Same-Sex Legal Marriage and Psychological Well-Being: Findings From the California Health Interview Survey

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Objectives. We examined whether same-sex marriage was associated with nonspecific psychological distress among self-identified lesbian, gay, and bisexual adults, and whether it had the potential to offset mental health disparities between lesbian, gay, and bisexual persons and heterosexuals.

Methods. Population-based data (weighted) were from the 2009 adult (aged 18–70 years) California Health Interview Survey. Within-group analysis of lesbian, gay, and bisexual persons included 1166 individuals (weighted proportion = 3.15%); within-group heterosexual analysis included 35 608 individuals (weighted proportion = 96.58%); and pooled analysis of lesbian, gay, and bisexual persons and heterosexuals included 36 774 individuals.

Results. Same-sex married lesbian, gay, and bisexual persons were significantly less distressed than lesbian, gay, and bisexual persons not in a legally recognized relationship; married heterosexuals were significantly less distressed than nonmarried heterosexuals. In adjusted pairwise comparisons, married heterosexuals had the lowest psychological distress, and lesbian, gay, and bisexual persons who were not in legalized relationships had the highest psychological distress ($P < .001$). Psychological distress was not significantly distinguishable among same-sex married lesbian, gay, and bisexual persons, lesbian, gay, and bisexual persons in registered domestic partnerships, and heterosexuals.

Conclusions. Being in a legally recognized same-sex relationship, marriage in particular, appeared to diminish mental health differentials between heterosexuals and lesbian, gay, and bisexual persons. Researchers must continue to examine potential health benefits of same-sex marriage, which is at least in part a public health issue. (*Am J Public Health.* 2013;103:339–346. doi:10.2105/AJPH.2012.301113)

Well-established research demonstrates that lesbian, gay, and bisexual persons have worse mental health outcomes than their heterosexual counterparts, highlighting important but poorly understood mental health disparities associated with sexual orientation.[1] For example, a meta-analysis of 4 decades of research concluded that lesbian, gay, and bisexual persons had higher rates of mental disorder, substance misuse, suicidal ideation, and self-harm than did heterosexuals.[2] Research that examines both population- and individual-level outcomes supports the theory that sexual minority stressors (e.g., stigma or expectations of rejection, experiences of discrimination, internalized homophobia, the need for concealment of sexual identity) might be at the root of this disparity because they strain lesbian, gay, and bisexual persons' abilities to adapt to and function in their everyday environments, increasing risks for poor mental health.[3–8]

Extensive research also provides broad evidence that individuals in heterosexual marriages, on average, experience better mental health outcomes than their unmarried counterparts.[9–11] This differential might stem from tangible economic benefits (e.g., access to health insurance) or a heightened sense of relationship stability associated with legal recognition of the marital commitment, the positive effects of intimacy and closeness, as well as from greater emotional support and self-worth conferred to the married.[1]

Taken together, these 2 large bodies of work suggest that lesbian, gay, and bisexual persons might be uniquely disadvantaged because they endure sexual minority-related stressors and challenges not experienced by heterosexuals, and in most parts of the United States, they are denied access to legal marriage, which potentially could enhance their mental health in the same ways it does for heterosexuals. In 2009, the American Medical Association officially recognized that exclusion from legal marriage among sexual minorities contributes to health care disparities in same-sex households,[12] yet very little research has examined the potential mental health benefits of permitting lesbian, gay, and bisexual persons to legally marry someone of the same sex. To date, the best evidence has come from small-scale nonrepresentative studies, which suggest that, like their heterosexual counterparts, sexual minority persons realize psychological benefits from same-sex legal marriage and other types of legally recognized same-sex relationships (e.g., civil unions, registered domestic partnerships [RDPs]).[13,14]

Beginning in June 2008, same-sex couples were allowed to legally marry in California. A statewide referendum (Proposition 8) overturned this legal right in November 2008, putting a halt to all new same-sex marriages. In 2010, Proposition 8 was overturned by a US District Court, a decision recently twice affirmed by the US Court of Appeals. As of this writing, the issue is with the US Supreme Court and the status of same-sex marriage in California is in flux: existing same-sex marriages stand, but no new same-sex marriages are legally permitted. Also, since 2000, lesbian, gay, and bisexual persons may enter a RDP with a same-sex partner in California. A 2005 law enhanced the status of RDP to include almost all of the state-provided rights and responsibilities of marriage.

