Relationship Status-Based Health Disparities during the COVID-19 Pandemic

Mieke Beth Thomeer

Abstract
Previous research finds that marriage is a privileged family form with health benefits. These health advantages may have shifted during the pandemic, as more time was spent at home and resources strained. This study compares differences in three health outcomes across relationship statuses between April and December 2020 using a nationally-representative US survey, the Household Pulse Survey (N = 1,422,733). As the pandemic progressed, larger differences emerged when comparing married and never married respondents' probabilities of fair or poor health, depression, and anxiety as never married people had the steepest decline in health, even adjusting for pandemic-related stressors (e.g., food insufficiency). Yet, widowed and divorced/separated respondents' greater probabilities of these three health outcomes compared to married respondents narrowed over this same period. During the pandemic, relationship status and self-rated health patterns were similar for men and women, but for mental health there was evidence that the growing advantage of marriage relative to never being married was more pronounced for men, whereas the shrinking advantage of marriage relative to being previously married was more pronounced for women. This study identifies the unique health needs for never married adults during the pandemic, demonstrating that social conditions around the pandemic likely exacerbated health disparities by relationship status.

Keywords
relationship status, health and illness, mental health, stressors, gender

Family structure—and specifically relationship status—is a key social factor associated with health (Umberson & Thomeer 2020). Previous research has identified robust associations between relationship status and health across multiple outcomes, finding that on average married adults are healthier and live longer than non-married adults (Idler, Boulifard, & Contrada 2012; Liu et al. 2020; Rendall et al. 2011). The association between relationship status and health is at least partially driven by economic pathways, which provide a buffer against the negative health impact of stressors—perhaps especially during crisis periods (Thoits 2011). Yet the link between

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intimate relationships and health is complicated in a number of ways. To name two, first, the association between relationship status and health differs across time. Some evidence suggests that both the health benefits from marriage and the health costs from singleness have declined over the last several decades, likely reflecting the changing rates and meanings of marriage (Liu & Umberson 2008), but other evidence demonstrates that the relative health of never married adults has worsened over time (Lamidi 2020). Second, within different-sex marriages, some studies find that men experience more health benefits from marriage than women and that marital dissolution (i.e., divorce, death of a spouse) is more detrimental for men’s health (Liu et al. 2020; Shor et al. 2012).

These two points demonstrate what social scientists have long known—that the association between relationship status and health is driven by social contexts. There are some environments in which marriage may be especially beneficial for health or in which being divorced or widowed or never having married would be particularly costly, other environments in which marriage would be harmful for health, and still other environments in which differences in the costs or benefits of specific relationship statuses would be muted or non-existent. This study draws attention to comparisons of differences in the association between relationship status and health during the first several months of the COVID-19 pandemic (April-December 2020). The association between relationship status and health was potentially heightened during the pandemic, as people spent more time at home and relied on family members—including spouses—as a major part of their social safety net (Thomeer, Yahirun, & Colón-López 2020). This could mean that married people would experience more of a cumulative health benefit during the pandemic relative to widowed, divorced/separated, and never married people, both because of married people’s access to social and economic resources from their spouse and because of non-married people’s restricted access to these same resources (Jace & Makridis 2021; Prime, Wade, & Brown 2020; Thomeer et al. 2020). Alternatively, married people’s health may have been more disadvantaged over the pandemic relative to non-married people due to increased marital strains and conflicts (Pietromonaco & Overall 2020). This study analyzes data from 1,422,733 adults in the Household Pulse Survey (HPS; April–December, 2020), a US Census Bureau-administered nationally representative probability sample, and estimates how the associations between relationship status and three health indicators (self-rated health, depression, and anxiety) compared across the pandemic and whether these associations differed by gender.

Background

Relationship Status and Health during the COVID-19 Pandemic

The first research question asks, How did the associations between relationship status and health differ from April to December 2020? Families act as a central institution through which resources are distributed and organized, with some family forms advantaged compared to others due to the specific social, political, and economic environments in which families are embedded (Berger & Carlson 2020). Compared to being divorced/separated, widowed, or never married, being married has been identified by previous research as a relatively privileged family form, translating into better mental, physical, and cognitive health and longer life expectancy on average (Idler, Boulifard, & Contrada 2012; Liu et al. 2020; Rendall et al. 2011). For example, a recent analysis of the Medicare Health Outcomes Survey found that married men’s active life expectancy at age 65 was 2.4 years longer than non-married men’s (Jia & Lubetkin 2020).

Complicating our understanding of the current associations between relationship status and health, however, is the rapid societal change experienced in 2020 during the COVID-19 pandemic. The COVID-19
pandemic brought multiple shocks throughout the population which likely had differential impacts across relationship statuses (Jace & Makridis 2021; Prime, Wade, & Brown 2020; Thomeer et al. 2020). As two examples of pandemic-related stressors during the pandemic, a Kaiser poll in early April 2020 found 39% of respondents had lost a job or income (Kirzinger et al. 2020), and an analysis of the HPS found that before 13 March 2020 about 30% of US households were food insecure compared to 43% in late April 2020 (Morales, Morales, & Beltron 2020). These stressors negatively impacted well-being (Zheng et al. 2021); for example, recent evidence from during the pandemic indicates that rates of depression and anxiety were higher for those who have experienced loss of income (Donnelly & Farina 2021) with this most impactful for non-married adults (Jace & Makridis 2021).

Although previous studies have identified that married adults experienced a health advantage during the COVID-19 pandemic (Hearne 2021; Jace & Makridis 2021), less attention has been paid to how that health advantage may have shifted as the pandemic progressed. Yet there are reasons to expect that health disparities by relationship status were dynamic during the early pandemic months. Notably, pandemic-related stressors were dynamic over time—for example, the unemployment rate increased from 3.5% in February 2020 to 14.7% in April but fell to 6.9% in October (BLS 2020). I propose several hypotheses for how the association between relationship status and health might have differed across the pandemic. The possible patterns suggested by each hypothesis are illustrated in Figure 1.

First, Hypothesis 1 states that health disparities between married and non-married groups would widen between April and December 2020 due to married couples being able to build their existing health advantage over time and non-married adults accumulating disadvantage (Dannefer 2003; Umberson and Thomeer 2020). The pandemic period was generally characterized by increased reliance on families, giving adults with a spouse a potential health-related benefit within the pandemic context (Jace & Makridis 2021; Thomeer et al. 2020). Studies prior to the pandemic demonstrate that spouses often provide each other with emotional, instrumental, and financial support, as well as physical touch and sexual intimacy, which all buffer against stress and lower the risk of poor health and disease (Burleson et al. 2013; Idler et al. 2012; Reczek et al., 2018). Given that stressors have been especially prevalent during the pandemic and opportunities for physical contact and intimacy limited (Kirzinger et al. 2020; Thomas and Kim 2021), support and other resources from a spouse may have served

![Figure 1](image_url)

**Figure 1.** Hypotheses for differences in association between relationship statuses and health outcomes between April–December 2020.
as important protective factors for the married, with these protections building over time. Spouses also provide each other with caregiving and social control, meaning they look after each other during illnesses and work to improve one another’s health habits (see Thomeer & Clark 2021 for overview). The pandemic brought new need for caregiving support, generally to the benefit of the married. The pandemic also contributed increased importance to existing and new health behaviors (e.g., wash hands, stay home when sick, wear a mask, and schedule a COVID-19 test), such that social control from a spouse may have provided important reminders when navigating this environment—again to the cumulative benefit of married adults.

