rachel Erin Donnelly
Certifies that this is the approved version of the following thesis:**

**Childhood Adversity, Daily Stress, and Marital Strain in Same-Sex and
Different-Sex Marriages**

**APPROVED BY
SUPERVISING COMMITTEE:**

Debra Umberson, Supervisor

Tetyana Pudrovska

**Childhood Adversity, Daily Stress, and Marital Strain in Same-Sex and
Different-Sex Marriages**

by

Rachel Erin Donnelly, B.A.

Thesis

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Arts

The University of Texas at Austin

December 2015

Acknowledgements

I would like to thank Dr. Debra Umberson and Dr. Tetyana Pudrovska for their input on this research and for reading over earlier drafts of this thesis. I would also like to extend a special thanks to Dr. Rhiannon Kroeger for her guidance and feedback on the statistical analyses for this project.

Abstract

Childhood Adversity, Daily Stress, and Marital Strain in Same-Sex and Different-Sex Marriages

Rachel Erin Donnelly, M.A.

The University of Texas at Austin, 2015

Supervisor: Debra Umberson

Childhood adversity has enduring consequences for individuals throughout life, including heightened vigilance and increased reactivity to stress that adversely affects marital quality in adulthood. Past research on childhood adversity and adulthood marital dynamics has focused only on heterosexual married couples, raising questions about how these effects may differ for men and women in same-sex marriages. In this study, we analyze dyadic diary data from 756 men and women in 378 gay, lesbian, and heterosexual marriages to consider how childhood adversity negatively influences daily marital strain in potentially different ways across gender and union types. We consider same-day as well as lagged effects of daily stress on daily marital strain depending on level of exposure to childhood adversity. We further consider how spouses' histories of childhood adversity may work in tandem to shape reactions to stress and the consequences of stress for marital strain. Results indicate that higher levels of childhood adversity are associated with more daily marital strain for all respondents. Childhood adversity magnifies the impact of daily stress on marital strain, and more so for different-sex than same-sex couples. We extend the literature on childhood adversity, daily stress, and marital strain by using dyadic daily diary data and including same-sex as well as different-sex married couples.

Table of Contents

List of Tables	vii
List of Figures	viii
Introduction.....	1
Background.....	4
Childhood Adversity.....	4
Childhood Adversity and Marital Strain.....	5
Childhood Adversity and the Daily Stress-Marital Strain Association	6
Dyadic Histories of Childhood Adversity and Marital Dynamics.....	9
Methods.....	11
Data and Sample	11
Measures	12
Analytical Strategy.....	16
Results.....	17
Discussion.....	29
References.....	35

List of Tables

Table 1:	Descriptive Data for Sample, by Marital Context	15
Table 2:	Estimates from Multi-level Regression Models Testing Respondent Childhood Adversity on Daily Marital Strain.....	18
Table 3:	Estimates from Multi-level Regression Models Testing Daily Nonmarital Stress on Daily Marital Strain by Levels of Childhood Adversity.....	20
Table 4:	Estimates from Multi-level Regression Models Testing Previous-Day Nonmarital Stress on Daily Marital Strain by Levels of Childhood Adversity.....	25
Table 5:	Estimates from Multi-level Regression Models Testing Daily Nonmarital Stress on Daily Marital Strain by Dyadic Childhood Adversity Histories	28

List of Figures

Figure 1:	Predicted Scores of Daily Stress on Daily Marital Strain for Moderate Childhood Adversity	22
Figure 2:	Predicted Scores of Daily Stress on Daily Marital Strain for High Childhood Adversity	22
Figure 3:	Predicted Scores of Daily Stress on Daily Marital Strain for Dissimilar Childhood Adversity	28

INTRODUCTION

A growing body of evidence shows that stress experienced in childhood makes it more difficult to form and sustain close ties in adulthood (Miller, Chen, and Parker 2011). The enduring consequences of childhood adversity may be especially salient in the context of marital relationships. Indeed, childhood adversity has emerged as a significant predictor of marital dissatisfaction in adulthood for both husbands and wives (Bradbury, Fincham, and Beach 2000; Sabatelli and Bartle-Haring 2003). Moreover, childhood adversity makes individuals more sensitive or reactive to stress throughout the life course; thus, childhood adversity might magnify the negative effect of stress on marital quality in adulthood (Umberson et al. 2005). Each spouse brings their own childhood history to the relationship, and taken together, spouses' histories of childhood adversity may further influence how they interact in relation to stress and the consequences of stress for marital strain. Past research on childhood adversity and marital quality has focused on heterosexual married couples, yet childhood adversity may operate differently for gay, lesbian, and heterosexual married couples. This may occur, in part, because gays and lesbians experience higher levels of childhood adversity compared to heterosexuals (Anderson and Blosnich 2013), and this could potentially contribute to greater marital strain for same-sex couples. Alternatively, having a spouse may protect gay and lesbian couples against the adverse effects of childhood adversity. Understanding how childhood adversity modifies the impact of stress on marital dynamics in same-sex and different-sex marriages can provide important insights into the lasting influence of childhood

adversity, as well as shed light on possible sources of vulnerability or protection for sexual minority populations.

This study relies on ten days of diary data from both spouses in same-sex and different-sex marriages to explore how childhood adversity shapes daily marital strain across gender and union type. The goals of this study are to: 1) examine how childhood adversity is associated with daily marital strain and whether/how this association differs for men and women in same-sex and different-sex marriages; 2) examine how the impact of same-day as well as lagged effects of daily nonmarital stress on daily marital strain depends on levels of childhood adversity and how these effects vary for men and women in same-sex and different-sex marriages; and 3) explore whether both spouse's childhood adversity histories work in tandem to shape marital strain and how this process varies for men and women in same-sex and different-sex marriages. We use multilevel regression modeling to examine the consequences of childhood adversity on daily marital strain for gay, lesbian, and heterosexual married couples.

We extend the existing literature on childhood adversity and marital strain by using dyadic daily diary data and including same-sex as well as different-sex married couples. A daily diary approach moves beyond a static model of family and models real-life marital processes (Repetti, Reynolds, and Sears 2015), allowing us to look at daily fluctuation in stress and marital dynamics. Moreover, dyadic data take into account the many different ways that two partners can experience a relationship (Carr and Springer 2010). Understanding how these stress processes work for same-sex marriages is

especially important in light of health disparities experienced by sexual minority populations (Institute of Medicine 2011) and in light of previous work showing that sexual minority populations report higher levels of childhood adversity than do heterosexual populations (Anderson and Blosnich 2013). Including same-sex as well as different-sex married couples also provides an opportunity for a more nuanced understanding of how gender shapes marital experiences in relation to stress.

BACKGROUND

CHILDHOOD ADVERSITY

Early life course experiences reverberate into adulthood, shaping numerous outcomes (Pearlin et al. 2005; Sobolewski and Amato 2005). Childhood adversity gets under the skin, in part, because high levels of childhood adversity lead to greater emotional, physical, and psychological vigilance and greater reactivity to stress (Miller et al. 2011; Repetti, Taylor, and Seeman 2002). In turn, vigilance and reactivity interfere with the ability to form and sustain close social relationships (Miller et al. 2011). Indeed, research shows that various adversities experienced in childhood are strongly related to insecure attachments in adulthood (Michelson et al. 1997) as well as lower levels of perceived social support from family, friends, and partners (Brown et al. 2008; Turner and Butler 2003). The consequences of childhood adversity are especially salient in the context of marital relationships. Individuals who experience higher levels of adversity in childhood are less likely to marry and more likely to divorce, raising questions about the quality of marriage for those who are married.

