

Mating in Captivity: The Influence of Social Location on Sexual Satisfaction through Phases of the COVID-19 Pandemic

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Abstract

The recent global pandemic provides a natural experiment “intervention” to examine how differing baseline social dynamics such as gender, education, and politics shaped diverging patterns of well-being during rapidly shifting societal conditions. Using married adults from a nationally representative panel study in the United States from August 2019 to August 2021, discontinuous growth curves reveal a large drop in average married sexual satisfaction in both quality and frequency directly following the pandemic onset. Moreover, sexual satisfaction remained largely suppressed for the subsequent 18 months, apart from a brief “optimism blip” in the fall of 2020. Race, age, income, employment, parenthood, education, and political affiliation all appear as meaningful predictors, but these differ across various phases of the pandemic and by gender. These results reveal evidence of lingering changes in subjective sexual well-being as well as patterns of catastrophe risk and resilience moderated by social location factors.

Keywords

COVID-19, natural experiment, sexual satisfaction, gender, inequality

The world has recently experienced a period of profound stress and increased isolation related to a global pandemic. Almost immediately, speculation among the scientific community and media proliferated about potential fallout such as relationship strain, an increase in sexual activity followed by a baby boom, a shift in gender relations, increased rates of problematic pornography use, infidelity, or a “tsunami” of divorces (Döring 2020; Gordon and Mitchell 2020; Grubbs et al. 2022; Lopes et al. 2020; Pennanen-Iire et al. 2021; Ruppanner et al. 2021). Certainly, a wide range of health and well-being outcomes are of serious concern related to the coronavirus disease 2019 (COVID-19) pandemic. Isolation, grief, anxiety, lingering symptoms and side effects of infection, financial instability, and hassles became common for many people (Bierman et al. 2021; Park et al. 2020). However, there have been important differences in experiences of the pandemic depending on relative social positions such as gender (Lyttelton, Zang, and Musick 2022; Ruppanner et al. 2021; Yavorsky, Qian, and Sargent 2021), race/ethnicity (Mude et al. 2021; Wright and Merritt 2020), and political affiliation (Block et al. 2022; Kerr, Panagopoulos, and van der Linden 2021; Perry, Whitehead, and Grubbs 2021). Although sex is associated with protective health benefits

(Mollaioli et al. 2021; Pennanen-Iire et al. 2021), under such circumstances of acute stress and change, a couple’s relationship and sexual dynamics may absorb fallout from pandemic difficulties and require innovation (Lehmiller et al. 2021; Lopes et al. 2020; Luetke et al. 2020; Panzeri et al. 2020; Pascoal et al. 2021). As romantic relationship factors are one of the most robust predictors of well-being (Wignall et al. 2021) and many people continue to rate sexual satisfaction as important to their quality of life even in the face of poor health (Flynn et al. 2016), outcomes in sexual satisfaction can enhance our understanding of how relative social positions influence personal and relational well-being during a prolonged catastrophe.

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A growing body of research has documented the effects of this unique period on romantic relationships and sexual well-being around the globe. However, the bulk of these studies have been cross-sectional, focused primarily on the spring and early summer of 2020, or lacking pre-COVID-19 baseline data. Additionally, most have been forced to rely on non-generalizable convenience samples and thus have been highly context dependent and somewhat inconsistent in findings. This study contributes to a deeper understanding of how social dynamics moderated this exogenous shock on married sexual relationships by tracking a nationally representative sample for a two-year span, from six months pre-pandemic to 18 months after its arrival in the United States. This allows us not only to examine general trends related to the pandemic effect over an extended period but also to compare which subgroups experienced the greatest change.

Sexual Health since COVID-19

Frequency and Function

A growing number of studies have shown a decrease in reported frequency of sexual activity and an increase in sexual dysfunction since the onset of the pandemic (Delcea, Chirilă, and Săucea 2021; Masoudi, Maasoumi, and Bragazzi 2022). For example, independent studies of Italian women (Schiavi et al. 2020) and Polish women (Fuchs et al. 2020) have documented substantial worsening in average scores of sexual frequency, sexual functioning, quality of life, and sexual dysfunctions. Similarly, health care workers in Istanbul reported a decline in sexual desire, sexual intercourse and masturbation frequency, foreplay time, and intercourse time relative to their pre-pandemic levels (Culha et al. 2021). Yuksel and Ozgor (2020) also documented a decrease in sexual functioning in Turkish women, though in that sample reported sexual frequency increased slightly just after the pandemic from a weekly average of 1.9 to 2.4. In a sample of married individuals from Bangladesh, India, and Nepal composed predominantly of men, Arafat et al. (2020) documented only a 4 percent decrease in sexual frequency just after the onset of the pandemic. However, their measure of sexual frequency combined everyone who reported averages between 1 and 4 times a week into a single category and thus likely obscured much of the change that may have taken place.

In one of the few nationally representative studies, Luetke et al. (2020) found that 34 percent of people in the United States had already reported some level of conflict with a partner related to the pandemic, and those who experienced conflict had substantially higher odds of a decreased frequency in various sexual behaviors. Furthermore, these detrimental effects tended to be gendered. They found the association between conflict and decreased frequency of sexual activity tended to be stronger among men than women, possibly indicating many women continued to engage in “maintenance sex” even amid heightened relational strife.

Thus, fluctuations in the frequency of sexual activity may hold different implications or subjective interpretations for men and women.

Satisfaction and Quality

Studies of American adults (Lehmiller et al. 2021), Indonesian adults (Ramadhani and Poerwandari 2022), and married Kenyans (Osuri, Ireri, and Esho 2021) reported significant declines in sexual satisfaction during the pandemic. Several studies also link changes in sexual dynamics directly to pandemic stress. Fear of COVID-19 infection and increased relational conflicts were associated with lower sexual quality and satisfaction in samples of Turkish women (Gönenç, Öztürk Özen, and Yılmaz Sezer 2022) and married Egyptian men (Reda et al. 2022). Higher rates of pandemic stress were also related to increased experiences of sexual coercion among Canadians with live-in partners (Brotto et al. 2022).