Supporting this possibility of widening disparities between married and non-married adults between April and December 2020, there were also processes among previously and never married people that might mean the health costs of the pandemic were most detrimental for the health of these groups. During the pandemic, public health officials cautioned against extra-familial social interactions, even warning against extended family gatherings, and public communal spaces such as bars and churches, which may have held special importance for non-married adults as primary spots for socializing, were shut down around the US (Thomeer et al. 2020). The social conditions around the pandemic increased social isolation and loneliness within society (Ray 2021; van Mulukom et al. 2020), perhaps especially for the non-married, and consequently may have increased health disparities by relationship status.

Second, as an alternative hypothesis (Hypothesis 2), health disparities between married and non-married groups may have narrowed as the pandemic progressed due to the pandemic contributing to an environment where fewer benefits—and more strains—were affiliated with marriage. Previous research on marriage indicates that external stressors negatively impact the quality and stability of couples’ relationships (Conger et al. 1990; Ross et al. 2020). The COVID-19 pandemic and its related stressors (e.g., income loss, food insecurity) likely had a large negative impact on marital quality for many couples, increasing strain and conflict and decreasing support provisions with this worsening over time (Pietromonaco & Overall 2020). As mentioned, the pandemic increased loneliness and social isolation across groups (van Mulukom et al. 2020), even among the married, and being isolated together as a married couple may have increased tension within the relationship, reducing the health benefits of marriage. A decline in marital quality due to the stress of the pandemic would likely contribute to a dampening of the health benefits of marriage relative to widowed, divorced/separated, and never married populations, given the strong link between marital quality and health (Robles et al. 2014).

Finally, as a third hypothesis (Hypothesis 3), differences in the association between relationship status and health over the pandemic may be non-linear, linked to general trends in COVID-19 infection and hospitalization rates. Between April and December 2020, the US experienced multiple “waves” of infections and hospitalizations, with the first wave beginning in the spring and declining in the early summer, the second wave beginning mid-summer and declining in the late summer/early fall, and the third wave beginning mid-summer and declining in the late summer/early fall, and the third wave beginning in late fall and continuing through the early winter (Parker 2021). Following the logic of Hypothesis 1, it may be that the health gap between married and non-married adults was largest when the infections and hospitalization rates were at their relative peaks—or approximately April (Wave 1), mid-June-July (Wave 2), and November-December (Wave 3) in 2020—as these were periods in which the benefits to married adults discussed above (e.g., social support, social control, and caregiving availability) may have been most salient (Hypothesis 3a). But following Hypothesis 2, the health gap may be the smallest during those same months, or even see crossover where non-married adults exhibit better health than married adults, as the pandemic peaks may be associated with more strains on marriages to the disadvantage of married people’s health (Hypothesis 3b).
Gender

The second research question asks, (How) do shifts in the associations between relationship status and health vary for men compared to women from April to December 2020? Traditional research on different-sex marriages and health posits that marriage benefits the well-being of men more than women (Bernard 1982; Gove 1984), although empirical support for this conclusion has been mixed. Some studies do find that relationship status differences in health are larger for men than for women (Liu et al. 2020; Shor et al. 2012), but others find no gender differences (Idler et al. 2012; Lawrence et al. 2019) or larger differences among women (Alcaraz et al. 2019; Bulloch et al. 2017). Explanations for why relationship status would matter more for the health of men than women often draw on feminist perspectives, such as Bernard’s (1982) framework of his and hers marriages which says men and women within the same marriage experience two different marriages. Studies support this in two ways. First, on average within different-sex marriages, men benefit from their spouse doing more unpaid work (e.g., housework and emotion work) and providing social support and social control, whereas women experience stress from providing these benefits to their spouse without receiving much in kind (Calarco et al. 2020; Reczek et al. 2018). Second, women tend to report worse marital quality, including more relational conflict and more stress, than men (Yu & Liu 2020). Given that unpaid work provisions and low relationship quality are negatively associated with multiple health outcomes (Umberson et al. 2020; Yu & Liu 2020), it makes sense that marriage would provide fewer health benefits to women, including during the pandemic.

Based on this research, I expect men’s greater benefit from marriage compared to women would grow larger as the COVID-19 pandemic progressed. Married women experienced more pandemic-related stressors than married men during the pandemic, as seen in married women’s higher rates of exiting the workforce, reducing their work hours, and increasing their housework and childcare (Calarco et al. 2020; Carlson et al. 2020; Collins et al. 2021). Similarly, as discussed above regarding the unique importance of social support and social control during the COVID-19 pandemic, married men likely receive more of these benefits within marriage than women.

Method

I analyze the Household Pulse Survey (HPS; 21 time points between April and December 2020; https://www.census.gov/data/experimental-data-products/household-pulse-survey.html), a survey designed to monitor the health of the US adult population through collection and analysis of data on a broad range of health topics. The HPS is a cross-sectional household interview survey administered by the US Census Bureau, focused on non-institutionalized US adults residing in all 50 states and DC using the sampling frame of housing units from the Census Bureau’s Master Address File (MAF). Because of COVID-19 risks such that interviews had to be conducted over the internet, the HPS sampling frame only included households where at least one email address or cell phone number was known. The analytic sample was 1,422,733 adults for the self-rated health outcome, 1,417,604 for the depression outcome, and 1,418,450 for the anxiety outcome.

Measures

Health outcomes. Self-rated health was measured by asking, “Would you say your health in general is excellent, very good, good, fair, or poor?” I constructed self-rated health as dichotomous, comparing those who rated their health as fair or poor to all other respondents, consistent with previous studies (Donnelly & Farina 2021; Lamidi 2020). Depressive symptoms were assessed using the Patient Health Questionnaire 2-item (PHQ-2) which included two items, asking how often in the past 7 days respondents experienced “having little interest or pleasure in doing things” and “feeling down,
depressed, or hopeless.” Response choices were not at all (0), several days (1), more than half the days (2), and nearly every day (3), and responses for the two items were added together such that the values ranged from 0–6. Anxiety was assessed using the Generalized Anxiety Disorder 2-item (GAD-2) which asked respondents how often in the past seven days they experienced “feeling nervous, anxious, or on edge” and “not being able to stop or control worrying,” with the same four response choices as the PHQ-2. Responses were added together, again ranging from 0 to 6. Both measures were analyzed as dichotomous indicators, such that a score of three or greater was categorized as having depression or anxiety, consistent with previous studies (Donnelly & Farina 2021; Twenge & Joiner 2020) and in line with research indicating that this cutoff on the PHQ-2 is associated with diagnosis of major depressive disorder and on the GAD-2 with diagnosis of generalized anxiety disorder (Staples et al. 2019). Supplementary analysis showed that treating PHQ-2 and GAD-2 as continuous led to similar conclusions.