Past research has focused on gender differences within heterosexual married couples, yet childhood adversity may not affect marital quality similarly across gender and union type. Gays and lesbians experience higher levels of adversity in childhood compared to heterosexuals (Anderson and Blosnich 2013), which could contribute, in part, to marital strain adulthood. For example, same-sex couples may experience greater marital strain, or, alternatively, the known benefits of marriage for gay and lesbian

spouses (Wight, LeBlanc, and Lee Badgett 2013) may offer protection against the adverse effects of childhood adversity. Including same-sex married couples allows scholars to identify important gender dynamics within marriage and also sheds light on potential mechanisms contributing to the health disparities faced by sexual minority populations (Institute of Medicine 2011). In this study, therefore, we aim to understand how childhood adversity contributes to marital strain for men and women in same-sex and different-sex marriages.

CHILDHOOD ADVERSITY AND MARITAL STRAIN

Childhood adversity may affect marital quality by altering psychological and physiological processes that contribute to vigilance and mistrust of others (Miller et al. 2011). For example, Sabatelli and Bartle-Haring (2003) found that, in heterosexual marriages, both husbands' and wives' childhood experiences adversely influenced marital adjustment. Moreover, a study of heterosexual cohabitating partners found parental maltreatment during childhood to be associated with poor quality partnerships in adulthood (Brown et al. 2008). Clearly, experiences in childhood influence the sense of connectedness and relationship dynamics in adult partnerships. However, existing evidence suggests that childhood adversity influences marital dynamics in different ways for men and women. Indeed, one study found that wives' childhood experiences influenced husbands' reports of marital adjustment, yet husbands' childhood experiences did not cross over to affect wives' reports of marital adjustments (Sabatelli and Bartle-

Haring 2003). In part due to previous legal restrictions on same-sex marriage in the United States, scholars have failed to consider how the association between childhood adversity and marital functioning might vary for men and women in same-sex and different-sex marriages, yet the inclusion of same-sex couples is necessary to more fully understand the role of gender in this association. The first aim of this study, therefore, is to examine the association between childhood adversity and daily marital strain and whether/how this association differs for men and women in same-sex and different-sex marriages.

CHILDHOOD ADVERSITY AND THE DAILY STRESS-MARITAL STRAIN ASSOCIATION

Although marriage is often perceived as a stable nucleus for individuals, external stressors impose strain on marital relationships (Bradbury et al. 2000; Story and Bradbury 2004). Stress in adulthood can take various forms, such as major life events (e.g., death of a loved one), chronic stress (e.g., financial stress) and daily hassles (e.g., arranging childcare), and each form can contribute to strain in a marriage and undermine marital quality (Randall and Bodenmann 2009). All individuals experience varying levels of stress on a daily basis, and stress may affect both spouses in a marriage. Researchers have long documented the negative impact that various sources of stress have on marital quality, a process referred to as stress spillover (for a review, see Randall and Bodenmann 2009). Longitudinal studies show that marital quality declines more rapidly over time for couples who report more stressful life events and higher levels of chronic

stress (Karney, Story, and Bradbury 2005). The research linking stress and marital quality also suggests that stress impacts marital quality in different ways for men and women in heterosexual marriage (Schulz et al. 2004). For example, Neff and Karney (2004) examine the effects of stress spillover on marital quality and find that wives, but not husbands, report lower levels of marital satisfaction when they experience higher than average levels of stress. Similarly wives, but not husbands, report more anger and are more likely to express anger toward their husbands after heavy workload days (Story and Repetti 2006). In fact, gender difference in the experience of stress within marriage is a major theme in the literature on marital dynamics (Schulz et al. 2004). However, previous research focuses almost entirely on heterosexual couples and these gendered dynamics in heterosexual couples raise questions about how stress and marital experiences might differ for men and women in same-sex unions. For example, if two women tend to be highly responsive to each other in similar ways, the effect of stress on marital quality may differ for lesbian couples compared to heterosexual couples.

Prior research suggests that people who were exposed to high levels of childhood adversity are more reactive to stress throughout life. For example, higher levels of childhood adversity are associated with more impaired immune response and greater inflammatory reactivity when exposed to stress (Miller et al. 2011, Repetti et al. 2002). If those who grew up with more childhood adversity tend to be more reactive to stress in their daily lives, this may influence the ways that they interact with their spouse on days that they perceive more stress. In this way, those with more childhood adversity may

report more marital strain in response to daily stress. Because childhood adversity influences reactivity to stress, the effect of daily nonmarital stress on marital strain may depend on levels of childhood adversity. Childhood adversity, therefore, could affect marital quality by magnifying the impact of stress in adulthood on marital quality. Indeed, the negative effect of stress in adulthood on marital quality is intensified by experiences of childhood adversity (Umberson et al. 2005). Although previous studies often examine the role of childhood adversity on reactivity to stress over several years, childhood adversity affects day-to-day stress processes and marital dynamics. For example, the effects of daily nonmarital stress on marital strain can be fairly ephemeral and dissipate by the next day. However, the effects of daily stress may be more persistent and affect marital strain for several days. Because childhood adversity increases reactivity to stress, we expect that more childhood adversity will result in more persistent effects of daily stress on daily marital strain. Therefore, in this study, we focus on how childhood adversity modifies the impact of same-day and previous-day daily stress on daily marital strain.

We consider the possibility that higher levels of childhood adversity for same-sex partners might further influence the role of childhood adversity in relation to daily stress and marital strain in adulthood. For example, the toll of childhood adversity in the linkage between daily stress and marital strain could be magnified more for same-sex couples given the higher exposure of gays and lesbians to adversity in childhood. Alternatively, two spouses of the same gender may be more likely than those in different-

sex unions to share approaches to coping with stress, and this shared experience may buffer them from the adverse consequences of childhood adversity in relation to daily stress and marital strain. Considering same-sex married couples in addition to different-sex married couples provides a unique research design that allows us to explore how childhood adversity influences daily marital strain across gender and union type. The second aim of the study, therefore, is to examine how the impact of same-day as well as lagged effects of daily nonmarital stress on daily marital strain depends on levels of childhood adversity and how these effects vary for men and women in same-sex and different-sex marriages

DYADIC HISTORIES OF CHILDHOOD ADVERSITY AND MARITAL DYNAMICS

Within marriage, both spouses influence each other's emotions and actions. If a spouse is exposed to stress during the course of a day, the stress may spillover into his or her life at home at the end of day. In turn, the stressful experiences and their consequences are likely to influence interactions with the other spouse in ways that may increase stress for both spouses (Neff and Karney 2007). Several studies have documented the negative effect of a respondent's childhood adversity on marital strain due to their own increased reactivity to stress in adulthood (Umberson et al. 2005). But because two partners can experience a marriage differently (Carr and Springer 2010), studies should consider each partner's exposure to childhood adversity. Indeed, some evidence suggests that an individual's adverse experiences in childhood may affect their

partner's reports of marital satisfaction in adulthood (Sabatelli and Bartle-Haring 2003). To date, no studies have considered how spouses' childhood adversity histories may work together in a marriage to shape marital dynamics. For example, spouses may have similar experiences (i.e., both spouses experienced high or low levels of childhood adversity) or dissimilar experiences (i.e., one spouse experienced high childhood adversity while the other experienced low adversity). Moreover, the effect of having similar or dissimilar levels of childhood adversity may differ across union types. Same-sex couples are more likely to have at least one partner with higher levels of childhood adversity, but being in a union with a spouse of the same gender may result in shared approaches that protect them from marital strain. The third aim of this study, therefore, is to consider how the childhood adversity histories of both spouses in a marriage work in tandem to modify the association between daily nonmarital stress and daily marital strain, and how this process varies for men and women in same-sex and different-sex marriages.