But Decline Was Not Universal

Although a decline in various aspects of sexuality related to the pandemic was regularly found across studies, a few authors noted that there were also groups who reported sexual benefits from this period. For example, Lehmiller et al. (2021) found that about 14 percent of Americans in their sample reported improvement in the quality of their sex lives. Some people used the social changes as an opportunity to try something new, like a new sexual position or sex technology, and indeed, improvements were predicted by trying new things or being less stressed.

Notably, women’s sexual satisfaction seems to be more sensitive to changes in both directions during this period than men’s. In a sample of Italians living with partners, Panzeri et al. (2020) found that about 3 percent of men reported increases in sexual satisfaction and 6 percent reported decreases, whereas for women these values were 13 percent and 15 percent, respectively. They also showed similar trends whereby women reported higher rates of difference in both directions before and after the pandemic in relation to desire, arousal, frequency, satisfaction, and perception of their partner’s satisfaction. This seems to suggest that social context and stress levels are more salient in women’s sexual well-being for good or ill.

Social Standing Meets Stress

Given that a decline in sexual well-being was not universal and some even increased in satisfaction during this period (Lehmiller et al. 2021; Panzeri et al. 2020), it is worthwhile for future theory and practice to articulate which subgroups face greater risk in times of widespread social upheaval or disaster. Thus, in this study we examine how gender as well as a range of other social location factors

interacted with pandemic period effects to shape subjective sexual well-being.

The Pandemic and the Gender Pleasure Gap

Sexual dynamics such as desire, functioning, internalized scripts for interactive sexual behaviors, expectations for pleasure, and orgasm frequency are sensitive to cultural and relational context (Fahs and Swank 2011; Lentz and Zaikman 2021; Pascoal et al. 2018; Rubin et al. 2019; Simon and Gagnon 1986; Wongsomboon, Burlison, and Webster 2020), and researchers have called attention to a problematic gender gap in various components of sexual enjoyment (Armstrong, England, and Fogarty 2012; Leonhardt et al. 2018; Mahar, Mintz, and Akers 2020; Mintz 2017; van Anders et al. 2022; Wade 2016). After reviewing articles on women's sexual health during the pandemic, de Oliveira and Carvalho (2021) speculated that the widespread decline in sexual functioning, satisfaction, desire, and relationship satisfaction might have further exacerbated the pleasure gap.

In line with this premise, Masoudi et al. (2022) concluded from a meta-analysis that sexual dysfunction increased more severely during the pandemic for women than for men. For example, mixed-gender samples in the United Kingdom (Wignall et al. 2021) and Egypt (Omar et al. 2021) reported more significant declines in sexual desire and heightened sexual stress for women than for men during the pandemic. These results were consistent with earlier findings from Hamilton and Julian (2014) showing that daily stressors were related to lower sexual satisfaction for both men and women, though women's sexual functioning was more strongly related to stress and depression than men's. Thus, we expect gender that has played a primary role in moderating contextual effects on sexual satisfaction trajectories during the COVID-19 pandemic.

Other Moderating Factors

In addition to gender differences, we expect changes in subjective sexual well-being to vary in relation to several other social location factors. Economic problems can affect marital quality and stability (Siegel and Dekel 2022), and job precarity has been pervasive because of rapidly shifting economic conditions during the COVID-19 pandemic (Rao 2020). Labor force participation in the United States fell more severely for women than for men (Collins et al. 2021), and gender equity spanning work, home life, and parenting has deteriorated (Lytelton et al. 2022; Ruppner et al. 2021; Yavorsky et al. 2021). Thus, we also expect factors such as work status, income level, and parenthood to be meaningful predictors of well-being under pandemic conditions but likely in different ways for men and women.

Age is a key predictor of sexual satisfaction in its own right (Forbes, Eaton, and Krueger 2017), but it may also

serve as a proxy for other social forces such as employment precarity for those just beginning a career or nearing retirement. Similarly, race and ethnicity may reflect general differences in sexual dynamics as well as multiple facets of recent societal stress. The pandemic has disproportionately affected African Americans (Mude et al. 2021; Wright and Merritt 2020), and racial tensions were centered in the public consciousness after the murder of George Floyd and frequent Black Lives Matter protests during the summer of 2020 and beyond.

Political ideals may translate to gendered ideals extending into the bedroom (Armstrong et al. 2012; van Anders et al. 2022), and the pandemic and its mitigation measures have also been highly politicized in the United States. Republicans and Democrats have, on average, had markedly different responses to social distancing guidelines, masking, and vaccinations, leading to different profiles of virus exposure and infection, quarantine length, trust in health professionals, and optimism (Block et al. 2022; Evans and Hargittai 2020; Kerr et al. 2021; Whitehead and Perry 2020). Thus, political affiliation may reflect both general differences in sexuality as well as how these ideologies may have interacted with period effects to shape subjective well-being.

Religious factors are related to sexual relationship outcomes (Dew, Uecker, and Willoughby 2020; Iveniuk, O'Muircheartaigh, and Cagney 2016), and religiosity has been shown to mitigate the effects of external stressors (Schnabel and Schieman 2022; Upenieks, Schieman, and Bierman 2021). Religious forces also shaped the adoption or eschewal of COVID-19 mitigation measures such as closures, quarantines, and masking (Perry, Whitehead, and Grubbs 2020; Perry et al. 2021; Schnabel and Schieman 2022; Smothers, Burge, and Djupe 2020). Last, and related to race, religion, and political characteristics, is regional residence. Different parts of the country experienced spikes and troughs in their infection rates at different times throughout the pandemic, and these regional patterns could predict fluctuations in well-being as Americans responded to social and economic stressors.