This study analyzed population-based data from the 2009 California Health Interview Survey (CHIS) to investigate the association between legal marriage and mental health among heterosexual and lesbian, gay, and bisexual adults aged 18 to 70 years, as well as the potential relationship between same-sex marriage and mental health disparities based on

sexual orientation. Given the apparent mental health benefits of marriage found in previous research, we hypothesized that lesbian, gay, and bisexual persons in legal same-sex marriages and partnerships would experience better mental health than lesbian, gay, and bisexual persons not in same-sex legal relationships. Consistent with the previously described findings, we also hypothesized that married heterosexuals would report lower psychological distress than unmarried heterosexuals. Further, we hypothesized that mental health disparities between lesbian, gay, and bisexual persons and heterosexuals would be diminished when same-sex relationship status was taken into account, given the tangible and emotional benefits that accrue with legal marriage.

METHODS

Data were from the 2009 adult CHIS.[15] Conducted by telephone every 2 years, the CHIS is the nation's largest population-based state health survey. The CHIS has been a leader in telephone survey methodology and employs a multistage sample design with random-digit-dial (RDD) sampling that includes both landline and cellular telephone numbers to enhance coverage. For the landline RDD sample, the state was divided into 56 geographic sampling strata, including 2 counties with subcounty strata, 41 single-county strata, and 3 multicounty strata. Within each stratum, residential telephones were selected, and within each household, 1 adult (aged ≥ 18 years) was randomly selected. A separate RDD sample was drawn of telephone numbers assigned to cellular service. The cell RDD sample was stratified by area code, and 1 adult household member was randomly selected from cell-only households.

The sample size was 47 614 adults. The overall household response rate (a product of the screener response rate, 36.1%, and the extended adult response rate, 49.0%, landline and cellular numbers combined) was 17.7% and was roughly comparable to other large telephone surveys specific to California at around the same time, such as the 2009 California Behavioral Risk Factor Surveillance System Survey.[16] RDD response rates have declined in recent years, a trend at least partly caused by the proliferation of telemarketing and telephone screening devices.[17] However, emerging studies show that RDD response rates should not be the sole criteria in rating data quality or survey representativeness because there might be little correlation between response rates and nonresponse bias.[18] CHIS researchers conducted extensive data quality studies to assess methodological issues related to nonresponse and noncoverage biases with CHIS data and consistently found that the data accurately represented California's household population.[19] Detailed information about CHIS methodology can be found at the CHIS data quality Web site (http://www.chis.ucla.edu/dataquality.html).

Adults aged 70 years and younger were asked, "Do you think of yourself as straight or heterosexual, as {gay/gay,lesbian} or homosexual, or bisexual?" The analytic sample for within-group lesbian, gay, and bisexual analysis included those who responded that they were gay, lesbian, homosexual, or bisexual (n = 1166). After the application of sample weights, this number represented 3.15% of the 70-years-and-younger adult California population (weighted n = 777 508). The analytic sample for within-group heterosexual analysis included those who reported they were straight or heterosexual (n = 35 608). After the application of sample weights, this number represented 96.85% of the 70-years-and-younger adult California population. For a small number of cases, respondents reported exclusively engaging in sexual behavior that did not "match" their marital status (i.e., being in a same-sex marriage but having only different-sex partners, n = 12; being in a different-sex marriage but having only same-sex partners, n = 28); these cases were omitted from the analysis. These omissions did not affect the findings presented. Heterosexual RDPs were not assessed in the CHIS. The pooled lesbian, gay, bisexual, and heterosexual analysis included 36 774 individuals. Nonheterosexuals who reported being "not sexual," celibate, or "other" were excluded from the analysis. Transgender identity was not assessed in the CHIS.