**Relationship status.** Respondents were asked whether they were now married, widowed, divorced, separated, or never married. I created four categories: married, widowed, divorced/separated, and never married. Because of limitations with the HPS, I was not able to identify cohabiting adults within the non-married categories.

**Time period.** I modeled time period in two ways: as a continuous measure using survey week and as a categorical measure using approximate “COVID-19 Wave.” For survey week, I assigned each wave a number in our analysis representing the approximate week of the survey, beginning with “1” for April 23–May 5 through “34” for December 9–21. For wave, I considered approximate date of each pandemic wave (and between waves) based on previous epidemiological estimates (Parker 2021). Wave 1 roughly occurred in April 2020, Wave 2 mid-June to July 2020, and Wave 3 from November 2020 to January 2021. Given data limitations, I include four categories: Between Waves 1 and 2 (April 23–June 16), Wave 2 (June 18–July 21), between Waves 2 and 3 (August 19–October 26), and Wave 3 (October 28–December 21). Week numbers and wave categories, along with the date range of survey and sample sizes, are shown in Supplemental Table A.

**Pandemic-related stressors and other covariates.** All models adjust for pandemic-related stressors (income loss, food insufficiency, delaying medical care due to the pandemic, and housing payment issues) and sociodemographic variables (gender, respondent’s age, race/ethnicity, educational attainment, household income, and whether any children under the age of 18 in the household). Previous studies have identified the importance of these pandemic-related stressors and these sociodemographic indicators in the association between relationship status and health (Hearne 2021; Jace & Makridis 2021; Liu & Umberson 2008; Wölfl & Thomeer 2021). For income loss, respondents were asked, “Have you, or has anyone in your household, experienced a loss of employment income since March 13, 2020?” and “Do you expect that you or anyone in your household will experience a loss of employment income in the next 4 weeks because of the coronavirus pandemic?” If respondents responded yes to either question, they were coded as 1 for income loss, and if they responded no to both questions, 0. As an important note, for the first question, respondents who were interviewed later in the study period (e.g., December compared to April) had a greater cumulative risk of experiencing loss of employment income, given the wording of the question. For food insufficiency, respondents were asked, “In the last 7 days, which of these statements best describes the food eaten in your household?” Respondents who selected, “Sometimes not enough to eat” or “Often not enough to eat” were coded as having food insufficiency. For delayed medical care, respondents were asked, “At any time in the last 4 weeks, did you delay getting medical care
because of the coronavirus pandemic?" and “At any time in the last 4 weeks, did you need medical care for something other than coronavirus, but did not get it because of the coronavirus pandemic?” If they selected “yes” for either question, they were categorized as delaying medical care due to the pandemic. For housing issues, respondents were asked whether they had to pay a monthly mortgage or rent and, if yes, if they paid last month’s mortgage or rent on time and if they had confidence in paying it on time next month. Respondents without a monthly mortgage or rent or who had a mortgage or rent but had paid last month on time and had high or moderate confidence in paying their mortgage or rent were coded as 0, and respondents with no or slight confidence in paying their mortgage or rent or who had been late the previous month were coded as 1. Respondents who had been permitted to defer mortgage or rent payment were also coded as 0.

For gender, respondents were asked whether they were male or female. For ease of discussion, I refer to males as men and females as women throughout this study. Age in years was a continuous variable, from 18 to 89 (top coded at 89). I include both age and age-squared due to the non-linear association between age and the health outcomes (Le & Nguyen 2021). Race/ethnicity included five categories: (non-Hispanic) White, (non-Hispanic) Black, Hispanic, Asian, and Other, with “Other” including multi-racial respondents. For educational attainment, I created four categories: “less than high school,” “high school” (including GED), “some college,” and “college degree or more.” For household income, respondents were asked, “In 2019 what was your total household income before taxes?” and chose from eight categories. I collapsed these into four categories: “less than $35,000,” “between $35,000 and $74,999,” “between $75,000 and $149,999,” and “$150,000 or more.” For co-residential children under 18, respondents reported the number of people under 18 years currently living in their household, and responses were coded as 0 for no people under 18 and 1 if any.

### Analytic Strategy

Analyses were conducted using Stata/SE 16.0, and regression results were weighted with sampling weights and 80 replicate weights from the HPS to adjust for nonresponse, different sampling probabilities, and complex survey design (Peterson et al. 2021). This weighting strategy allows the estimates to match Census Bureau estimates of the population by age, gender, race/ethnicity, and educational attainment. Because the study used 21 time points, these weights were further adjusted to take into account the pooling of data (US Census Bureau 2021). I first calculated unweighted descriptive statistics, stratified by relationship status. For the first research question, I used logistic regression models to estimate how relationship status was associated with the odds of fair/poor health, depression, and anxiety in between April and December 2020. In these models, I adjusted for the sociodemographic and pandemic-related stressor covariates (described above). These models included the interaction terms (i.e., product terms) between relationship status and time period. I first estimated this treating time as a continuous variable (survey week), and then as a categorical variable (COVID-19 infection waves). Next, I used the estimates from these models to generate predicted probabilities (holding covariates at their mean value) that demonstrated the association between relationship status and each health outcome across the pandemic period (Mize 2019). I used pairwise comparisons to test for differences between the estimates at both time points at the 95% confidence level. To address the second research question, I added interactions terms between gender, relationship status, and time period. Similar to my approach for the first research question, I used the estimates from the previous models to generate predicted probabilities that demonstrated the association between relationship status and each health outcome for men compared to women between April and December 2020.

For all analysis, I excluded respondents who were missing on relationship status (n = 6204).
and the specific health outcome of focus in that model. I used the imputations provided by the Census Bureau for birth year, gender, race/ethnicity, educational attainment, and number of children and adults in household (Peterson et al. 2021).