In sum, we expect that the pandemic had a demonstrable effect on subjective sexual well-being but in different ways for men and women. More specifically, we expect women to report more severe declines in sexual quality and frequency satisfaction than men because of disbalanced increases in sexual dysfunction, job precarity, and home life responsibilities. Extending this reasoning, we also expect heterogeneous patterns of satisfaction decline as a function of other social positions for both men and women. Baseline factors including work status, income level, parenthood, age, race/ethnicity, politics, religion, and regional context are expected to serve as both controls for average differences in sexual satisfaction as well as moderators of how the exogenous shock of the pandemic translated into risk and resilience for personal well-being.

Method

The longitudinal panel data used here allows an examination of both within-person and between-person changes in Americans' sexual satisfaction before and after the COVID-19 pandemic. The onset of a global pandemic constitutes a natural experiment, a framework used to examine the effects of interventions not controlled by the researcher (Frankfort-Nachmias, Nachmias, and DeWaard 2015; Leatherdale 2019), such as profound policy changes (Galster and Wessel 2019; Jung and Gil 2019) or natural disasters (Kirk 2009; Oishi, Kohlbacher, and Choi 2018). The COVID-19 "intervention" provided a natural experiment¹ by which to examine (1) the general trends in sexual satisfaction that accompanied various phases of the pandemic including initial change and subsequent recovery and (2) how baseline social characteristics moderated these trajectories.

We used hierarchical linear models (HLM) that account for the non-independence (clustering) inherent in the data with repeated observations nested within individuals (Rabe-Hesketh and Skrondal 2022). HLMs are by no means the only option to address clustering (McNeish, Stapleton, and Silverman 2017), though they are advantageous when wishing to disentangle the variance occurring between individuals versus within individuals as we do here. The hierarchical nature of the data is reflected throughout the variable descriptions and analytic plan below.

Data

Our analyses used data from the Public Discourse and Ethics Survey (PDES). The PDES was a nationally representative panel study of noninstitutionalized adults in the United States and tracked a wide range of participants' experiences and opinions over a two-year period. The survey was designed by the authors and fielded by YouGov, an international research data and analytics company.² Collection began in August 2019 with an original sample of 2,519 people. It captured two waves of data before the onset of the COVID-19 pandemic, and these serve as a baseline for capturing within-person

changes recorded after that time. The sexual satisfaction measures were included in seven collection waves (August 2019; February, May, August, and November 2020; and February and August 2021).

Participants who reported being married or in a domestic or civil partnership (hereafter "married") are the focus of these analyses. Unfortunately, the PDES did not differentiate among the nonmarried people who were single, dating, or cohabiting. These distinctions among nonmarried individuals would have introduced meaningful confounding factors for sexual outcomes (Brotto et al. 2022; Herbenick et al. 2022; Yabiku and Gager 2009), especially because quarantines may have unequally limited access to noncohabiting sexual partners. Thus, although the experiences of these groups are well worth studying, they fall outside of the scope of this analysis. After excluding unmarried people ($n = 1,126$) and those with no survey responses after the pandemic ($n = 327$),³ we retained an analytical sample of 1,066 married individuals. The total number of observations was 5,715 ($M = 5.4$ per person).

Measures and Descriptive Statistics

Dependent Variables. Sexual satisfaction was measured through two outcomes. Participants were asked to rate their satisfaction with both the quality and frequency of sexual experiences with a partner over the past three months. Response options were presented on a seven-point, Likert-type scale from "extremely dissatisfied, moderately dissatisfied, slightly dissatisfied, neither satisfied nor dissatisfied, slightly satisfied, moderately satisfied, or extremely satisfied." Both outcomes were coded from 0 to 6, with higher scores indicating greater satisfaction. As an initial assessment, Figure 1 demonstrates a clear drop in the raw means of both quality and frequency satisfaction among married people at the onset of the pandemic. Moreover, average satisfaction remained largely suppressed across the observation period, save for a limited recovery in fall 2020.

Although these basic descriptives reveal an overall population trend, the averages likely obscure divergent outcomes between individuals. We therefore constructed a nominal variable representing whether a person generally increased, decreased, or maintained the same level of satisfaction before and after COVID-19.⁴ These basic change categories echo findings from previous research that some fared better in

¹More specifically, under Leatherdale's (2019) classification system of natural experiment types, this study constitutes a longitudinal interrupted time-series nonexperimental design.

²YouGov recruited a panel of participants through Web sites and banner ads. These respondents were not paid directly but were entered into lotteries for monetary prizes. To draw a nationally representative sample, YouGov used a method called "matching." Drawing a random sample from the American Community Survey, YouGov then matched a participant in the opt-in panel who was the closest to the census respondent on the basis of key sociodemographic factors. Because of the specific recruitment and sampling design used by YouGov, the company does not publish traditional response rates. However, YouGov developed sampling weights to ensure that the survey sample was in line with nationally representative norms for age, gender, race, education, and census region.

³A logistic regression comparing the final sample with the attrition group revealed a higher probability of dropping out among married individuals who were men, younger than 40 years, parents, or dissatisfied with their relationship. Age was the most substantive of these predictors. It is unclear, however, if this pattern might have differed without the pandemic.

⁴That is, we subtracted the mean of each person's satisfaction scores from the two pre-COVID-19 waves from the mean of their five post-COVID-19 wave scores.