METHODS

DATA AND SAMPLE

For the present study, we rely on dyadic survey data which requires the participation of both spouses in each marriage. The data come from a baseline survey and diary surveys conducted daily for 10 days, which were all completed online. The baseline survey took about 45 minutes to complete and the diary surveys took 5-10 minutes to complete each night. Spouses completed the surveys separately and each received a \$50 gift card following completion of the study. The analytic sample for this study includes both spouses in 378 couples (n=756 individuals): 106 gay couples, 157 lesbian couples, and 115 heterosexual couples. All participants were aged 35 to 65 and legally married for a minimum of three years at the time of the survey (2014-2015).

The sample, although not representative of the U.S. population, was recruited in a systematic way to create comparable groups of gay, lesbian, and heterosexual married couples. Participants were matched on age, relationship duration, and place of residence. Due to past legal restrictions on marriage for same sex couples, we measure total relationship duration based on number of years cohabiting and married combined. Massachusetts was selected as the study site because it was the first U.S. state to legalize same-sex marriage in 2004, but couples who married in Massachusetts but reside in other states were also invited to participate. Same-sex couples married between 2004 and 2012 and meeting the age requirements were identified through marriage records at the Massachusetts Registry of Vital Records and invited to participate through letters mailed

to their addresses. About 70% of same-sex couples were recruited in this way.

Participating couples were also asked to refer both same-sex and different-sex married friends and family members who met the study requirements. The remaining 30% of same-sex couples were recruited via referrals. About 40% of different-sex couples were identified and recruited from publicly available city lists in Massachusetts that listed addresses and demographic information of all residents in the city. The remaining 60% of different-sex couples were recruited through referrals from both same-sex and different-sex participants. Descriptive demographic data for the survey sample are provided in Table 1.

MEASURES

Marital Strain. We assessed a respondent's reports of marital strain based on five questions from the daily diary survey. These items were adapted from previous measures assessing social strain in marital relationships (DeLongis et al. 2004; Neff and Karney 2005). Respondents were asked "Over the past 24 hours, how much did your spouse 1) Let you down, 2) Criticize you, 3) Act inconsiderate towards you, 4) Seem bothered or upset with you, and 5) Make demands on you." Each question had five response categories ranging from "Not at all" to "A great deal." Responses to all questions were summed ($\alpha=.81$).

Nonmarital Daily Stress. Respondents' reports of nonmarital daily stress was based on nine questions from the daily diary survey. These items were adapted from the

Daily Inventory of Stressful Events (Almeida 2005) and measure the occurrence of various stressors and the level of respondent stress for each stressor. Respondents were asked whether or not four events happened over the past 24 hours: “I had an argument or disagreement with someone other than my spouse,” “Something else happened to me that most people would consider stressful,” “Housework and home demands,” and “Work demands.” If respondents reported exposure to any of these stressors, they were also asked how stressful these four events were; five response options ranged from “Not at all stressful” to “Extremely stressful.” Respondents also answered an additional question: “How much did social interactions with anyone other than your spouse make you feel irritated, hurt, or annoyed” (five response options ranged from “Not at all stressful” to “Extremely stressful.”). Responses to all nine questions were summed ($\alpha=.70$).

Childhood Adversity. Childhood adversity was measured using questions from the baseline survey. Respondents were asked whether or not they experienced 14 events or situations before age 18. Adverse events include family economic hardship, parents divorced, never knew father, death of a parent, at least one parent had mental health problem, at least one parent had an alcohol or drug problem, violence in the family, physical or sexual abuse, bullied in school, suicidal thoughts or attempt, kicked out of parent’s or guardian’s home, drug and/or alcohol problem, rape, and life-threatening illness or injury. Responses were summed and standardized to create a measure of number of adverse events before age 18. Although childhood adversity items rely on retrospective recall and may be subject to bias, several studies report the reliability and

validity of retrospective reports of these items in predicting adult outcomes (e.g., McLeod 1991; Sobolewski and Amato 2005). Respondents were also asked “Overall, how stressful was your childhood” and response options included “Not at all,” “Slightly,” “Somewhat,” “Very,” and “Extremely.” Responses to this question were standardized. The childhood adversity variable used in analyses was the average of these two standardized measures (number of adverse events and overall perception of stress in childhood). Thus, this measure (“childhood adversity”) captures not only the number of events that occurred in childhood, but also reflects perceived stress of childhood experiences. This continuous measure is used when assessing the direct influence of childhood adversity on daily marital strain. When assessing whether levels of childhood adversity modify the association between daily nonmarital stress and marital strain, this continuous variable is collapsed into three categories: low (less than one standard deviation below the mean), moderate (within one standard deviation of the mean), and high (greater than one standard deviation above the mean).

Dyadic Childhood Adversity. We consider both spouses’ childhood adversity in tandem by comparing the degree of similarity or difference between partners within a couple. For each couple, the lower value of childhood adversity between the two partners (based on the continuous variable above) was subtracted from the higher value of childhood adversity. This created a continuous variable measuring the difference in childhood adversity within each couple. Because the continuous measure of childhood adversity is on a standard scale, a difference of less than one represents less than a

standard deviation difference in childhood adversity between spouses within a couple, whereas values greater than one represent more than a standard deviation difference in childhood adversity between spouses. Therefore, we collapsed this variable into two categories: similar histories of childhood adversity (a difference value less than one) or dissimilar histories of childhood adversity (a difference value greater than or equal to one). A similar couple could have both spouses at low levels or both spouses at high levels of childhood adversity, while a dissimilar couple would comprise one spouse with low childhood adversity and the other with high childhood adversity.

Table 1. Descriptive Data for Sample, by Marital Context (N=756 individuals; 378 couples)

	Total Sample	Men with Men	Men with Women	Women with Men	Women with Women
N	756	212	115	115	314
Age	48.2	49.7	46.5	45.0	49.0
Relationship Duration	15.1	16.3	15.9	15.9	13.7
Education					
Some College or Less	19.5%	19.8%	30.1%	24.5%	13.6%
College Degree	29.7%	31.3%	32.3%	26.3%	28.9%
Post Graduate	50.1%	49.0%	37.6%	49.2%	57.5%
Mean Childhood Adversity	2.7	2.9	2.3	2.5	2.7
Mean Daily Stress	5.0	4.8	4.9	5.3	5.1
Mean Daily Marital Strain	6.5	6.3	7.0	6.5	6.4
Dyadic Childhood Adversity					
Similar Histories	58.9%	58.6%	57.3%	57.3%	60.5%
Dissimilar Histories	41.1%	41.4%	42.7%	42.7%	39.5%

ANALYTICAL STRATEGY

In order to examine how childhood adversity increases marital strain across gender and union types, we employ the factorial method (West, Popp, and Kenny 2008), an extension of the Actor Partner Interdependence Model (APIM; Cook and Kenny 2005), via multilevel regression modeling. The factorial method allows for the examination of three different “gender effects” in the model: actor (or respondent) gender, partner gender, and the interaction of actor and partner gender. For each outcome, the first regression model tests whether actor gender is a significant predictor (“Actor is Woman”) after controlling for partner gender and whether partner gender (“Partner is Woman”) is a significant predictor after controlling for actor gender. The second model adds the interaction of actor gender and partner gender (“Actor is Woman*Partner is Woman”) to test whether the actor gender and/or partner gender effects differ if both spouses are women. For models testing the association between childhood adversity and marital strain or daily stress and marital strain, each of these “gender effects” (actor gender, partner gender, and actor gender*partner gender) is interacted with the independent variable of interest in order to test whether the effect of the independent variable on marital strain varies for men and women in same-sex and different-sex marriages. The factorial method allows us to use the regression estimates to estimate predicted values for four groups: men with men, men with women, women with men, and women with women.