Measures

Psychological distress. The dependent variable was nonspecific psychological distress, as measured with a continuous form of the widely used Kessler 6 (K6) screening scale,[20] which asks how often in the past 30 days (responses scored from 0 [none of the time] to 4 [all of the time]) respondents felt nervous, hopeless, restless, fidgety, so depressed that nothing could cheer them up, everything was an effort, and worthless. Responses were summed (possible range = 0–24). The continuous form of the K6 was used rather than the dichotomous form (cutoff score of "13+" = possible serious mental illness) to capture the full range of psychological distress, including subsyndromal symptomatology.

Legal relationship status. Nonheterosexual respondents were asked, "Are you legally registered as a domestic partner or legally married in California with someone of the same sex?" RDP and same-sex legal marriage responses were mutually exclusive. We referred to a lesbian, gay, or bisexual person who was legally married as "same-sex married" to clearly distinguish individuals with same-sex and different-sex spouses. Heterosexual marriage was assessed with the question, "Are you now married, living with a partner in a marriage-like relationship, widowed, divorced, separated, or never married?" (responses were mutually exclusive).

Sociodemographic controls. Multiple sociodemographic variables that might influence observed findings were controlled in the analysis:

1. gender (male or female)
2. ethnicity (Asian or Asian Pacific Islander, African American, Hispanic, Non-Hispanic White, and other),
3. age (categorized because of its known nonlinear association with psychological distress, such that, on average, distress is high in young adulthood, then decreases, and then increases in old age,[21] 18–29, 30–39, 40–49, 50–59, 60–70 years),
4. education (< high school, high school, some college, ≥ college degree),
5. whether English was the primary language spoken in the home (yes or no),
6. employment status (works now vs not),
7. health insurance status (has insurance vs not),
8. whether the respondent lives in an urban area (yes or no),
9. whether household income was below the 2008 California median household income level of $61 000 (yes or no),[22]
10. self-rated fair or poor health (yes or no).

Analysis

Analyses were conducted with the Stata SVY procedure (StataCorp, College Station, TX),

which accounts for sample weights and the complex survey sampling design. Associations between relationship status and psychological distress, adjusted for sociodemographic controls, were first assessed with ordinary least-squares SVY regression models (within-group lesbian, gay, and bisexual association, within-group heterosexual association, pooled lesbian, gay, and bisexual–heterosexual association). Adjusted means for psychological distress by relationship status were then assessed with the Stata ANOVALATOR procedure, which provides adjusted pairwise comparisons. Because of multiple comparisons, a P value of .05 was divided by the number of paired comparisons made to determine the significance level.

RESULTS

Sample characteristics of lesbian, gay, and bisexual persons (weighted) are shown in Table 1. Most lesbian, gay, and bisexual adults in California were not in a legally recognized same-sex marriage or domestic partnership. The proportion in same-sex marriages (7.13%) was nearly identical to recent US Census Bureau Reports,[23] and the proportion in RDPs was also comparable to recent estimates (12.35%).[24] Slightly more than half of heterosexual adults in California were currently married, similar to recent national estimates.[25]

In the CHIS lesbian, gay, and bisexual subsample, men outnumbered women, ethnicity and age were roughly comparable to the California population,[26] nearly half had a college degree or more, most spoke English in their homes, were currently employed, had health insurance, and had household incomes below the 2008 California median level. A majority (94.72%) lived in urban areas. About one fifth rated their health as fair or poor. Heterosexuals were roughly similar to lesbian, gay, and bisexual persons, with the exception of education (lesbian, gay, and bisexual persons were more educated) and English being the primary language spoken at home (lesbian, gay, and bisexual persons were more likely to live in homes where English was the primary language).