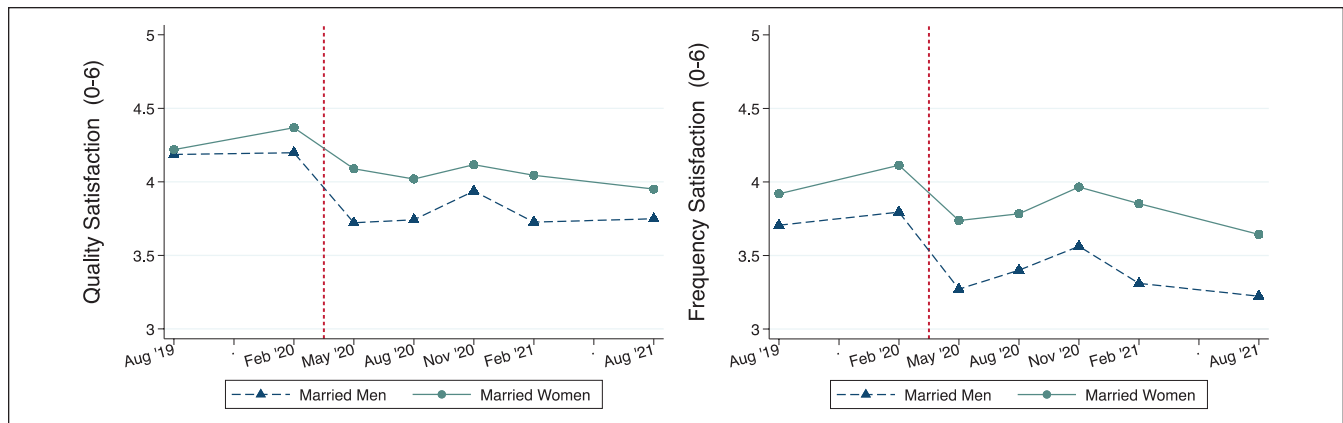


Figure 1. Raw means of sexual quality and frequency satisfaction by gender.

Source: Public Discourse and Ethics Survey, waves 1 to 7.

Note: $N = 1,066$ ($n = 511$ men, $n = 555$ women); $T = 5,715$ ($T = 2,787$ men, $T = 2,928$ women). The vertical dotted line indicates the onset of the coronavirus disease 2019 pandemic and related mitigation measures in the United States.

sexual well-being in the pandemic era than others (Table 1). Here, 14 percent of men and 20 percent of women increased in average quality satisfaction, and frequency satisfaction increased for 17 percent of men and 23 percent of women. Conversely, 39 percent of men and 38 percent of women decreased in quality satisfaction, and 39 percent of men and 36 percent of women decreased in frequency satisfaction. In other words, a nontrivial number of people reported increased rates of satisfaction, though decreases were far more common. Interestingly, it was slightly more common for women to report increased scores in both types of satisfaction than men, while their proportions of decrease were fairly similar.

Independent Variables: Time (Level 1). Growth curve models are used to examine how an outcome changes as a linear function across measurement occasions. However, as the goal here was to examine how the pandemic may have interrupted or changed sexual satisfaction trajectories, we used a piecewise approach that allowed for separate slope coefficients before and after COVID-19 (Bliese and Lang 2016; Rabe-Hesketh and Skrondal 2022; Raudenbush and Bryk 2002). This was accomplished by dividing the level 1 variable for time into three components: a pre-COVID-19 slope, a COVID-19 pandemic onset intercept change, and a post-COVID-19 slope.

Referring again to Figure 1, the raw means of sexual satisfaction recovery after COVID-19 appear nonlinear, which suggested that a quadratic function may be needed to describe the second slope piece. We tested an additional time component of the post-COVID-19 slope squared for a possible curvilinear recovery trajectory. Alternatively, because the post-COVID-19 high appears to be focused primarily on a spike around the November 2020 wave, we also tested a binary indicator controlling for observations only in that wave. Three of the four models showed better model fit (as indicated by the Akaike information criterion and the

Bayesian information criterion) when using the localized control rather than the quadratic function. Therefore, we added a binary indicator for fall 2020 to the level 1 components defining the period effects. Table A1 in the Appendix details the coding scheme for each of the potential variables tested for level 1. The post-COVID-19 slope uses an “absolute” coding method such that its coefficients can be interpreted relative to zero rather than relative to the pre-COVID-19 slope (Bliese and Lang 2016). The full testing progression for period effects in each model can be found in Tables A2 to A5.

Independent Variables: Demographics (Level 2). Variables describing the participants constitute the second level of our HLMs, and their main effects represent differences between people in sexual satisfaction averaged across the entire observation period (Rabe-Hesketh and Skrondal 2022). We controlled for demographic factors including participants’ age, race/ethnicity, parental status, education, employment status, income, religious engagement, southern residence, and political affiliation. All demographic variables in these analyses were collected at baseline and were functionally time invariant. Ideally, we would have liked to account for how some factors, such as work status, income, and religious participation, may have changed over the observation period. Participants were almost certainly exposed to differing levels of stress related to changes in these factors. However, we argue that a person’s social dynamics at the outset of a disaster will strongly influence their level of risk exposure and repertoire of responses. Thus, we find the results compelling to reveal how baseline social dynamics shaped personal and relational well-being in the face of societal upheaval (Wu, Bierman, and Schieman 2022).

Ages ranged from 21 to 88 years at wave 1, with a mean of 55 years. To observe cohort effects more directly, we recoded age into six groups for those in their 20s, 30s, 40s, 50s, 60s, and 70 years and older, referencing from the median

Table 1. Descriptive Statistics with Variable Mean or Percentage by Gender.