RESULTS

To address the first research aim about the direct role of childhood adversity on daily marital strain for men and women in same-sex and different-sex marriages, the factorial method via multilevel modeling estimated effects for the association between childhood adversity and marital strain (Table 2). First, Models 1 and 2 included the measure of childhood adversity in addition to actor gender, partner gender, and actor*partner gender. Model 1 and Model 2 show that higher levels of childhood adversity predicted higher levels of daily marital strain ($p < .01$) regardless of gender and union type. Having a female partner predicted higher levels of daily marital strain ($p < .001$), while being in a same-sex marriage predicted lower levels of daily marital strain ($p < .01$). However, when considering the moderating role of these three “gender effects” (Models 3-5) on the association between childhood adversity and daily marital strain, we found no differences by actor gender, partner gender, or actor*partner gender. Overall, these results indicate that the negative effects of childhood adversity on daily marital strain operate similarly for men and women in same-sex and different-sex marriages.

Table 2. Estimates from Multi-level Regression Models Testing Respondent Childhood Adversity on Daily Marital Strain (N=756 individuals; 378 couples)

Model	1	2	3	4	5
Childhood Adversity	0.13* (0.05)	0.15** (0.05)	0.10 (0.08)	0.14+ (0.08)	0.15 (0.10)
Actor is Woman	-0.17 (0.11)	0.25 (0.18)	-0.17 (0.11)	-0.17 (0.11)	0.26 (0.19)
Partner is Woman	0.24* (0.11)	0.67*** (0.18)	0.24* (0.11)	0.24* (0.11)	0.65*** (0.19)
Actor Woman*Partner Woman		-0.80** (0.28)			-0.79** (0.28)
Actor Woman*Childhood Adversity			0.05 (0.11)		0.03 (0.18)
Partner Woman*Childhood Adversity				-0.02 (0.11)	-0.08 (0.17)
Actor Woman*Partner Woman*Childhood Adversity					0.06 (0.25)
Time	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)
Constant	6.59*** (0.12)	6.44*** (0.13)	6.59** (0.12)	6.58*** (0.12)	6.44*** (0.13)

***p<.001; **p.01; *p<.05; +p<.10

Our findings indicate that, consistent with previous literature, adverse experiences in childhood increase negative marital strain in adulthood, but does childhood adversity modify the impact of daily nonmarital stress on daily marital strain? In order to address our second research aim about how childhood adversity modifies the association between same-day daily stress and marital strain, we interacted daily nonmarital stress and childhood adversity and found that higher levels of childhood adversity magnified the association between daily nonmarital stress and daily marital strain (data not shown). This indicates that individuals with higher childhood adversity are in fact more reactive

to daily stress when considering the effect of daily stress on strained marital interactions. In order to address whether this effect varies across gender and union type, we use the factorial method via multilevel modeling to estimate actor gender, partner gender, and actor*partner gender effects in the association between daily stress and marital strain by three levels of childhood adversity: low, moderate, and high (Table 3). Panel A shows that daily stress did not predict daily marital strain for respondents with low levels of childhood adversity, but Panels B and C show that it did predict greater marital strain for those with moderate and high levels of childhood adversity ($p < .001$). For respondents with moderate levels of childhood adversity, the association between daily stress and marital strain was weakened if respondents were in a same-sex relationship ($p < .05$; Panel B, Model 5), indicating a protection for same-sex couples against reactivity to daily stress as indicated by strained marital interactions. However, the association between daily stress and marital strain was stronger for respondents with female partners, regardless of whether they were in a same-sex or different-sex marriage ($p < .01$; Panel B, Model 5). Panel C shows that high childhood adversity magnifies the effect of daily stress on daily marital strain equally across gender and union type ($p < .001$).

Table 3. Estimates from Multi-level Regression Models Testing Daily Nonmarital Stress on Daily Marital Strain by Levels of Childhood Adversity (N=756 individuals; 378 couples)

Model	Panel A: Low Childhood Adversity					Panel B: Moderate Childhood Adversity					Panel C: High Childhood Adversity				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Daily Stress	0.03 (0.03)	0.03 (0.03)	-0.01 (0.04)	0.04 (0.04)	0.05 (0.07)	0.04*** (0.01)	0.04*** (0.01)	0.04*** (0.01)	0.03* (0.01)	0.02 (0.02)	0.09*** (0.02)	0.09*** (0.02)	0.10*** (0.03)	0.08*** (0.03)	0.11*** (0.03)
Actor is Woman	-0.55* (0.27)	-0.47 (0.50)	-0.81* (0.36)	-0.56* (0.27)	-0.40 (0.65)	-0.12 (0.11)	0.32+ (0.19)	-0.11 (0.14)	-0.11 (0.11)	0.13 (0.23)	-0.10 (0.29)	0.26 (0.51)	0.01 (0.37)	-0.10 (0.29)	0.79 (0.65)
Partner is Woman	0.09 (0.28)	0.17 (0.47)	0.11 (0.28)	0.17 (0.38)	0.54 (0.58)	0.26* (0.11)	0.71*** (0.19)	0.26* (0.11)	0.16 (0.14)	0.31 (0.24)	-0.02 (0.29)	0.31 (0.48)	-0.02 (0.29)	-0.10 (0.37)	0.38 (0.62)
Actor Woman*Partner Woman		-0.13 (0.64)			-0.62 (0.80)		-0.85** (0.31)			-0.36 (0.36)		-0.66 (0.76)			-1.22 (0.94)
Actor Woman*Daily Stress			0.06 (0.05)		-0.02 (0.09)			0.00 (0.02)		0.04 (0.03)			-0.02 (0.04)		-0.08 (0.06)
Partner Woman*Daily Stress				-0.02 (0.05)	-0.09 (0.09)				0.02 (0.02)	0.08** (0.03)				0.01 (0.04)	-0.01 (0.07)
Actor Woman*Partner Woman*Daily Stress					0.12 (0.11)					-0.10* (0.04)					0.09 (0.09)
Time	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	0.01 (0.03)	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.03** (0.01)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Constant	6.39*** (0.36)	6.34*** (0.43)	6.53*** (0.38)	6.34*** (0.39)	6.26*** (0.49)	6.34*** (0.14)	6.18*** (0.15)	6.33*** (0.15)	6.39*** (0.14)	6.31*** (0.16)	6.44*** (0.30)	6.35*** (0.32)	6.38*** (0.33)	6.49*** (0.33)	6.26*** (0.36)