Comparisons among lesbian, gay, and bisexual persons who reported being in legal same-sex marriages, RDPs, and neither of these legal arrangements revealed wide variation for some characteristics (Table 1). For example, lesbian or bisexual women were more likely to be in same-sex marriages than gay or bisexual men, whereas gay or bisexual men were more likely to be in RDPs. Among lesbian, gay, and bisexual persons, non-Hispanic Whites were disproportionately more likely than other ethnicities to be in either type of legally recognized union, as were late middle-aged persons and those with more socioeconomic resources (education, employment, health insurance, income). Such relationship-related disparities were less evident among heterosexuals, although married heterosexuals had more socioeconomic resources than nonmarried heterosexuals.

Association Between Psychological Distress and Relationship Status

Lesbian, gay, and bisexual persons. As shown in Table 2, model 1, same-sex married lesbian, gay, and bisexual persons were significantly less distressed than lesbian, gay, and bisexual persons not in a same-sex legal relationship. The level of distress among lesbian, gay, and bisexual persons in RDPs was not significantly different than that of lesbian, gay, and bisexual persons not in a legal relationship. Model 1 also showed that among lesbian, gay, and bisexual persons, psychological distress was negatively associated with being male, older, and currently employed, whereas it was positively associated with living in a home in which English was the primary language spoken. Model 1 accounted for 16% of the variance in psychological distress.

Heterosexuals. Model 2 in Table 2 shows that married heterosexuals were significantly less distressed than nonmarried heterosexuals. Model 2 also indicated that among heterosexuals, psychological distress was negatively associated with being Asian or Asian Pacific Islander or Hispanic (compared with being non-Hispanic White), being older, having a high school education or more, and being currently employed. Distress was positively associated with living in an urban area, having a household income lower than the median California household income, and reporting fair or poor health. Model 2 accounted for 12% of the variance in psychological distress.

Lesbian, gay, and bisexual persons and heterosexuals pooled. Model 3 in Table 2 shows that psychological distress was lower among married heterosexuals, unmarried heterosexuals, and same-sex married lesbian, gay, and bisexual persons than among lesbian, gay, and bisexual persons not in a legally recognized relationship (the omitted reference group). The estimate for same-sex RDP was not significant. The association between the control variables and psychological distress was nearly identical to model 2 (the heterosexual model).

Adjusted Mean Psychological Distress Scores

Lesbian, gay, and bisexual persons. As shown in Table 3, adjusted pairwise comparisons (controlling for sociodemographics, statistical significance set at $P < .017$ to adjust for 3 comparisons) indicated that psychological distress was significantly higher among persons who were not in any type of same-sex legal union than in those in a same-sex marriage, but not compared with those in an RDP. Differences in mean psychological distress scores between persons in same-sex marriages and RDPs were nonsignificant ($P > .05$).

Heterosexuals. Adjusted pairwise comparisons (controlling for sociodemographics, statistical significance set at $P < .05$ to adjust for 1 comparison) indicated that psychological distress was significantly higher ($P < .001$) among unmarried heterosexuals than among those who were married (Table 3).

Lesbian, gay, and bisexual persons and heterosexuals pooled. The overall mean psychological distress score (adjusted and weighted) for heterosexuals (4.01; SE = 0.10) was significantly ($P < .001$) lower than that for lesbian, gay, and bisexual persons (5.25; SE = 0.26), consistent with previous research.[2] As shown in Table 3, adjusted pairwise comparisons (controlling for sociodemographics, statistical significance set at $P < .005$ to adjust for 10 comparisons) indicated that married heterosexuals had the lowest psychological distress, and lesbian, gay, and bisexual persons who were not in any legalized relationship had the highest psychological distress, a significant difference ($P < .001$). Psychological distress was not significantly distinguishable among same-sex married lesbian, gay, and bisexual persons, lesbian, gay, and bisexual persons in RDPs, and heterosexuals of any marital status. Same-sex

TABLE 1—Weighted Characteristics of California Lesbian, Gay, and Bisexual Persons and Heterosexuals Aged 18–70 Years in 2009 by Legal Relationship Status