**Results**

In the sample, 15.04% of respondents reported fair/poor self-rated health, 22.40% categorized as having depression, and 31.50% anxiety. As Figure 2 shows, the proportion of respondents reporting fair or poor health and having depression and anxiety was largest in Waves 2 and 3 (largest in Wave 3) and smallest between the waves. Descriptive statistics (unweighted) are presented in Table 1, stratified by relationship status. Married respondents have the lowest rates of fair/poor self-rated health and depression compared to the other three groups, and married and widowed respondents have similar rates of anxiety (lower than divorced/separated and never married respondents). The worst mental health (proportion of group with depression or anxiety) is seen among divorced/separated respondents. Compared to married respondents, more divorced/separated and never married respondents reported each of the pandemic-related stressors (lost income, food insufficiency, delayed medical care, and issues with paying for housing), and more widowed respondents reported food insufficiency but fewer widowed respondents reported lost income, delayed medical care, and issues with paying for housing.

I use the regression analysis to address the question, How did the associations between relationship status and health differ from April to December 2020? First, I consider time (i.e., survey week) as linear, with results including interaction terms between relationship status and survey month shown in Table 2 (Models 1–3) and the estimated trends based on predicted probabilities derived from these coefficients shown in Figures 3–5. Models demonstrate variation across survey weeks in how relationship status is associated with fair/poor health, depression, and anxiety. Probabilities of fair/poor health, depression, and anxiety increased for all relationship status groups across the study period, with this increase most modest for widowed adults and steepest for never married adults. Consequently, across all three outcomes,
there was a widening of the gap between married and never married adults, such that never married respondents had increased probabilities of fair/poor health, depression, and anxiety relative to married adults (as well as divorced/separated and widowed adults) as the pandemic progressed (April to December 2020). For example, for self-rated health, in the first weeks of the study period (April 23–May 5), married respondents’ predicted probability of reporting fair/poor health was 0.15 and never married respondents’ 0.16, a difference of 0.01. But in the last weeks of the study period (December 9–21), married respondents’ probability increased

Table 1. Descriptive Information of Analytic Sample, Means (With Standard Deviations) and Proportions (Household Pulse Survey; April–December 2020; N = 1,422,733*).

|                        | Married (reference) (58%) | Widowed (5%) | Divorced or separated (17%) | Never married (20%) |
|------------------------|---------------------------|--------------|-----------------------------|---------------------|
| Fair or poor self-rated health | 0.12 | 0.23 | 0.22 | 0.17 |
| Depression (3 or more)   | 0.17 | 0.22 | 0.29 | 0.32 |
| Anxiety (3 or more)      | 0.27 | 0.26 | 0.37 | 0.41 |
| Woman                   | 0.55 | 0.77 | 0.69 | 0.60 |
| Race/Ethnicity           |               |              |                             |                     |
| White (reference)        | 0.79 | 0.82 | 0.75 | 0.65 |
| Black                   | 0.05 | 0.07 | 0.09 | 0.13 |
| Hispanic                | 0.08 | 0.05 | 0.09 | 0.11 |
| Asian                   | 0.05 | 0.02 | 0.03 | 0.06 |
| Other                   | 0.03 | 0.03 | 0.04 | 0.05 |
| Age                     | 52.58 (0.02) | 69.01 (0.04) | 55.66 (0.03) | 39.03 (0.03) |
| Education               |               |              |                             |                     |
| Less than high school (reference) | 0.01 | 0.02 | 0.03 | 0.03 |
| High school             | 0.10 | 0.17 | 0.14 | 0.13 |
| Some college            | 0.29 | 0.38 | 0.39 | 0.33 |
| College degree          | 0.60 | 0.43 | 0.45 | 0.51 |
| Household income in 2018 (NHIS) or 2019 (HPS) |       |     |     |     |
| Less than $35K (reference) | 0.09 | 0.37 | 0.35 | 0.33 |
| Between $35K and $74K    | 0.26 | 0.37 | 0.36 | 0.32 |
| Between $75K and $149K   | 0.40 | 0.21 | 0.22 | 0.24 |
| $150K or more            | 0.27 | 0.06 | 0.07 | 0.09 |
| Any coresidential kids under 18 | 0.43 | 0.17 | 0.31 | 0.24 |
| Week                    | 15.69 (0.01) | 16.07 (0.04) | 15.60 (0.02) | 15.39 (0.02) |
| Pandemic-related stressors (HPS only) |       |     |     |     |
| Any lost income since March 2020 | 0.40 | 0.27 | 0.45 | 0.49 |
| Any food insufficiency in last 7 days | 0.04 | 0.06 | 0.12 | 0.11 |
| Delayed medical care because of pandemic | 0.43 | 0.40 | 0.47 | 0.43 |
| Issues with paying mortgage or rent | 0.09 | 0.08 | 0.17 | 0.17 |

*Sample size for all variables except depression (N = 1,417,604) and anxiety (N = 1,418,450). Unweighted.
to 0.21 and never married respondents to 0.26—a difference of 0.05, five times greater than the difference observed in the first week. In fact, by the end of the study period, never married adults had the highest probability of reporting fair/poor health, despite having the second lowest probability at the beginning of the study period. This provides support for Hypothesis 1.

Table 2. Logistic Regression Models Predicting Fair or Poor Self-Rated Health, Depression, and Anxiety for U.S. Adults (Household Pulse Survey, April-December 2020); Odds Ratio With Confidence Intervals in Parentheses.