	Men	Women	Total
Quality satisfaction (0 to 6)			
Pre-COVID-19	4.3	4.3	4.3
Post-COVID-19	3.8	4.0	3.9
Frequency satisfaction (0 to 6)			
Pre-COVID-19	3.8	4.0	3.9
Post-COVID-19	3.4	3.8	3.6
Change in quality satisfaction pre- vs. post-COVID-19			
No change	47.3%	42.4%	44.7%
Decreased	38.6%	37.6%	38.1%
Increased	14.1%	20.0%	17.2%
Change in frequency satisfaction pre- vs. post-COVID-19			
No change	43.9%	41.0%	42.4%
Decreased	39.2%	36.3%	37.7%
Increased	16.9%	22.7%	19.9%
Women			52.2%
Age cohort			
20s	2.9%	8.5%	5.8%
30s	10.8%	18.0%	14.5%
40s	12.2%	17.1%	14.7%
50s	21.6%	19.1%	20.3%
60s	30.0%	20.1%	24.9%
≥70	22.5%	17.3%	19.8%
Race/ethnicity			
White	76.3%	75.4%	75.8%
Black	7.1%	6.3%	6.7%
Hispanic	9.6%	9.2%	9.4%
Other	7.1%	9.2%	8.2%
Has a child younger than 18	26.9%	36.9%	32.1%
Educational attainment			
High school or less	30.8%	36.2%	33.6%
Some college or two-year degree	32.2%	30.6%	31.3%
College degree or more	37.1%	33.3%	35.1%
Annual family income			
<\$30,000	8.6%	17.4%	13.2%
\$30,000 to \$60,000	25.7%	32.0%	29.0%
\$60,000 to \$100,000	30.0%	20.7%	25.1%
\$100,000 to \$200,000	24.3%	15.8%	19.9%
≥\$200,000	3.9%	2.5%	3.2%
Prefer not to say	7.5%	11.5%	9.6%
Employment status			
Retired	35.3%	27.7%	31.3%
Employed full-time	47.6%	29.1%	38.0%
Employed part-time or other	17.1%	43.2%	30.7%
Standardized religiosity scale (-1.6 to 1.3)	-.08	.07	-.00

(continued)

Table 1. (continued)

	Men	Women	Total
Religious affiliation			
Not affiliated	28.0%	24.8%	26.4%
Liberal Protestant	16.1%	15.1%	15.6%
Evangelical Protestant	22.0%	26.1%	24.1%
Catholic	20.6%	19.6%	20.1%
Other religion	13.3%	14.4%	13.9%
Political affiliation			
Independent	13.7%	15.6%	14.7%
Strong Democrat	18.6%	22.1%	20.5%
Lean Democrat	21.0%	20.3%	20.6%
Lean Republican	25.5%	19.6%	22.4%
Strong Republican	21.2%	22.3%	21.8%
Lives in the South	39.0%	39.0%	39.0%
Relationship satisfaction at wave 1 (0 to 6)	4.6	4.6	4.6
Pre-COVID-19 relationship			
Extremely satisfied	48.6%	46.6%	47.6%
Slightly/moderately satisfied	33.1%	31.8%	32.5%
Not satisfied	18.2%	21.6%	20.0%

Source: Public Discourse and Ethics Survey, waves 1 to 7.

Note: $N = 1,066$ ($n = 510$ men, $n = 556$ women). COVID-19 = coronavirus disease 2019.

group (50s). Race/ethnicity was collapsed into categories for people who self-identified as White (reference), Black, Hispanic, or another race/ethnicity. A binary indicator was included for those with a child younger than 18. Educational attainment categories indicated those with a high school degree or less (reference), some college or a two-year degree, or a bachelor's degree or more. Employment status was indicated by categories for those who were retired (reference), worked full-time, or worked part-time or other. Annual family income was collapsed from 17 to 6 categories: less than \$30,000, \$30,000 to \$60,000, \$60,000 to \$100,000 (reference), \$100,000 to \$200,000, \$200,000 or more, and those who answered, "prefer not to say."⁵ We constructed a religiosity scale from three commonly combined measures including religious salience, public behavior, and private behavior (Longest and Uecker 2018). Participants were asked to indicate the importance of religion in their lives on a scale from "not at all important" (0) to "very important" (3), their frequency of religious service attendance from "never" (0) to "more than once a week" (5), and their frequency of praying alone from "never" (0) to "several times a day" (6). We standardized these items and then combined them into a single continuous scale (Cronbach's $\alpha = .86$).⁶ Religious affiliation

⁵Including this category avoided the loss of about 10 percent of the sample. However, we do not interpret the coefficients from this group.

⁶Principal-component analysis and exploratory factor analysis tests supported unidimensionality in this measure.

was collapsed into categories representing liberal Protestant, Evangelical Protestant, Catholic, other religion, and not affiliated (reference). Participants were asked to describe their political affiliations by selecting from “strong Democrat,” “not very strong Democrat,” “lean Democrat,” “Independent,” “lean Republican,” “not very strong Republican,” “strong Republican,” and “don’t know.” We combined the intermediate affiliation levels into categories for strong Democrat, lean Democrat, independent or don’t know (reference), lean Republican, or strong Republican. A binary indicator was also included for those who lived in the southern census region.

Finally, we included a control for a person’s satisfaction with their overall relationship before the pandemic. This was originally measured on the same seven-point, Likert-type scale as the outcome measures and tended to track closely with both sexual quality and frequency satisfaction. Because of this collinearity, if relationship satisfaction at each wave were included as a time-varying predictor, it would artificially absorb the period effects of interest. In other words, the models would attribute the sexual change to the relationship change rather than to the exogenous shock influencing them both. However, if reformatted, relationship satisfaction can serve as a proxy variable to control for any number of baseline relationship dynamics not explicitly captured. Therefore, we averaged participants’ relationship satisfaction over the two pre-COVID-19 observations and collapsed that score into three categories for people who reported being extremely satisfied (reference; 48 percent, score of 6), slightly or moderately satisfied (33 percent, scores of 4 and 5), and not satisfied (20 percent, scores of 0–3) with their relationships before COVID-19. This control proved pivotal in reducing overall level 2 (between-individual) variance in the models while not obscuring the COVID-19 intervention and recovery effects. Additionally, it serves to make the other level 2 covariates more precise for the question at hand by partialing out their relationships with sex from relationship quality more broadly. See Table 1 for a full description of the independent and dependent variables.