	Lesbian, Gay, and Bisexual				Heterosexual		
Characteristics	Total, %	Same-Sex Married (7.13%), %	RDP (12.35%), %	Neither (80.51%), %	Total, %	Different-Sex Married (55.04%), %	Not Married (44.96%), %
Gender							
Male	56.91	43.08	60.99	57.51	49.57	48.67	50.66
Female	43.09	56.92	39.01	42.49	50.43	51.33	49.34
Ethnicity							
Asian or Asian Pacific Islander	10.82	4.89	1.89	12.72	13.65	14.70	12.38
African American	6.14	3.21	2.45	6.97	5.82	3.71	8.41
Hispanic	19.42	1.29	11.52	22.24	25.18	23.06	27.78
Non-Hispanic White	51.58	82.12	76.45	45.06	46.61	50.22	42.20
Other	12.03	8.49	7.69	13.01	8.73	8.31	9.23
Age, y							
18–29	28.63	3.86	12.68	33.27	25.52	7.86	47.13
30–39	25.90	22.70	20.98	26.94	20.15	24.18	15.21
40–49	23.35	30.27	32.21	21.38	22.16	27.53	15.58
50–59	14.13	23.39	23.36	11.90	18.77	23.72	12.72
60–70	7.98	19.79	10.76	6.51	13.41	16.71	9.36
Education							
< high school	6.29	1.61	1.76	7.40	16.03	16.68	15.22
High school	16.05	5.62	6.66	18.41	25.95	21.37	31.55
Some college	31.42	24.09	26.41	32.84	23.77	20.23	28.12
> college degree	46.24	68.68	65.16	41.35	34.25	41.72	25.11
English is primary language spoken at home							
Yes	69.73	90.91	81.84	66.00	56.86	56.54	57.26
No	30.26	9.09	18.16	34.00	43.14	43.46	42.74
Currently employed							
Yes	60.78	72.77	62.57	59.44	60.34	64.07	55.76
No	39.22	27.23	37.43	40.56	39.66	35.93	44.24
Currently has health insurance							
Yes	82.40	94.14	89.59	80.26	80.15	87.03	71.72
No	17.60	5.86	10.41	19.74	19.85	12.96	28.28
Lives in an urban area							
Yes	94.72	96.27	94.69	94.59	92.52	92.25	92.85
No	5.28	3.73	5.31	5.41	7.48	7.75	7.15
Household income below CA median							
Yes	52.44	17.39	22.79	60.09	54.18	43.00	67.87
No	47.56	82.61	77.21	39.91	45.82	57.00	32.13
Self-rated fair or poor health							
Yes	17.70	16.83	16.90	17.90	16.97	16.31	17.78
No	82.30	83.17	83.10	82.10	83.03	83.69	82.22

Note. Neither = neither same-sex married nor RDP; RDP = registered domestic partnership. The unweighted sample sizes were n = 1166 for lesbian, gay, and bisexual persons and 35 608 for heterosexuals.

married lesbian, gay, and bisexual persons were significantly less distressed than were lesbian, gay, and bisexual persons who were not in legal relationships ($P<.001$).

Supplemental Analysis

Because there did not appear to be significant differences in psychological distress between lesbian, gay, and bisexual persons in same-sex marriages and RDPs, supplemental analyses of the lesbian, gay, and bisexual analytical sample were conducted to test associations between each relationship type and

TABLE 2—Parameter Estimates (weighted) for Psychological Distress Among Californians Aged 18–70 Years in 2009