***p<.001; **p.01; *p<.05; +p<.10

The results from the regression estimates for actor gender, partner gender, actor*partner gender were used to estimate predicted values for the impact of daily nonmarital stress on daily marital strain at low, moderate, and high levels of childhood adversity for four groups: men with men, men with women, women with men, and women with women. Figure 1 illustrates how men with men, men with women, women with men, and women with women who experienced moderate levels of childhood adversity react to daily stress as indicated by marital strain. These results indicate that an increase in daily stress has the greatest negative effect on marital strain for men married to women at moderate levels of childhood adversity. At high levels of childhood adversity, higher levels of daily nonmarital stress increase marital strain for all couples, regardless of gender – same-sex couples are no longer protected. Figure 2 shows that the positive association between daily stress and marital strain is similar for men with men, men with women, women with men, and women with women. Overall, these results indicate that at low levels of childhood adversity, daily stress does not have a significant effect on marital strain, and at high levels of childhood adversity, daily stress increases daily marital strain similarly for men and women in same-sex and different-sex marriages. However, at moderate levels of childhood adversity, results indicate that same-sex couples are protected from the negative effects of daily stress, while the association between daily stress and daily marital strain is magnified for men with women.

Figure 1. Predicted Scores of Daily Stress on Daily Marital Strain for Moderate Childhood Adversity (from Table 3, Panel B)

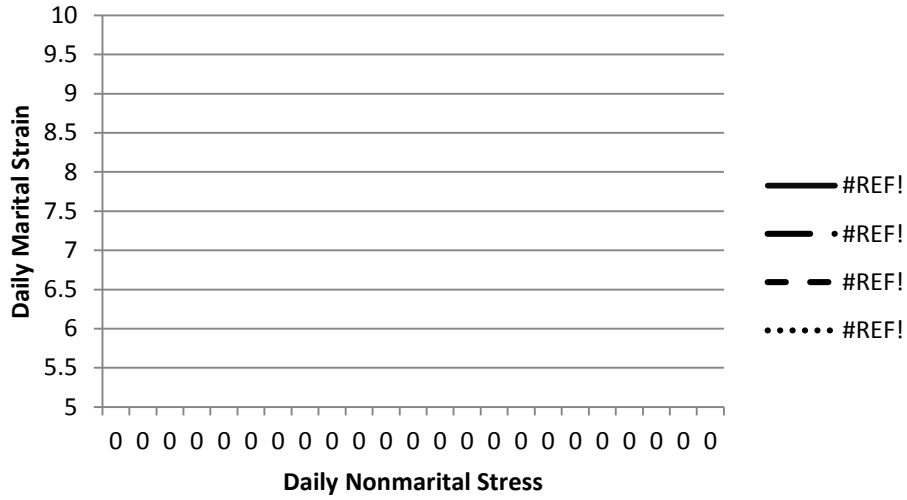
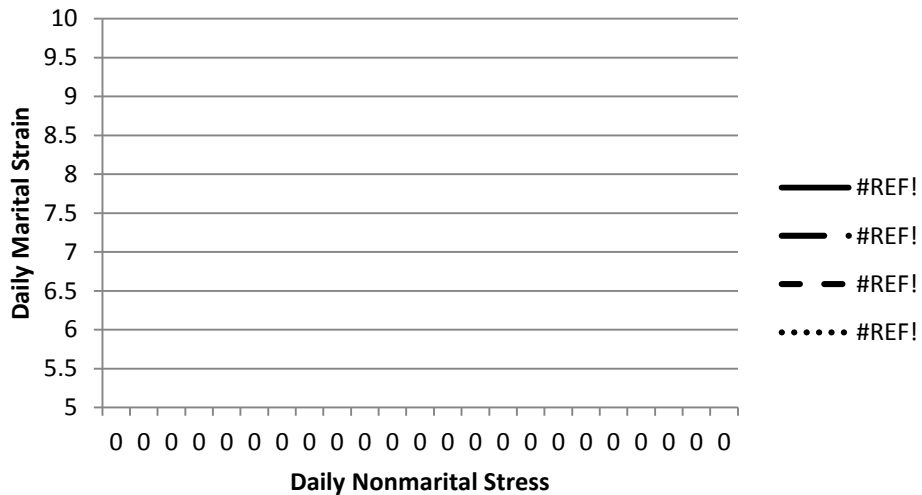


Figure 2. Predicted Scores of Daily Stress on Daily Marital Strain for High Childhood Adversity (from Table 3, Panel C)



In addition to examining reactivity to daily stress as indicated by same-day strained marital interactions, we consider whether the effects of daily stress persist to influence marital strain on the following day. Because childhood adversity increases reactivity to stress and magnifies the negative effect of same-day stress on marital strain, childhood adversity may result in more persistent effects of daily stress on daily marital strain. We next consider whether lagged effects of daily stress on next-day marital strain differ by levels of childhood adversity for men and women in same-sex and different-sex marriages (Table 4). Previous day nonmarital stress increases marital strain the next day for the sample as a whole, regardless of actor gender, partner gender, or actor gender*partner gender ($p < .001$; data not shown). When stratifying the results by low, moderate, and high levels of childhood adversity, we find similar results as reported in Table 3. Panel A shows that previous day nonmarital stress did not predict next-day marital strain for respondents with low levels of childhood adversity, but Panels B and C show that it did predict greater marital strain for those with moderate ($p < .01$) and high levels of childhood adversity ($p < .05$). For respondents with moderate levels of childhood adversity, the association between previous day daily stress and next-day marital strain was weaker if respondents were in a same-sex relationship ($p < .05$), whereas the association between previous day daily stress and next-day marital strain was stronger for respondents with female partners ($p < .05$), regardless of whether they were in a same-sex or different-sex marriage (Panel B, Model 5). Overall, these results indicate that the negative influence of daily stress on marital strain does not persist for low levels of

childhood, but does persist for moderate and high levels of childhood adversity. While high levels of childhood adversity influence the persistence of daily stress on marital strain similarly across gender and union type, the persistent effect of daily stress on marital strain differs for men and women in same-sex and different-sex marriages at moderate levels of childhood adversity. At these moderate levels, men with women experience more persistent reactivity to daily stress as indicated by strained marital interactions.

Table 4. Estimates from Multi-level Regression Models Testing Previous-Day Nonmarital Stress on Daily Marital Strain by Levels of Childhood Adversity (N=756 individuals; 378 couples)