|                        | Fair or Poor Health | Depression | Anxiety |
|------------------------|---------------------|------------|---------|
|                        | Model 1             | Model 2    | Model 3 |
| Marital status         |                     |            |         |
| Married (reference)    |                     |            |         |
| Widowed                | 1.43*** (1.35; 1.50) |            |         |
| Divorced/separated     | 1.34*** (1.30; 1.39) | 1.45*** (1.42; 1.49) | 1.29*** (1.26; 1.32) |
| Never married          | 1.08*** (1.05; 1.12) | 1.36*** (1.34; 1.39) | 1.17*** (1.14; 1.20) |
| Survey week            | 1.01*** (1.01; 1.01) | 1.01*** (1.01; 1.01) | 1.01*** (1.01; 1.01) |
| Woman                  | 1.06*** (1.05; 1.07) | 1.14*** (1.12; 1.15) | 1.44*** (1.42; 1.45) |
| Race/Ethnicity         |                     |            |         |
| White (reference)      |                     |            |         |
| Black                  | 1.08*** (1.06; 1.10) | 0.82*** (0.81; 0.83) | 0.71*** (0.70; 0.72) |
| Hispanic               | 1.14*** (1.12; 1.16) | 0.84*** (0.83; 0.85) | 0.81*** (0.80; 0.83) |
| Asian                  | 1.05*** (1.02; 1.08) | 0.90*** (0.88; 0.92) | 0.69*** (0.67; 0.70) |
| Other race/ethnicity   | 1.25*** (1.21; 1.28) | 1.07*** (1.05; 1.10) | 1.05*** (1.03; 1.07) |
| Age                    | 1.04*** (1.04; 1.05) | 0.98*** (0.98; 0.98) | 1.00 (1.00; 1.00) |
| Age-squared            | 0.99*** (0.99; 0.99) | 1.01*** (1.01; 1.01) | 0.99*** (0.99; 0.99) |
| Education              |                     |            |         |
| Less than high school  |                     |            |         |
| (reference)            | 0.71*** (0.69; 0.73) | 0.91*** (0.89; 0.94) | 0.95*** (0.92; 0.97) |
| High school            | 0.62*** (0.60; 0.63) | 0.93*** (0.90; 0.95) | 1.03*** (1.01; 1.06) |
| Some college           | 0.38*** (0.37; 0.39) | 0.73*** (0.71; 0.75) | 1.02 (1.00; 1.05) |
| College degree         |                     |            |         |
| Household income in 2019 |                   |            |         |
| Less than $35K (reference) |                 |            |         |
| Between $35K and $74K  | 0.63*** (0.63; 0.64) | 0.85*** (0.84; 0.86) | 0.91*** (0.90; 0.92) |
| Between $75K and $149K | 0.41*** (0.41; 0.42) | 0.72*** (0.71; 0.73) | 0.81*** (0.80; 0.82) |
| $150K or more          | 0.26*** (0.25; 0.27) | 0.58*** (0.57; 0.59) | 0.69*** (0.68; 0.71) |
| Any coresidential kids | 0.87*** (0.86; 0.88) | 0.83*** (0.82; 0.84) | 0.90*** (0.89; 0.92) |
| under 18               |                     |            |         |
| Pandemic-related stressors |              |            |         |
| Any lost income since March 2020 | 1.16*** (1.14; 1.17) | 1.58*** (1.57; 1.60) | 1.66*** (1.64; 1.68) |
| Food insufficiency in last 7 days | 2.24*** (2.20; 2.28) | 2.43*** (2.39; 2.48) | 2.38*** (2.35; 2.42) |
| Delayed medical care because of pandemic | 2.31*** (2.28; 2.33) | 2.35*** (2.33; 2.38) | 2.47*** (2.45; 2.50) |
| Issues with paying mortgage or rent | 1.40*** (1.38; 1.42) | 1.46*** (1.44; 1.48) | 1.52*** (1.50; 1.54) |
| Interactions with time |                     |            |         |
| Week*Widowed           | 0.99*** (0.99; 0.99) | 0.99*** (0.99; 0.99) | 0.99*** (0.99; 0.99) |
| Week*Divorced/Separated | 0.99*** (0.99; 0.99) | 0.99*** (0.99; 0.99) | 0.99*** (0.99; 0.99) |
| Week*Never married     | 1.01*** (1.01; 1.01) | 1.01*** (1.01; 1.01) | 1.01*** (1.01; 1.01) |
| N                      | 1,422,733           | 1,417,604  | 1,418,450 |

Weighted using sampling and replicate weights; *p < 0.05; **p < 0.01; ***p < 0.001.
At the same time, and in partial support for Hypothesis 2, for probability of all three health outcomes, there was a slight narrowing of the difference between married and previously married respondents across the study period, with this most pronounced when considering fair/poor health. For example, in the first weeks (April 23–May 5), the difference in married respondents’ and divorced/separated respondents’ probability of fair/poor health was 0.04 and in married and widowed respondents’ probability was 0.05, but by the last week these probabilities had narrowed to 0.02 and 0.01, respectively. These findings indicate that the increase in predicted probabilities of fair/poor health, depression, and anxiety from April to December 2020 was steeper among married respondents than among divorced/separated and widowed respondents (although still steepest for never married adults).

Next, I considered Hypothesis 3a and 3b, that trends in the association between relationship status and health were non-linear. Regression models showing interactions between pandemic waves as a categorical variable (with “between Waves 1 and 2” as the reference) and relationship status are shown in Supplemental Table B, with the predicted probabilities estimated from these models shown in Table 3. The difference between never married and married people in all three health outcomes is larger between Waves 2 and 3 and in Wave 3 compared to between Waves 1 and 2. For example, between Waves 1 and 2, married adults had a predicted probability of 0.12 of fair/poor health and never married adults’ predicted probability was 0.13 (a small but statistically significant difference of 0.01; \(p < .001\)), but by Wave 3, married adults’ predicted probability was 0.16 never married adults’ 0.21 (a difference of 0.05, five times greater than the difference between Waves 1 and 2—similar to what was seen when treating time as linear). In other words, in general, the

Figure 3. Estimated Trends in Reporting Fair or Poor Health by Relationship Status, Household. Pulse Survey, April-December 2020; N = 1,422,733. Weighted using sampling and replicate weights. Post-estimation values were calculated using parameter estimates from logistic regression models adjusting for gender, age, age-squared, race/ethnicity, educational attainment, household income, coresidence with minor child, week of survey, loss of income, food insufficiency, delaying medical care, and housing payment issues (Model 1) in Table 2. Covariates held at their means.
health difference between married and never married adults was larger in the later months than in the earlier months, providing some support for Hypothesis 1.

At the same time, again providing some support for Hypothesis 2, when comparing the differences in fair/poor health, there is evidence of a narrowing of the difference between married and previously married respondents, consistent with those shown in models treating time as continuous. Namely, the difference in probabilities of fair/poor health between married and widowed respondents and married and divorced/separated respondents was largest between Waves 1 and 2 but smallest by Wave 3.

I finally ask, (How) do shifts in the associations between relationship status and health vary for men compared to women from April to December 2020? Based on models with interactions between gender and relationship status models, shown in Supplemental Table C with the linear measure of time, and the predicted probability estimates shown in Table 4 by gender comparing the first week of the survey to the last week, differences in patterns of relationship status and health over the pandemic, discussed above, demonstrate some gender differences that are small substantively but statistically significant. The growth in the difference in depression for married compared to never married respondents is larger for men than for women, with the difference for married and never married women growing by about 33% and the difference for the same groups of men growing by about 57%. At the same time, the narrowing in the difference in depression and anxiety for married compared to divorced/separated respondents was more pronounced for women than for men. For both mental health outcomes, the increase in probabilities is steeper for married women compared to married men. These analyses also demonstrated that the gap between married and never married
respondents in probability of anxiety was greater for women than for men, although this difference was consistent across the study period.