Analytic Strategy

All analyses were conducted in Stata 17 (StataCorp LP, College Station, TX). Before proceeding to the discontinuous HLM, we conducted preliminary analyses using ordinary least squares regressions to establish which demographic factors best predicted both kinds of sexual satisfaction at wave 1 (Tables A6 and A7). For women at baseline, younger age predicted higher satisfaction in both quality and frequency, and strong Democratic affiliation predicted lower frequency satisfaction net of other factors. For men, baseline quality satisfaction was predicted to be higher for men in their 30s, and lower for men in the top income bracket. Baseline frequency satisfaction was lowest among politically unaffiliated men, and higher for men who live in

the South. Unsurprisingly, sexual satisfaction in both areas was strongly related to overall relationship satisfaction levels for both genders.

A simple random-effects analysis of variance for quality satisfaction revealed intraclass correlation coefficients of .666 for men and .612 for women, meaning that 66.6 percent and 61.2 percent of the variation in sexual quality satisfaction occurred between individuals, and 33.4 percent and 38.8 percent occurred within individuals over time. A similar ratio can be seen for frequency satisfaction, with 70.5 percent and 62.8 percent of the variation in satisfaction between individuals among the groups of men and women, respectively, and 29.5 percent and 37.2 percent within individuals over time. In other words, roughly one third of the variation across these observations had to do with period effects rather than strictly personal attributes. This also shows that a greater proportion of variance occurred over time for women than for men, again contradicting the impression of greater stability for women in the raw means from Figure 1.

For the primary analysis, we implemented a progression of discontinuous HLMs to examine the pandemic period effects (Bliese and Lang 2016; Luke 2020; Rabe-Hesketh and Skrondal 2022; Raudenbush and Bryk 2002). This modeling approach allowed us to examine the overall period trends (in the level 1 main effects), which social characteristics predicted the outcome on average (in the level 2 main effects) and which characteristics may have interacted with period effects to change the trajectory of an individual’s outcomes (through cross-level interactions). For example, if some subgroup is generally more sex positive than another, they may have a higher average satisfaction score reflected in the main effects. On the other hand, if some subgroup experienced much higher stress or strain during a particular phase of the pandemic, they may have lower satisfaction reflected in a particular interaction effect.

Each model building progression began with the four variables in level 1 representing the pandemic period effects (a pre-COVID-19 slope, COVID-19 intercept change, post-COVID-19 slope, and fall 2020 indicator). We then included a random effect for the COVID-19 intercept change and added the demographic variables from level 2. All models used maximum likelihood estimation and unstructured covariance matrices. As the potentially divergent trajectories between men and women were of particular interest, all models were conducted with the total sample as well as with split samples by gender. Finally, we further probed into the period effects by conducting extensive testing on each demographic variable for evidence of significant interactions with the time components from level 1. We tested each potential cross-level interaction individually as well as in combinations, such as the COVID-19 intercept change \times age in conjunction with the post-COVID-19 slope \times age. We then combined all previously discovered significant cross-level interactions into a single model and retested each

component for statistically significant effects and model variance reduction net of other factors using likelihood ratio tests. We retained only the cross-level interactions that improved model fit consistently across these tests. These constitute the social structural factors that most reliably moderated the pandemic period effects on sexual subjective well-being.

Results

The Pandemic Effect

The onset of the pandemic had a large negative effect on both average quality satisfaction ($-.37, p < .001$) and frequency satisfaction ($-.37, p < .001$) among married people in the United States (Tables 2 and 3). Perhaps more alarmingly, the post-COVID-19 trajectory coefficients are near zero and statistically insignificant, indicating very little recovery across the observation period. A brief uptick in both satisfaction types occurred in fall 2020 (quality, $.14 [p < .01]$; frequency, $.22 [p < .001]$) but apparently with little impact on the overall recovery trajectories.

Looking more closely at these changes in average satisfaction by gender, married men experienced a larger drop in average quality satisfaction, nearly twice that of women (men, $-.48 [p < .001]$; women, $-.25 [p < .001]$; gender difference = $.23, p < .05$). The brief rebound in quality satisfaction in fall 2020 was also driven primarily by men ($.19, p < .01$), without a reliable trend among women ($.09, p = .21$; difference = $-.10, p = .29$). The gendered pattern in decline for the COVID-19 shift in frequency satisfaction (men, $-.47 [p < .001]$; women, $-.29 [p < .001]$; difference = $.18, p = .08$) was similar to the pattern for quality, though for reported frequency satisfaction both genders had a significant respite in fall 2020 (men, $.25 [p < .001]$; women, $-.20 [p < .01]$; difference = $-.05, p = .64$).

General Social Location Differences

The demographic predictors reveal a pattern of average differences in satisfaction between subgroups largely similar to the baseline analysis. Recall that these coefficients represent between-group differences averaged across the entire two-year observation period. For married men, average quality satisfaction was higher for those in their 30s ($.51, p < .05$) and 40s ($.46, p < .05$) and those more highly religious ($.22, p < .05$) and lower for those who made more than \$200,000 ($-.58, p < .05$) and liberal Protestants ($-.38, p < .05$). These dynamics were slightly different for frequency satisfaction. Higher religiosity remained a predictor of higher average frequency satisfaction among men ($.19, p < .05$), but here age, income, and religious affiliation were replaced by race and region. Black men had higher frequency satisfaction on average ($.51, p < .05$), as did men in the South ($.31, p < .01$). For married women, age was a powerful predictor of

average quality satisfaction, with those in their 20s ($.45, p < .05$) and 30s ($.55, p < .001$) reporting significantly higher levels than the reference group in their 50s. Very few other factors predicted average quality satisfaction for women, save marginally significant effects for Evangelical Protestants ($.35, p = .06$) and strong Democrats ($-.30, p = .07$). Married women in their 20s ($.49, p < .05$) and 30s ($.55, p < .01$) were predicted to have higher average frequency satisfaction scores with lower scores predicted for women with a strong Democratic affiliation ($-.53, p < .01$) and some college ($-.25, p < .05$).