Independent Variables	Model 1: Lesbian, Gay, and Bisexual, b (SE)	Model 2: Heterosexual, b (SE)	Model 3: Pooled Lesbian, Gay, and Bisexual Plus Heterosexual, b (SE)
Legal relationship status			
Lesbian, gay, and bisexual same-sex married[a,b]	−1.55** (0.45)		−1.73*** (0.45)
Lesbian, gay, and bisexual same-sex RDP[a,b]	−0.64 (0.52)		−0.99 (0.56)
Lesbian, gay, and bisexual neither same-sex married nor RDP	. . .		. . .
Heterosexual different-sex married[b,c]		−0.84*** (0.11)	−1.88*** (0.31)
Heterosexual not married[b,c]		. . .	−1.05** (0.31)
Control variables			
Male	−1.03* (0.44)	−0.15 (0.09)	−0.17* (0.08)
Asian or Asian Pacific Islander[d]	0.69 (0.68)	−0.41* (0.18)	−0.37* (0.18)
African American[d]	−0.46 (0.80)	−0.07 (0.26)	−0.08 (0.25)
Hispanic[d]	−0.35 (0.95)	−0.74*** (0.13)	−0.71*** (0.15)
Other ethnicity[d]	−0.67 (0.66)	−0.25 (0.15)	−0.27 (0.15)
Age 30–39 y[e]	0.42 (0.72)	−0.01 (0.17)	−0.00 (0.17)
Age 40–49 y[e]	−0.90 (0.68)	−0.12 (0.15)	−0.16 (0.15)
Age 50–59 y[e]	−1.77** (0.59)	−0.33* (0.16)	−0.36* (0.15)
Age 60–70 y[e]	−2.18*** (0.54)	−1.28*** (0.14)	−1.31*** (0.14)
High school education[f]	−2.16 (1.53)	−0.61** (0.21)	−0.64** (0.20)
Some college[f]	−2.68 (1.48)	−0.64** (0.20)	−0.70** (0.20)
College degree or above[f]	−2.38 (1.59)	−0.73** (0.21)	−0.75** (0.21)
English primary language spoken at home	1.38* (0.56)	−0.06 (0.12)	−0.00 (0.12)
Currently employed	−1.33** (0.43)	−0.52*** (0.11)	−0.53*** (0.11)
Currently has health insurance	0.68 (0.61)	−0.21 (0.15)	−0.19 (0.14)
Lives in an urban area	0.74 (0.49)	0.25* (0.10)	0.25** (0.09)
Household income below CA median	0.70 (0.60)	0.40*** (0.10)	0.41*** (0.10)
Self-rated fair/poor health	1.07 (0.63)	2.29*** (0.14)	2.26*** (0.13)
R^2	0.16	0.12	0.12
F	4.30***	33.35***	31.00***
df[g]	(20,60)	(19,61)	(22,58)

[a]Reference group for Model 1 = lesbian, gay, and bisexual neither same-sex married nor registered domestic partnership (RDP).
[b]Reference group for Model 3 = lesbian, gay, and bisexual persons neither same-sex married nor RDP.
[c]Reference group for Model 2 = heterosexual, not married.
[d]Reference group = non-Hispanic White.
[e]Reference group = age 18–29 years.
[f]Reference group = < high school education.
[g]*df* based on jackknife variance estimation, 80 replications.
*$P \leq .05$; **$P < .01$; ***$P < .001$.

psychological distress when added individually to the adjusted model. Postestimation Wald tests indicated that the association between same-sex marriage and psychological distress was significantly different from 0 ($F[1,79] = 6.98$; $P = .01$), but this was not the case for the association between same-sex RDP and psychological distress ($F[1,79] = 0.01$; $P = .92$). Thus, although direct mental health differences between same-sex marriage and RDP were not detected among lesbian, gay, and bisexual persons, it appears there might be a unique positive mental health association specifically conferred by legal marriage, particularly compared with not being in any type of legally recognized relationship at all.

DISCUSSION

Findings presented here add to the very small body of work aimed at exploring associations between being in a same-sex legal marriage and mental health among sexual minorities. With data from a population-based sample representative of Californians aged 18 to 70 years, we found results similar to those found in small-scale studies. These data suggested that psychological distress might be lower among lesbian, gay, and bisexual persons in same-sex marriages compared with those not in any type of legally recognized same-sex union. This association was statistically significant even when controlling for myriad sociodemographic characteristics related to mental health.