Model	Panel A: Low Childhood Adversity					Panel B: Moderate Childhood Adversity					Panel C: High Childhood Adversity				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Previous Day Stress	0.01 (0.03)	0.01 (0.03)	0.01 (0.05)	-0.02 (0.04)	0.02 (0.08)	0.03*** (0.01)	0.03*** (0.01)	0.03+ (0.01)	0.02 (0.01)	-0.01 (0.02)	0.05* (0.02)	0.05* (0.02)	0.05 (0.03)	0.04 (0.03)	0.05 (0.04)
Actor is Woman	-0.53+ (0.28)	-0.54 (0.52)	-0.56 (0.38)	-0.51+ (0.28)	-0.19 (0.68)	-0.08 (0.11)	0.32 (0.20)	-0.16 (0.15)	-0.08 (0.11)	0.07 (0.24)	-0.06 (0.31)	0.30 (0.54)	-0.06 (0.39)	-0.06 (0.31)	0.66 (0.69)
Partner is Woman	-0.01 (0.29)	-0.01 (0.48)	-0.01 (0.29)	-0.25 (0.40)	0.06 (0.61)	0.24* (0.11)	0.66** (0.20)	0.24* (0.11)	0.11 (0.14)	0.28 (0.26)	-0.10 (0.31)	0.24 (0.51)	-0.10 (0.31)	-0.22 (0.39)	0.31 (0.66)
Actor Woman*Partner Woman		0.01 (0.66)			-0.54 (0.84)		-0.78* (0.32)			-0.34 (0.38)		-0.67 (0.81)			-1.15 (1.00)
Actor Woman*Previous Day Stress			0.01 (0.06)		-0.06 (0.09)			0.01 (0.02)		0.05+ (0.03)			0.00 (0.04)		-0.05 (0.07)
Female Woman*Previous Day Stress				0.05 (0.05)	-0.02 (0.10)				0.03 (0.02)	0.08* (0.03)				0.02 (0.04)	-0.01 (0.08)
Actor Woman*Female Woman*Previous Day Stress					0.11 (0.12)					-0.09* (0.04)					0.08 (0.10)
Time	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)	0.03 (0.03)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.03)	-0.01 (0.03)	-0.01 (0.03)	-0.01 (0.03)	-0.01 (0.03)
Constant	6.40*** (0.38)	6.40*** (0.45)	6.41*** (0.41)	6.54*** (0.41)	6.35*** (0.53)	6.30*** (0.15)	6.16*** (0.16)	6.34*** (0.16)	6.36*** (0.16)	6.33*** (0.17)	6.64*** (0.33)	6.55*** (0.35)	6.64*** (0.36)	6.71*** (0.36)	6.52*** (0.40)

***p<.001; **p.01; *p<.05; +p<.10

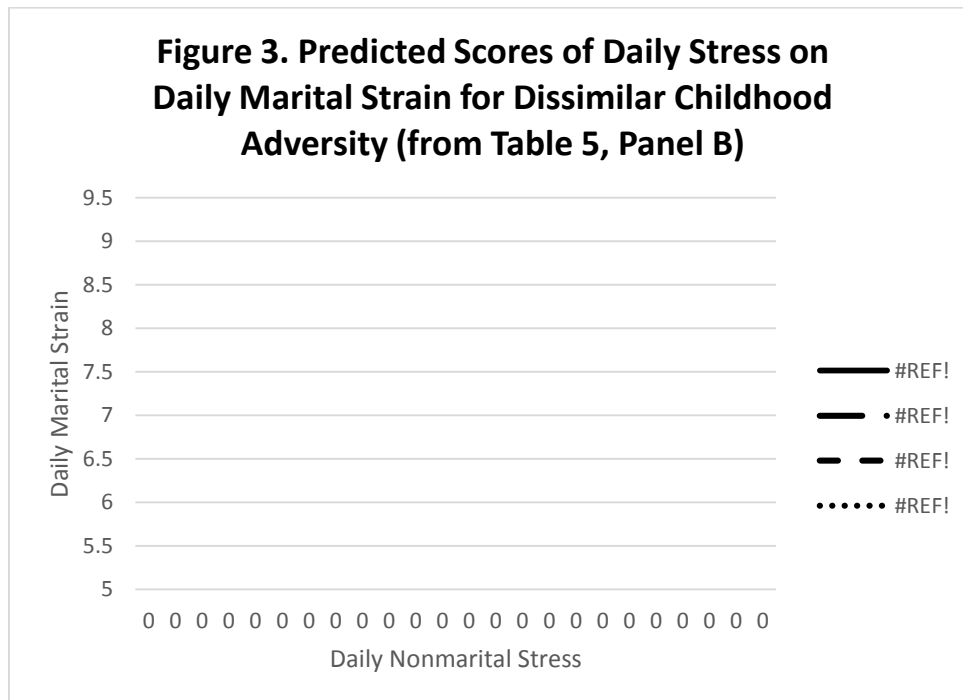
Within each couple, each partner brings their own history of childhood adversity that may affect daily marital dynamics; however, these childhood adversity histories may work in tandem at the dyadic level to affect marital dynamics. For example, the influence of childhood adversity may be different for a couple wherein both spouses have high levels of childhood adversity compared to a couple where one spouse has a high level while their partner has a low level. In order to address our third research aim, we first consider how having similar (i.e., either both low or both high) or dissimilar (i.e., one high and one low) couple-level childhood adversity histories directly influences marital strain for men and women in same-sex and different-sex marriages (data not shown). Compared to couples with more similar childhood adversity histories, couples with dissimilar childhood adversity histories reported higher levels of daily marital strain (data not shown). Supplemental analyses (data not shown) indicate that, compared to couples where both spouses experienced low levels of childhood adversity, couples with one high and one low level of childhood adversity and couples with both spouses experiencing high levels of childhood adversity reported statistically higher levels of marital strain ($p < .001$). The effects of dyadic childhood adversity histories on marital strain did not differ by actor gender, partner gender, or actor*partner gender. Overall, these results indicate that marital strain is increased if either spouse has experienced more than low levels of adversity in childhood, regardless of gender and union type. However, the results also provide evidence that having dissimilar childhood adversity experience directly increases marital strain in adulthood.

We next consider how having similar or dissimilar childhood adversity histories influences the impact of marital strain on daily nonmarital stress. We also consider how the effects of similar or dissimilar childhood adversity histories influences marital strain differently for men and women in same-sex and different-sex marriages (Table 5). Our findings in Table 5 show that daily nonmarital strain is associated with higher levels of marital strain for couples with both similar and dissimilar childhood adversity histories ($p < .001$; Panels A and B, Models 1-2). For similar couples, the negative impact of daily nonmarital stress on marital strain works similarly for men with men, men with women, women with men, and women with women (Panel A, Models 3-5). However, the association between daily stress and daily marital strain is not equal for couples with dissimilar childhood adversities. Model 5 in Panel B shows that, for couples with dissimilar histories of childhood adversity, having a female partner is associated with more reactivity to daily stress as indicated by strained marital interactions ($p < .05$), but being in a same-sex marriage is associated with less reactivity to daily stress when considering the effect on marital strain ($p < .05$). Taken together, Figure 3 graphically illustrates these findings and suggests that an increase in daily stress has the greatest negative effect on marital strain for men with women when spouses have dissimilar levels of childhood adversity. The negative effect of daily stress on marital strain is reduced for same-sex couples when spouses have dissimilar experiences of childhood adversity.