**Discussion**

The COVID-19 virus directly caused an enormous number of infections, chronic health conditions, and deaths (Verdery et al. 2020). Additionally, because of the social conditions surrounding the pandemic, including job furloughs, an economic recession, the closing and re-opening of schools, public policies (e.g., unemployment benefits and stay-at-home orders), strains on the healthcare systems, distrust in government and scientists, and increased social isolation, the COVID-19 pandemic also indirectly contributed to poor mental and physical health across the population (Donnelly & Farina 2021; Jace & Makridis 2021; Manning et al. 2021; Twenge & Joiner 2020). Neither the direct nor the indirect health issues related to the COVID-19 pandemic have been experienced equally across the population. Rather, social scientists have produced evidence-based analysis of health disparities during the COVID-19 pandemic, showing that the pandemic has been much more detrimental for people who face disadvantage and discrimination within society due to structural systems of racism, sexism, and classism as well as other oppressive forces (Garcia et al., 2021; Hearne 2021; Laster Pirtle & Wright 2021; Thomeer, Moody, & Yahirun 2022; Yancy 2020).

This present study contributes to this discussion by considering health disparities related to relationship status during the COVID-19 pandemic, analyzing a large representative sample of people in the US from April to December 2020. In line with other studies conducted prior to the pandemic (Idler, Boulifard, & Contrada 2012; Liu et al. 2020;
### Table 3. Predicted Probability of Health Outcomes by Pandemic Waves (Confidence Intervals in Parentheses; Household Pulse Survey, April-December 2020)

|                      | Between waves 1 and 2 | Wave 2 | Between waves 2 and 3 | Wave 3 |
|----------------------|-----------------------|--------|-----------------------|--------|
|                      | Pr(Fair-poor health)  |         | Pr(Fair-poor health)  |         | Pr(Fair-poor health)  |         | Pr(Fair-poor health)  |         |
| Pairwise comparison: | v. Married            |        | v. Married            |        | v. Married            |        | v. Married            |        |
| Married              | 0.12 (0.12; 0.12)     | 0.14 (0.14; 0.14) | 0.15 (0.15; 0.16)     | 0.15 (0.16; 0.16) |
| Widowed              | 0.16 (0.15; 0.16)     | 0.17 (0.17; 0.18) | 0.18 (0.17; 0.19)     | 0.18 (0.18; 0.19) |
| Divorced/Separated   | 0.15 (0.15; 0.16)     | 0.16 (0.16; 0.17) | 0.18 (0.18; 0.19)     | 0.18 (0.18; 0.19) |
| Never married        | 0.13 (0.13; 0.13)     | 0.15 (0.15; 0.16) | 0.16 (0.16; 0.17)     | 0.16 (0.17; 0.18) |
|                      |                       |         |                       |        |
|                      | Pr(Deprivation)       |         | Pr(Deprivation)       |         | Pr(Deprivation)       |         | Pr(Deprivation)       |         |
| Pairwise comparison: | v. Married            |        | v. Married            |        | v. Married            |        | v. Married            |        |
| Married              | 0.19 (0.19; 0.19)     | 0.21 (0.21; 0.21) | 0.21 (0.21; 0.21)     | 0.24 (0.24; 0.25) |
| Widowed              | 0.25 (0.24; 0.26)     | 0.29 (0.28; 0.30) | 0.27 (0.26; 0.27)     | 0.30 (0.29; 0.31) |
| Divorced/Separated   | 0.25 (0.25; 0.26)     | 0.26 (0.26; 0.27) | 0.28 (0.27; 0.28)     | 0.30 (0.29; 0.31) |
| Never married        | 0.25 (0.24; 0.25)     | 0.27 (0.26; 0.27) | 0.28 (0.28; 0.29)     | 0.32 (0.31; 0.33) |
|                      |                       |         |                       |        |
|                      | Pr(Anti)              |         | Pr(Anti)              |         | Pr(Anti)              |         | Pr(Anti)              |         |
| Pairwise comparison: | v. Married            |        | v. Married            |        | v. Married            |        | v. Married            |        |
| Married              | 0.27 (0.27; 0.28)     | 0.30 (0.30; 0.30) | 0.30 (0.30; 0.30)     | 0.34 (0.34; 0.34) |
| Widowed              | 0.32 (0.31; 0.33)     | 0.36 (0.35; 0.36) | 0.34 (0.33; 0.35)     | 0.38 (0.37; 0.39) |
| Divorced/Separated   | 0.33 (0.32; 0.33)     | 0.34 (0.34; 0.35) | 0.35 (0.35; 0.36)     | 0.38 (0.37; 0.39) |
| Never married        | 0.31 (0.30; 0.31)     | 0.34 (0.34; 0.34) | 0.35 (0.35; 0.35)     | 0.39 (0.38; 0.39) |

Weighted using sampling and replicate weights. N = 1,422,733 for fair/poor health, N = 1,417,604 for depression, N = 1,418,450 for anxiety; Post-estimation values were calculated using parameter estimates from logistic regression models shown in Models 1a-3a in Supplemental Table B. Models adjust for gender, age, age-squared, race/ethnicity, educational attainment, household income, coresidence with minor child, loss of income, food insufficiency, delaying medical care, and housing payment issues and hold covariates at their means. Between Waves 1 and 2: April 23-June 16; Wave 2: June 18-July 21; Between Waves 2 and 3: August 19-October 26; Wave 3: October 28-December 21.
Table 4. Predicted Probability of Health Outcomes by Selected Survey Weeks by Gender (Confidence Intervals in Parentheses; Household Pulse Survey, April-December 2020.

|                  | Week 1 men | Week 34 men | Week 1 women | Week 34 women |
|------------------|------------|-------------|--------------|---------------|
|                  | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) |
| Married          | 0.15 (0.14; 0.15) | 0.21 (0.20; 0.21) | 0.16 (0.16; 0.16) | 0.21 (0.21; 0.21) |
| Widowed          | 0.19 (0.18; 0.21) | 0.24 (0.23; 0.25) | 0.20 (0.19; 0.21) | 0.23 (0.22; 0.23) |
| Divorced/Separated | 0.19 (0.18; 0.19) | 0.22 (0.21; 0.23) | 0.19 (0.19; 0.20) | 0.23 (0.22; 0.23) |
| Never married    | 0.16 (0.16; 0.16) | 0.25 (0.24; 0.26) | 0.17 (0.16; 0.17) | 0.26 (0.26; 0.27) |

|                  | Pr(Depression) | Pr(Depression) | Pr(Depression) | Pr(Depression) |
|------------------|----------------|----------------|----------------|----------------|
|                  | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) |
| Married          | 0.20 (0.20; 0.21) | 0.24 (0.24; 0.25) | 0.22 (0.21; 0.22) | 0.28 (0.28; 0.29) |
| Widowed          | 0.27 (0.26; 0.29) | 0.30 (0.29; 0.32) | 0.29 (0.28; 0.30) | 0.34 (0.33; 0.35) |
| Divorced/Separated | 0.26 (0.26; 0.27) | 0.31 (0.30; 0.32) | 0.28 (0.27; 0.28) | 0.33 (0.33; 0.34) |
| Never married    | 0.25 (0.25; 0.25) | 0.33 (0.33; 0.34) | 0.27 (0.27; 0.27) | 0.35 (0.34; 0.35) |

|                  | Pr(Anxiety) | Pr(Anxiety) | Pr(Anxiety) | Pr(Anxiety) |
|------------------|-------------|-------------|-------------|-------------|
|                  | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) | Pr(Fair-poor health) |
| Married          | 0.27 (0.27; 0.27) | 0.31 (0.31; 0.32) | 0.31 (0.31; 0.32) | 0.39 (0.39; 0.40) |
| Widowed          | 0.32 (0.30; 0.33) | 0.33 (0.32; 0.35) | 0.38 (0.36; 0.39) | 0.43 (0.42; 0.44) |
| Divorced/Separated | 0.31 (0.30; 0.31) | 0.35 (0.34; 0.36) | 0.37 (0.37; 0.38) | 0.43 (0.42; 0.43) |
| Never married    | 0.29 (0.29; 0.29) | 0.35 (0.35; 0.36) | 0.35 (0.35; 0.36) | 0.45 (0.44; 0.45) |