There was no significant difference in psychological distress between persons in

TABLE 3—Psychological Distress Scores (Kessler 6) by Legal Relationship Status among Californians Aged 18–70 Years in 2009, Weighted and Adjusted for Sociodemographic Characteristics

Legal Relationship Status	Lesbian, Gay, and Bisexual,[a] Mean (SE)	Heterosexual,[b] Mean (SE)	Pooled,[c] Mean (SE)
Lesbian, gay, and bisexual same-sex married	3.05 (0.63)		3.78 (0.33)
Lesbian, gay, and bisexual same-sex RDP	3.96 (0.66)		4.52 (0.46)
Lesbian, gay, and bisexual neither same-sex married nor RDP	4.60 (0.46)		5.51 (0.31)
Heterosexual different-sex married		3.65 (0.10)	3.63 (1.00)
Heterosexual not married		4.49 (0.13)	4.46 (0.12)

Note. RDP = registered domestic partnership.
[a]Pairwise comparison: lesbian, gay, and bisexual persons same-sex married differ from lesbian, gay, and bisexual persons neither same-sex married nor RDP ($P = .001$).
[b]Pairwise comparison: heterosexual different-sex married differ from heterosexual not married ($P < .001$).
[c]Pairwise comparisons: lesbian, gay, and bisexual persons same-sex married differ from lesbian, gay, and bisexual persons neither same-sex married nor RDP ($P < .001$); heterosexual different-sex married differ from lesbian, gay, and bisexual neither same-sex married nor RDP ($P < .001$); heterosexual different-sex married differ from heterosexual not married ($P < .001$); heterosexual not married differ from lesbian, gay, and bisexual persons neither same-sex married nor RDP ($P < .001$).

same-sex marriages and RDPs. However, consistent with previous work,[14] supplemental analyses suggested that same-sex marriage might be the more beneficial legal arrangement for lesbian, gay, and bisexual persons in terms of their mental health. Future studies that explore the mechanisms by which this benefit might arise are needed.

Perhaps most importantly, findings additionally indicated that there were no statistically significant differences in psychological distress between heterosexual individuals and same-sex married lesbian, gay, and bisexual persons and lesbian, gay, and bisexual persons in RDPs, and that persons in each of these relationship categories had significantly lower distress scores than did lesbian, gay, and bisexual persons not in any type of legally recognized relationship, net of a range of sociodemographic control variables. Legal recognition of same-sex relationships, legal marriage in particular, thus appeared to have potential to offset mental health disparities between heterosexuals and lesbian, gay, and bisexual persons.

Previous research has suggested that the positive association between psychiatric disorders and being lesbian, gay, or bisexual was stronger in states that did not specifically protect sexual minorities from hate crimes or employment discrimination.[27] In addition, it has been shown that rates of psychiatric disorders actually increased among lesbian, gay, and bisexual persons in states that enacted constitutional amendments to ban same-sex marriage.[28] These associations were hypothesized to stem from social stress derived from institutionalized discrimination, one aspect of sexual minority stress.[8] Our findings were consistent with this work, in that sexual minority stressors, such as stigma, prejudice, internalized homophobia, and identity concealment,[8] might play a role in how same-sex marriage manifests in psychological well-being. Being legally married might negate or "buffer"[29] the mental health impact of these stressors at the individual level and might offset the larger macro-level effects of sanctioned discrimination. Much more research is needed that identifies pathways by which same-sex marriage might affect mental health.

As previously described, we operationalized psychological distress with a continuous version of the K6 to capture the full range of the severity of distress experiences, including subsyndromal symptomatology. The K6 was originally designed to screen for *Diagnostic and Statistical Manual of Mental Disorders-4th Edition* (*DSM-IV*) serious mental illness, defined as any *DSM-IV* mental disorder within a particular time frame, with a cutoff score of 13+ signifying possible serious mental illness.[20] Continuous operationalization of the K6 allowed us to examine associations between legal relationship status and a unit change (i.e., frequency of experiencing symptoms) in nonspecific psychological distress rather than comparing persons at the extreme end of the symptom spectrum from the majority of persons who either were asymptomatic or were symptomatic but did not meet diagnostic screening criteria, an approach that discards information about the full distress continuum. When we reran the adjusted within-group lesbian, gay, and bisexual analysis with the K6 dichotomized and made subsequent pairwise comparisons, the proportion of lesbian, gay, and bisexual persons who were screened as potentially seriously mentally ill did not differ across relationship status. In the pooled analyses, the proportion of persons who met diagnostic criteria did not significantly differ between heterosexuals, lesbian, gay, and bisexual persons in same-sex marriages, and lesbian, gay, and bisexual persons in RDPs, however it did differ between heterosexuals and lesbian, gay, and bisexual persons not in a legally recognized relationship. Thus, even when analyses separated individuals who were most likely to experience a diagnosable disorder from those who were not, legal recognition of same-sex relationships still appeared to diminish known mental health differentials between heterosexuals and lesbian, gay, and bisexual persons.