Period Differences by Social Location

Given that social location factors likely also shaped the period effects, we turn now to the cross-level interactions indicating the most significant demographic factors related to satisfaction shifts in the pandemic's various phases. This method provides a valuable glimpse into the social dynamics that moderated sexual well-being during this period. However, it also poses some level of risk in discounting the complexity of the model or in overfitting the model to the sample at hand. Thus, we provide this portion of the results primarily as seeds to cultivate further inquiry into the various influences of social structure on sexual well-being. The full tables comparing the level 1, level 2, and cross-level interaction models for each outcome by gender can be found in the Appendix (Tables A8–A11). For the sake of brevity, a summary of the significant cross-level interactions is presented here in Table 4.

The COVID-19 Drop. For married men, the intercept change in quality satisfaction was best predicted by their baseline relationship satisfaction ($.46, p < .01$), with those who were least satisfied in their relationship gaining about half a point in sexual quality satisfaction on average. Conversely, for married women, the change in quality satisfaction was best predicted by age and education level. Women in their 20s ($-.73, p < .01$) and 60s ($-.58, p < .01$) fared the worst, as did women with the least education (some college, $.31 [p < .05]$; college or more, $.32 [p < .05]$).

The pandemic drop in frequency satisfaction for men was best predicted by full-time employment status ($-.24, p < .05$). For women, relationship satisfaction was now the strongest predictor of a change in frequency satisfaction (not satisfied $.65, p < .001$) along with age (20s, $-.64 [p < .05]$; 60s, $-.49 [p < .05]$).

So in summary, baseline relationship dynamics moderated the COVID-19 drop for both genders, but it manifested through different satisfaction measures. Working full-time was a further detriment for men's frequency satisfaction level at that time, while having less education was a detriment to women's quality satisfaction level. Age group was a strong predictor of differences in the COVID-19 drop among women in both outcomes, even after accounting for the general differences by age.

Table 2. Hierarchical Linear Model of Sexual Quality Satisfaction through Phases of the COVID-19 Pandemic.

	Total		Men		Women	
	B	SE	B	SE	B	SE
Fixed part						
Pre-COVID-19 slope	.03	.03	.01	.04	.04	.04
COVID-19 Intercept change	-.37***	.05	-.48***	.07	-.25***	.07
COVID-19 Recovery slope	-.01	.01	.02	.02	-.03	.02
Fall 2020 bump	.14**	.05	.19**	.07	.09	.07
Women (reference: men)	.11	.07				
Age cohort (reference: 50–59 years)						
20–29 years	.38*	.17	.18	.33	.45*	.20
30–39 years	.58***	.13	.51*	.20	.55***	.16
40–49 years	.34**	.12	.46*	.19	.27 ⁺	.16
60–69 years	.01	.11	-.05	.16	.03	.16
≥70 years	-.02	.14	-.10	.20	.07	.20
Race/ethnicity (reference: White)						
Black	.03	.15	.09	.22	.04	.21
Hispanic	-.08	.13	-.20	.19	.11	.17
Other race/ethnicity	.03	.13	-.21	.21	.25	.17
Has a child younger than 18	.01	.09	-.07	.14	.06	.12
Education (reference HS or less)						
Some college/two-year degree	-.02	.09	.06	.14	-.08	.12
College degree or more	.03	.10	.07	.15	.03	.13
Family income (reference: \$60,000–\$100,000)						
<\$30,000	.13	.13	.11	.21	.03	.16
\$30,000–\$60,000	.11	.10	-.01	.14	.15	.13
\$100,000–\$200,000	-.02	.11	.01	.15	-.13	.16
>\$200,000	-.39 ⁺	.21	-.58*	.28	-.19	.31
Prefer not to say	.09	.13	.36 ⁺	.21	-.12	.17
Employment status (reference: retired)						
Full-time	.16	.12	.21	.16	.08	.18
Part-time or other	-.02	.12	-.11	.17	-.02	.16
Religiosity (three-item scale)	.13*	.06	.22*	.09	.02	.08
Religious affiliation (reference: none)						
Liberal Protestant	-.23 ⁺	.13	-.38*	.19	.02	.18
Evangelical Protestant	.04	.14	-.30	.20	.35 ⁺	.18
Catholic	-.03	.12	-.08	.18	.08	.17
Other religion	.07	.13	-.06	.19	.20	.17
Political party (reference: independent)						
Strong Democrat	-.13	.12	.03	.19	-.30 ⁺	.16
Lean Democrat	-.06	.12	-.05	.19	-.09	.16
Lean Republican	-.02	.12	.05	.18	-.12	.16
Strong Republican	-.05	.13	-.08	.20	.00	.16
Lives in the South	.04	.07	.20 ⁺	.11	-.09	.10
Pre-COVID-19 relationship (reference: extremely satisfied)						
Slightly/moderately satisfied	-1.46***	.08	-1.45***	.12	-1.49***	.11
Not satisfied	-3.10***	.09	-3.28***	.14	-2.95***	.12
Original intercept	5.05***	.21	5.20***	.30	5.06***	.27
Random part						
Variance of original intercept	.77**	.07	.82 ⁺	.10	.62***	.09
Variance of COVID-19 intercept change	.26***	.06	.35***	.09	.15***	.09
Covariance of intercept and intercept change	.36*	.16	.32 ⁺	.18	.64	.53
Residual variance	1.27***	.03	1.19***	.04	1.35***	.04

(continued)

Table 2. (continued)

	Total		Men		Women	
	B	SE	B	SE	B	SE
Fit indices						
χ^2 (df)	1,339.55 (35)		689.50 (34)		737.78 (34)	
AIC	19,622.10		9,515.37		10,125.82	
BIC	19,888.13		9,746.73		10,359.13	

Source: Public Discourse and Ethics Survey, waves 1 to 7.