Table 5. Estimates from Multi-level Regression Models Testing Daily Nonmarital Stress on Daily Marital Strain by Dyadic Childhood Adversity Histories (N=756 individuals; 378 couples)

Model	Panel A: Similar Couples					Panel B: Dissimilar Couples				
	1	2	3	4	5	1	2	3	4	5
Daily Stress	0.06*** (0.01)	0.06*** (0.01)	0.06*** (0.02)	0.05** (0.01)	0.05** (0.02)	0.05*** (0.01)	0.05*** (0.01)	0.05** (0.02)	0.04* (0.02)	0.02 (0.02)
Actor is Woman	0.04 (0.11)	0.25 (0.20)	0.04 (0.14)	0.04 (0.11)	0.36 (0.25)	-0.49** (0.16)	0.10 (0.29)	-0.50* (0.20)	-0.49** (0.16)	-0.20 (0.35)
Partner is Woman	0.13 (0.11)	0.33 (0.20)	0.13 (0.11)	0.04 (0.14)	0.33 (0.26)	0.39* (0.16)	0.98** (0.29)	0.40* (0.16)	0.31 (0.20)	0.51 (0.36)
Actor Woman*Partner Woman		-0.39 (0.33)			-0.55 (0.39)		-1.12* (0.47)			-0.47 (0.55)
Actor Woman*Daily Stress			0.00 (0.02)		-0.02 (0.03)			0.01 (0.02)		0.06 (0.04)
Partner Woman*Daily Stress				0.02 (0.02)	0.00 (0.03)				0.02 (0.02)	0.09* (0.04)
Actor Woman*Partner Woman*Daily Stress					0.03 (0.04)					-0.13* (0.05)
Time	-0.03* (0.01)	-0.03* (0.01)	-0.03* (0.01)	-0.03* (0.01)	-0.03* (0.01)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)	-0.01 (0.02)
Constant	6.17*** (0.15)	6.09*** (0.16)	6.17*** (0.16)	6.21*** (0.16)	6.10*** (0.17)	6.47*** (0.21)	6.26*** (0.23)	6.48*** (0.23)	6.52*** (0.22)	6.42*** (0.25)

***p<.001; **p.01; *p<.05; +p<.10



DISCUSSION

Previous research shows that adverse experiences in childhood may increase sensitivity to stress in adulthood in ways that undermine marital quality (Umberson et al. 2005). Past research on the role of childhood adversity in marital dynamics has focused almost exclusively on gender differences in heterosexual couples, overlooking how effects of stress on marital strain may differ across gay, lesbian, and heterosexual marriages. Moreover, past research shows that sexual minority populations experience higher levels of childhood adversity (Anderson and Blosnich 2013), which could influence their marital dynamics. To address these issues, we explore how childhood adversity influences daily marital strain for men and women in same-sex and different-sex marriages. By elucidating nuanced gender roles, we not only gain information on how men and women experience these stress processes and marital dynamics differently depending on whether they are married to a same- or different-sex spouse, we also reveal important public health implications in light of sexual health disparities (Institute of Medicine 2011).

Overall, the results of this study suggest that childhood adversity negatively impacts marital strain for all spouses, regardless of actor gender, partner gender, or actor gender*partner gender. Moreover, in line with previous literature, we found that childhood adversity magnified the negative influence of daily nonmarital stress on daily marital strain. However, reactivity to daily nonmarital stress as indicated by strained marital interactions differed across gender and union type at some levels of childhood

adversity. When men and women experienced moderate levels of childhood adversity, the negative effect on daily stress was magnified for men with women and reduced for same-sex spouses. When individuals experienced high levels of childhood adversity, all individuals (men with men, men with women, women with men, women with women) experienced a magnified impact of daily nonmarital stress on marital strain similarly. In addition to same-day effects of daily stress on marital strain, previous day stress was associated with greater next day marital strain for individuals with moderate and high levels of childhood adversity. For respondents with moderate levels of childhood adversity, the association was reduced if respondents were in a same-sex relationship, while the association was magnified for respondents with female partners, regardless of whether they were in a same-sex or different-sex marriage. Finally, the dyadic experiences of childhood adversity work in tandem, such that similar (i.e., both with high levels or both with low levels) and dissimilar (i.e., one with high levels and one with low levels) spousal histories of childhood adversity influence how external stressors impact marital strain. We found that dissimilar couples experienced higher levels of marital strain compared to similar couples, and when couples have dissimilar childhood adversity experiences the negative effect of daily stress on marital strain was again magnified for men with women and reduced for same-sex spouses. These results highlight three important themes.

First, childhood adversity has a negative influence on marital dynamics that is experienced regardless of actor gender, partner gender, and sexual orientation (actor

gender*partner gender). For example, all four groups (men with men, men with women, women with men, and women with women) experienced the direct negative influence of childhood adversity on marital strain. Moreover, high levels of childhood adversity resulted in heightened reactivity to daily nonmarital stress as indicated by more strained marital interactions for men and women in same-sex and different-sex marriages. This is in line with previous research by Umberson and colleagues (2005) showing that individuals with high levels of childhood adversity seem to be more reactive to stress burden in adulthood as indicated by a decline in positive marital experiences. For the association between same-day and previous-day daily stress and marital strain, gender differences were only apparent at moderate levels of childhood adversity. One explanation is that all individuals suffer the consequences of high levels of childhood adversity in their marital dynamics in adulthood. An alternative explanation is that given the lower likelihood of individuals with stressful childhoods to marry and their greater risk for divorce (Karney and Bradbury 1995), individuals with high levels of childhood adversity are qualitatively different.

Second, at moderate levels of childhood adversity, same-sex couples were slightly protected from the negative effect of same-day and previous-day nonmarital stress on marital strain. Moreover, men with women experienced the strongest effects of stress on marital strain suggesting greater reactivity to stress as revealed by strained marital interactions. This may be surprising given the increased levels of childhood adversity experienced by sexual minorities (Anderson and Blosnich 2013). Perhaps same-sex

couples act in similarly gendered ways that protect them from the negative effect of daily stress on marital strain. In addition to a dyadic effect, a partner gender effect indicated that individuals married to women had a magnified association between daily stress and marital strain, regardless of sexual orientation (although women with women were protected because of the dyad effect). Because women report greater marital strain when they perceive more stress in adulthood (Neff and Karney 2004; Schulz et al. 2004; Story and Repetti 2006), childhood adversity may magnify the effects of marital strain for individuals married to women. Future research should explore the underlying mechanisms that are contributing to the reduced negative effect of moderate childhood adversity on the association between daily stress and daily marital strain for same-sex married couples. Additionally, future research should use this framework to look at trajectories of marital quality over longer periods of time in order to better understand long-term trajectories and implications.

Finally, spouses with more dissimilar childhood adversity histories reported greater levels of marital strain than spouses with more similar histories of childhood adversity. Moreover, results indicate that when couples are dissimilar in their childhood adversity histories, men with women experience the greatest effect of daily nonmarital stress and daily strain and same-sex couples experience the lowest effect. Not only are same-sex couples protected from the consequences of daily stress at moderate levels of childhood adversity, but they are also more protected when one spouse has a high level of childhood adversity while the other has a low level of childhood adversity. These results

suggest that, at moderate levels of childhood adversity or with dissimilar childhood adversity histories, same-sex couples react to daily stress in a way that is less harmful for their marital quality, especially when compared to men with women. Perhaps the known benefits of marriage for sexual minority populations (Wight et al. 2013) are contributing to the lower reports of marital strain for same-sex married couples. Future research should examine the dyadic coping mechanisms of married couples who have experienced childhood adversity to better understand the ways in which couples work in tandem when faced with daily stressors.