Weighted using sampling and replicate weights. N = 1,422,733 for fair/poor health, N = 1,417,604 for depression, N = 1,418,450 for anxiety; Post-estimation values were calculated using parameter estimates from logistic regression models shown in Models 1a-3a in Supplemental Table C. Models adjust for gender, age, age-squared, race/ethnicity, educational attainment, household income, coresidence with minor child, loss of income, food insufficiency, delaying medical care, and housing payment issues and hold covariates at their means.
Rendall et al. (2011), I find that married adults exhibit the best health across all three health outcomes: self-rated health, depression, and anxiety. Yet the magnitude of this health advantage differs across the pandemic period. Specifically, I find that a disadvantage in health among never married adults compared to married adults grew over the first several months of the pandemic, even adjusting for sociodemographic variables and pandemic-related stressors. Although never married adults reported a relatively small health disadvantage compared to married people towards the beginning of the pandemic, by the end of 2020, they had much higher probabilities of fair/poor health, depression, and anxiety. At the same time, the difference between married and previously married adults in these three health outcomes decreased over the early pandemic months. There was also evidence that the growing advantage of the married for mental health was more pronounced for men than women, such that the increased difference in depression for never married compared to married respondents was greater for men but the decreased difference in depression and anxiety for married compared to previously married respondents was smaller for men. However, there were no gender differences in self-rated health trends. Based on these findings, I discuss four main implications.

First, I argue that this analysis suggests that being married conferred unique health benefits during the COVID-19 pandemic relative to never being married. These benefits accumulated over time and were likely sustained by social environments that promoted and privileged the institution of marriage and disadvantaged those who had never been married (Berger & Carlson 2020; Cherlin & Seltzer 2014). The social conditions surrounding the COVID-19 pandemic created an environment that likely intensified the salience of marriage’s health benefits and also intensified the costs of never having married (Thomeer et al. 2020). This supports findings from a recent study by Jace and Makridis (2021) that concluded that married adults experienced less of a negative mental health impact when experiencing declines in work-related income during the pandemic compared to non-married adults.

Our results, and particularly our evidence that the health gap between never married and married respondents grew between April and December 2020, suggest that any structural disadvantages experienced by never married adults—or any privileges or benefits experienced by married adults—accumulated as the pandemic progressed, supporting a cumulative disadvantage perspective (Dannefer 2003). This finding is similar to the conclusions of a recent study comparing data from 2000 to 2018 which found never married adults experienced the greatest decline in health over that period, suggesting that these trends I identify are possibly a continuation of previous patterns (Lamidi 2020). Never married adults may be at greater risk of social isolation during the COVID-19 pandemic, as gatherings outside of one’s families were limited (van Mulukom et al. 2020). Never married adults also experience stigma within society because of their relationship status (Fisher & Sakaluk 2020), and in the pandemic context this may have contributed to never married people being left out of social networks where families gathered together in “pods” and had limited extra-familial social interactions (Thomeer et al. 2020). Future research should investigate the unique pandemic-related obstacles faced by never married adults.

Second, as a contrasting pattern, the difference in self-rated health, depression, and anxiety between previously married and married respondents became smaller as the pandemic progressed, drawing attention to the important heterogeneity within the non-married category. This narrowing pattern may reflect that greater marital strain during the pandemic weakened the health benefits of marriage, as I previously proposed, although I was not able to test the role of marital quality due to data limitations. Thus, these findings may reflect a greater cumulative cost to being married during the pandemic months, as there was increased strain from sharing decision-making and other psychosocial marital dynamics during this crisis period (Pietromonaco & Overall 2020).
As a complementary explanation, the reduced difference in these health outcomes for married compared to previously married adults may reflect some advantage experienced by divorced/separated and widowed adults which provided modest protection against the pandemic’s negative health consequences. Namely, these results may reflect that some of the benefits of marriage during the pandemic extended to previously married adults, as a marital biography approach emphasizes (Hughes & Waite 2009; Reczek et al. 2016).

According to the marital biography approach, previously married adults, and especially widowed adults, typically experienced many years of marriage before their marriage ended which comes with resources, including tax and Social Security benefits, access to extended social networks (e.g., in-laws, spouse’s friends), and greater cultural acceptance, which can be used as flexible resources to improve health and buffer against stressors (Phelan et al. 2010). Previously married adults may have been able to activate social networks tied to their former spouse to provide support during the pandemic as a buffer against the stress of the pandemic and to the possible benefit of previously married adults’ health. Thus, both of these explanations (reduced benefits to marriage and flexible resources useful to previously married adults) provide possible reasons why health differences between married and previously married people were reduced during the pandemic.

Third, these relationship status differences, namely comparing married and never married respondents, persist even though models adjust for economic vulnerability as reflected in exposure to pandemic-related stressors, indicating that the health advantage of married adults is not just about financial resources. Clearly, married respondents as well as widowed respondents in our sample experienced profound economic advantage during the pandemic, part of both the benefits of marriage as well as reflecting selection into (and out of) marriage (Jace & Makridis 2021; Umberson & Thomeer 2020). For example, 67% of married respondents in the HPS had a household income greater than $75,000 and 72% owned their home. These resources were likely especially beneficial during the COVID-19 pandemic—such as by providing protection against eviction—with positive implications for health (Hoke & Boen 2021). All models in this analysis adjusted for pandemic-related stressors, yet still demonstrated evidence of relationship status-based health differences, supporting previous research which finds that health disparities for married compared to non-married groups remain after economic resource adjustments within statistical models (Liu & Umberson 2008; Liu et al. 2020). Future research should continue to explore the mechanisms linking relationship status to health during the pandemic, including what supports and resources are most beneficial for non-married adults who face health vulnerabilities. As one potential explanation, explored in supplemental analysis (not shown), it may be that living arrangements help to explain this widening gap between never married and married respondents. This preliminary analysis suggests that the best health is seen among adults who live alone and the worst health among adults who live with two or more other adults. Given these patterns, I do not think that the observed findings in this study regarding relationship status and health are driven by living arrangement differences, although future research should better explore this possibility.