Study Limitations

Limitations to this investigation included the cross-sectional nature of the analysis, which precluded definitively establishing the causal directions of the observed associations. Longitudinal studies on the health benefits (or lack thereof) of same-sex marriage are needed to clarify the directionality of findings, in particular, reverse causation and selection effects.

Although most longitudinal research suggests that entering into marriage is associated with increases in psychological well-being and decreases in psychological distress among heterosexuals (i.e., no selection effect), the magnitude of this protective effect appears to be smaller than that found in cross-sectional studies,[11] and caution should be used in ascribing a marriage effect to the marital relationship per se. Because the time period during which same-sex couples could marry in California was brief, lesbian, gay, and bisexual persons in relatively good health might have been most likely and able to take advantage of this narrow window of opportunity, enhancing the possibility of a selection of healthier individuals into same-sex marriage.

There was also the possibility that multiple unobserved confounding variables were responsible for the significant same-sex marriage finding. For example, it could be that unmeasured environmental or personality factors attenuated the association between same-sex marriage and psychological distress. In addition, self-reporting of same-sex marriage is subject to bias, and it was possible that some of the legal same-sex marriages actually reported were not legal marriages, but were "marriage-like" relationships, leading to false-positive reports of legal marriages. Such a bias would suggest that the relationship itself matters more to mental health than the legal status of the relationship. Furthermore, marriage dissolution data (widowhood, separation, divorce) were available for heterosexuals but not for lesbian, gay, and bisexual persons, precluding us from systematically comparing mental health differentials among subgroups of nonmarried heterosexuals and lesbian, gay, and bisexual persons. Future studies are needed to examine how marriage dissolution and many other confounding variables might be associated with sexual minority mental health. Marriage tenure was not assessed for either heterosexuals or lesbian, gay, and bisexual persons. It was also likely that some of the "neither same-sex married nor RDP" individuals were in long-term relationships that had no legal recognition: the CHIS did not differentiate these individuals from other lesbian, gay, and bisexual persons, preventing us from partitioning out specific associations for this group.

Conclusions

The findings presented here offer empirical evidence that same-sex marriage might be positively associated with psychological well-being in lesbian, gay, and bisexual persons, and that same-sex marriage might also be associated with the mental health disparity between heterosexuals and lesbian, gay, and bisexual persons. This finding emerged despite the fact that lesbian, gay, and bisexual persons in same-sex marriages, in California and any US state, do not enjoy the same level of social support or government recognition and benefits that those in different-sex marriages do. Given that same-sex marriage was the better predictor of psychological well-being than same-sex RDP, these findings suggest that potential mental health benefits might incrementally accrue with access to relationships that offer greater degrees of social and legal recognition. Mental health benefits of same-sex marriage might in part be derived from a heightened sense of social inclusion concomitant with the social institution of marriage.[30] Given these results, researchers should continue to examine the potential health benefits of legalizing same-sex marriage nationwide and re-legalizing same-sex marriage in California. In short, this research showed that same-sex marriage among lesbian, gay, and bisexual persons in the United States is at least in part a public health concern. ■

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Contributors

R. G. Wight designed the study, designed the analytic strategy, conducted the data analysis, and wrote the article. A. J. LeBlanc assisted with the study design, writing of the article, and article preparation. M. V. L. Badgett assisted with the study design, the analytic strategy, and article preparation.

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Human Participant Protection

This research was approved by the University of California, Los Angeles, Office for the Protection of Research Subjects.

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