This study extends the existing literature on childhood adversity, daily stress, and marital strain by using dyadic daily diary data and including same-sex as well as different-sex married couples. A dyadic diary approach allows for a dynamic model representing life as it is lived (Repetti et al. 2015). Moreover, dyadic data take into account the many different ways that two partners can experience a relationship (Carr and Springer 2010). Including same-sex and different-sex married couples advances our theoretical understanding of the role of gender in childhood adversity and daily marital processes. Understanding how these stress processes work for same-sex marriages is especially important in light of health disparities experienced by several minority populations (Institute of Medicine 2011) and in light of previous work showing that sexual minority populations report higher levels of childhood strain than do heterosexual populations (Anderson and Blosnich 2013). Because childhood adversity and stress in adulthood have long-term effects on health (Repetti, Wang, and Saxbe 2009), scholars

should examine whether the well-documented benefits of marriage may provide an opportunity to alleviate that health burden. When considering the role of gender in these stress processes in marriage, it is important to understand the implications for long-term health variations for men and women in same-sex and different-sex marriages.

REFERENCES

- Almeida, David M. 2005. "Resilience and Vulnerability to Daily Stressors Assessed via Diary Methods." *Current Directions in Psychological Science* 14(2):64-68.
- Anderson, Judith P. and John Blosnich. 2013. "Disparities in Adverse Childhood Experiences among Sexual Minority and Heterosexual Adults: Results from a Multi-State Probability-Based Sample." *PLOS ONE* 8(1):e54691.
doi:10.1371/journal.pone.0054691.
- Bradbury Thomas N., Frank D. Fincham, Steven R.H. Beach. 2000. "Research on the Nature and Determinants of Marital Satisfaction: A Decade in Review" *Journal of Marriage and Family* 62(4): 964-980.
- Brown, George W., Tom K.J. Craig, Tirril O. Harris, and Rachel V. Handley, 2008. "Parental Maltreatment and Adulthood Cohabiting Partnerships: A Life-Course Study of Adult Chronic Depression—4." *Journal of Affective Disorders* 110:115–125.
- Carr, Deborah and Kristen W. Springer. 2010. "Advances in Families and Health Research in the 21st Century." *Journal of Marriage and Family* 72(3):743-761.
doi: 10.1111/j.1741-3737.2010.00728.x.
- Cook, William L. and David A. Kenny. 2005. "The Actor-Partner Interdependence Model: A model of bidirectional effects in developmental studies." *International Journal of Behavioral Development* 29(2):101-109.

- DeLongis, Anita, Martha Capreol, Susan Hotzman, Tess O'Brien, and Jennifer Campbell. 2004. "Social Support and Social Strain Among Husbands and Wives: A Multilevel Analysis." *Journal of Family Psychology* 18(3):470-479.
- Institute of Medicine. 2011. *The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding*. Washington, DC: National Academy of Sciences.
- Karney, Benjamin R. and Thomas N. Bradbury. 1995. "The Longitudinal Course of Marital Quality and Stability: A Review of Theory, Method, and Research." *Psychological Bulletin* 118(1):3-34.
- Karney, Benjamin R., Lisa B. Story, Thomas N. Bradbury. 2005. "Marriages in context: Interactions between chronic and acute stress among newlyweds." Pp. 13-32 in *Couples coping with stress: Emerging perspectives on dyadic coping*, edited by T. A. Revenson, K. Kayser, & G. Bodenmann. Washington, DC: American Psychological Association.
- McLeod, Jane D. 1991. "Childhood Parental Loss and Adult Depression." *Journal of Health and Social Behavior* 32(3):205-220.
- Michelson, Kristin D., Ronald C. Kessler, and Phillip R. Shaver. 1997. "Adult Attachment in a Nationally Representative Sample." *Journal of Personality and Social Psychology* 73(5):1092-1106.
- Miller, Gregory E., Edith Chen, and Karen J. Parker. 2011. "Psychological Stress in Childhood and Susceptibility to the Chronic Diseases of Aging: Moving Toward a

- Model of Behavioral and Biological Mechanisms.” *Psychological Bulletin*. 137(6):959-997.
- Neff, Lisa A and Benjamin R. Karney 2004. “How Does Context Affect Intimate Relationships? Linking External Stress and Cognitive Processes Within Marriage.” *Personality and Social Psychology Bulletin* 30(2):134-148.
- Neff, Lisa A. and Benjamin R. Karney. 2005. “Gender Differences in Social Support: A Question of Skill or Responsiveness?” *Journal of Personality and Social Psychology*. 88(1):79-90.
- Neff, Lisa A. and Benjamin R. Karney. 2007 “Stress Crossover in Newlywed Marriage: A Longitudinal and Dyadic Perspective.” *Journal of Marriage and Family* 69(3):594-607.
- Pearlin, Leonard I., Scott Schiemen, Elena M. Fazio, and Stephen C. Meersman. 2005. “Stress, Health, and the Life Course: Some Conceptual Perspectives.” *Journal of Health and Social Behavior* 46(2):205-219.
- Randall, Ashley K. and Guy Bodenmann. 2009. “The role of stress on close relationships and marital satisfaction.” *Clinical Psychology Review* 29:105-115.
- Repetti, Rena L., SE Taylor, and TE Seeman. 2002. “Risky Families: Family Social Environments and the Mental and Physical Health of Offspring.” *Psychological Bulletin* 128(2):330-366.

- Repetti, Rena L., Shu-wen Wang, and Darby Saxbe. 2009. "Bringing It All Back Home: How Outside Stressors Shape Families' Everyday Lives." *Current Directions in Psychological Science* 18(2):106-111.
- Repetti, Rena L., Bridget M. Reynolds, and Meredith S. Sears. 2015. "Families Under the Microscope: Repeated Sampling of Perceptions, Experiences, Biology, and Behavior." *Journal of Marriage and Family* 77:126-146.
- Sabatelli, Ronald M. and Suzanne Bartle-Haring. 2003. "Family-of-Origin Experiences and Adjustment in Married Couples." *Journal of Marriage and Family* 65(1):159-169.
- Schulz, Marc S., Phillip A. Cowan, Carolyn P. Cowan, and Richard T. Brennan. 2004. "Coming home upset: Gender, marital satisfaction, and the daily spillover of workday experience into couples interactions." *Journal of Family Psychology* 18(1):250–263.
- Sobolewski, Juliana M. and Paul R. Amato. 2005. "Economic Hardship in the Family of Origin and Children's Psychological Well-Being in Adulthood." *Journal of Marriage and Family* 67(1):141-156.
- Story, Lisa B. and Thomas N. Bradbury. 2004. "Understanding marriage and stress: Essential questions and challenges." *Clinical Psychology Review* 23(8):1139 – 1162.
- Story, Lisa B. and Rena Repetti. 2006. "Daily Occupational Stressors and Marital Behavior." *Journal of Family Psychology* 20(4):690-700.

- Turner, Heather A. and Melissa J. Butler. 2003. "Direct and Indirect Effects of Childhood Adversity on Depressive Symptoms in Young Adults." *Journal of Youth and Adolescence* 32(2):89-103.
- Umberson Debra, Kristi Williams, Daniel A. Powers, Hui Liu, and Belinda Needham. 2005. "Stress in Childhood and Adulthood: Effects on Marital Quality Over Time." *Journal of Marriage and Family* 67: 1332-1347.
- West, Tessa V., Danielle Popp, and David A. Kenny. 2008. "A Guide for the Estimation of Gender and Sexual Orientation Effects in Dyadic Data: An Actor-Partner Interdependence Model Approach." *Personality and Social Psychology Bulletin* 34(3):321-336.
- Wight, Richard G., Allen J. LeBlanc, and M.V. Lee Badgett. 2013. "Same-Sex Legal Marriage and Psychological Well-Being: Findings from the California Health Interview Survey." *American Journal of Public Health* 103(2):339-346.