Fourth, results indicate that some of the changing associations between relationship status and mental health, discussed above, differ for men compared to women. The increase over the pandemic period in never married respondents’ probabilities of depression relative to married respondents was greater for men than for women, whereas the decrease in divorced/separated respondents’ probabilities of depression and anxiety relatively to married respondents was greater for women than for men. These patterns suggest a similar underlying dynamic—married women likely accumulated less advantage (and instead accumulated more disadvantage) as the pandemic progressed relative to married men. In other words, married women’s mental health got
worse over the pandemic relative to married men’s, such that the difference in health for married women compared to never married experienced less change and for married women compared to previous married women more change than seen among the same groups of men.

These findings support my initial hypothesis, that marriage provides fewer mental health benefits to women during the pandemic, which was also supported by a recent study by Hearne (2021) who concluded that married women may be overtaxed during the pandemic due to family demands and experienced more of a negative mental health impact than other groups. Other studies similarly demonstrate that the negative toll of the pandemic has been harsher for married women than for married men (Carlson et al. 2020)—for example, married women have been more likely to exit the workforce and reduce their work hours than married men (Collins et al. 2021). Notably, the advantage for married women compared to other groups of women still exists across the pandemic, just shows less change over time compared to what is observed among men. Married women also likely received fewer of the benefits of marriage than men (e.g., social control and caregiving), as previous research prior to the pandemic suggest would be the case (Umberson et al. 2020).

Missing within this analysis, however, is a consideration of parental status and caregiving responsibilities, as these were not available within the HPS data but would likely provide needed context to help understand these gendered patterns. Importantly, I do identify greater health disadvantage for never married women than never married men in terms of anxiety, which may reflect that never married women have higher rates of single motherhood and other caregiving responsibilities than never married men with relatively few supports during the pandemic (Hertz, Mattes, & Shook 2020). Future studies should identify how caregiving for children and adults may uniquely disadvantage non-married women during the pandemic, especially never married women, relative to men and married women—

including how this further intersects with race/ethnicity and economic resources (Laster Pirtle & Wright 2021).

**Limitations**

Despite significant contributions, there are several limitations to the present study. Although the HPS is a large and rich dataset with many relevant measures for our analysis, several variables were unavailable that would have been useful in interpreting our results. For example, there were no relevant social network or social isolation questions. These measures would have helped in understanding the role relationship dynamics play in shaping health disparities during the pandemic. Married adults with highly strained marriages likely did not experience a health advantage, just as non-married adults with strong and active social relationships may not have experienced any health disadvantage (Sarkisian & Gerstel 2016; Yu & Liu 2020).

There were also no relevant measures for identifying relationships with other non-spousal adults within the respondents’ household, meaning I could not distinguish between same-sex and different-sex couples or consider cohabitation status despite these both being important in understanding relationship status-based health differences. Thus, some percentage of the married couples in the sample were same-sex couples, but I was not able to identify how many or consider how gender might intersect with sexuality and/or gender of partner to moderate the associations between relationship status and health (Thomeer, Umberson, & Reczek 2020). Furthermore, many of the non-married adults were likely cohabiting with an intimate partner, and given limitations within the HPS data, I could not identify these respondents. The majority of adults within the US are not married (Rao 2014), but that does not mean they are single, and not having cohabitation measures within the HPS data or other measures identifying relationships with other adults in the household (e.g., adult children, roommates) or intimate relationships more generally is a
limitation of this study. I would expect that cohabitators’ health would be similar to married adults’, given previous research on relationship status differences in health (Brown, Bulanda, & Lee 2005; Noël-Miller 2011; Wright & Brown 2017)—both in terms of receiving advantages from being in an intimate relationship during the pandemic (e.g., caregiving, social support) as well as disadvantages (e.g., increased relational strain and conflict). However, I also expect that the health patterns related to cohabitation would be dependent on level of commitment and relationship duration, such that longer and more committed cohabitating partners would be more similar to married respondent (Brown et al. 2005). Future surveys should collect detailed data on cohabiting partnerships to understand the health impacts of these relationships during the pandemic.

Finally, because the study design involved cross-sectional data, I was not able to consider how divorce or the death of a spouse during the pandemic might matter for health. Notably, it is likely that some in our sample changed relationship statuses during the pandemic, especially given the high death rates within the population increasing rates of widowhood (Verdery et al. 2020). Even beyond widowhood, the pandemic impacted relationship stability (Manning & Payne 2021; Pietromonaco & Overall 2020) and the likelihood of marrying/remarrying (Wagner et al. 2020), with these processes likely shaping the patterns observed in this study. For example, one study found marriage rates declined in 2020 with evidence that this decline may be a long-term trend (Wagner et al. 2020) and another study found declines in divorce during the pandemic (Manning & Payne 2021). Together, these studies suggest that at least some of the non-married respondents in this study would have been married and some of the married respondents divorced or separated in a non-pandemic counterfactual context, indicating that unique selection processes around marital status have likely been occurring during the pandemic. Additionally, given my approach using cross-sectional panels, although I could compare patterns across time points, I was not able to ascertain within-person change in health or pandemic-related stressors, both during the pandemic as well as in the pre-pandemic period. The HPS is also limited given the low response rate, likely a consequence of fielding the surveys during the COVID-19 pandemic, contributing to sample selection dynamics which may bias these results (Peterson et al. 2021).

**Conclusion**

These results indicate that the long-term social consequences of the COVID-19 pandemic will likely include widening health disparities between married and non-married adults, especially the never married. But this is not an inevitable outcome. How relationship status impacts health during and after the pandemic is conditional on public policies and organizational decisions, including distribution of unemployment benefits, stimulus payments from the federal government, protections against evictions and debt repayment, childcare affordability and availability, and workplace accommodations. Within the current environment, married adults are at an advantage. For example, married couples earning less than $150,000 in 2019 received a $1200 stimulus payment in 2020, whereas a non-married individual had to earn less than $75,000 and received $600. Because economies of scale mean that it costs less to be married than single, this results in an economic advantage for the married. This benefit is coupled with the greater stability afforded to the married in other areas of life (e.g., housing and childcare availability), important when facing unexpected stressors during the pandemic. This does not indicate that marriage itself is uniquely important, but rather that society privileges spousal relationships above friendships, siblings, non-marital romantic partnerships, and other families of choice. More support for non-marital ties, as well as policies targeted at supporting non-married adults would contribute to a more equitable society, both during the pandemic and in its fallout.
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Supplemental Material

Supplemental material for this article is available online.

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