Note: $N=1,066$ ($n=510$ men, $n=556$ women), $T=5,714$ ($T=2,786$ men, $T=2,928$ women). AIC = Akaike information criterion; BIC = Bayesian information criterion; COVID-19 = coronavirus disease 2019; HS = high school.

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

Table 3. Hierarchical Linear Model of Sexual Frequency Satisfaction through Phases of the COVID-19 Pandemic.

	Total		Men		Women	
	B	SE	B	SE	B	SE
Fixed part						
Pre-COVID-19 slope	.06*	.03	.06 ⁺	.04	.07 ⁺	.04
COVID-19 intercept change	-.37***	.05	-.47***	.07	-.29***	.07
COVID-19 recovery slope	-.01	.01	-.00	.02	-.01	.02
Fall 2020 bump	.22***	.05	.25***	.07	.20**	.07
Women (reference: men)	.30***	.08				
Age cohort (reference: 50–59 years)						
20–29 years	.42*	.19	.45	.36	.49*	.22
30–39 years	.44**	.14	.24	.22	.55**	.18
40–49 years	.17	.14	.22	.21	.20	.17
60–69 years	.02	.13	.06	.18	.02	.18
≥70 years	.10	.16	.09	.22	.24	.22
Race/ethnicity (reference: White)						
Black	.32 ⁺	.17	.51*	.24	.25	.23
Hispanic	.00	.14	.18	.21	-.03	.19
Other race/ethnicity	.04	.14	.12	.23	.05	.18
Has a child younger than 18	.14	.10	.07	.16	.19	.13
Education (reference: HS or less)						
Some college/two-year degree	-.15	.10	.03	.15	-.25*	.13
College degree or more	-.14	.11	-.03	.16	-.20	.14
Family income (reference: \$60,000–\$100,000)						
<\$30,000	.07	.14	.18	.23	-.11	.17
\$30,000–\$60,000	-.01	.11	-.02	.16	-.01	.15
\$100,000–\$200,000	-.06	.12	-.07	.16	-.04	.17
>\$200,000	-.29	.23	-.50	.31	-.06	.34
Prefer not to say	.02	.15	.39 ⁺	.24	-.23	.19
Employment status (reference: retired)						
Full-time	.18	.13	.23	.18	.11	.19
Part-time or other	-.00	.13	-.08	.19	-.01	.18
Religiosity (three-item scale)	.17**	.06	.19*	.09	.11	.09
Religious affiliation (reference: none)						
Liberal Protestant	-.18	.14	-.27	.20	.05	.19
Evangelical Protestant	-.10	.15	-.20	.22	.04	.20
Catholic	-.06	.14	-.04	.20	-.03	.19
Other Religion	-.02	.14	.01	.21	.04	.19

(continued)

Table 3. (continued)

	Total		Men		Women	
	B	SE	B	SE	B	SE
Political party (reference: independent)						
Strong Democrat	-.16	.13	.26	.21	-.53**	.18
Lean Democrat	-.03	.13	.08	.21	-.10	.17
Lean Republican	.10	.13	.36 ⁺	.20	-.09	.18
Strong Republican	.02	.14	.28	.22	-.10	.18
Lives in the South	.08	.08	.31**	.12	-.09	.11
Pre-COVID-19 relationship average (reference: extremely satisfied)						
Slightly/moderately satisfied	-1.49***	.09	-1.49***	.13	-1.47***	.12
Not satisfied	-3.05***	.10	-3.31***	.16	-2.84***	.13
Original intercept	4.64***	.23	4.29***	.33	5.05***	.30
Random part						
Variance of COVID-19 intercept change	.27***	.06	.24***	.08	.28***	.09
Variance of original intercept	1.03	.08	1.11	.11	.82 ⁺	.10
Covariance of intercept and intercept change	.32*	.14	.39 ⁺	.21	.40 ⁺	.24
Residual variance	1.22***	.03	1.13***	.04	1.31***	.04
Fit indices						
χ^2 (df)	1,135.75 (35)		612.45 (34)		598.37 (34)	
AIC	19,654.67		9,453.18		10,216.36	
BIC	19,920.70		9,684.55		10,449.66	

Source: Public Discourse and Ethics Survey, waves 1 to 7.

Note: N = 1,066 (n = 510 men, n = 556 women), T = 5,715 (T = 2,787 men, T = 2,928 women). AIC = Akaike information criterion; BIC = Bayesian information criterion; COVID-19 = coronavirus disease 2019; HS = high school.

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

Table 4. Summary of Major Cross-Level Interactions between Demographic Factors and Phases of the Pandemic in Predicting Sexual Quality and Frequency Satisfaction.

	Sexual Quality Satisfaction (0–6)		Sexual Frequency Satisfaction (0–6)	
	Men	Women	Men	Women
COVID-19 onset intercept change (0/1)	Relationship satisfaction Not satisfied (.46**)	Age 20s (-.73**) 60s (-.58**) Education Some college (.31*) College or more (.32*)	Employment Full-time (-.24*)	Relationship satisfaction Moderately satisfied (.19 ⁺) Not satisfied (.65***) Age 20s (-.64*) 30s (-.37 ⁺) 60s (-.49*)
Post-COVID-19 recovery slope (0–5)	Employment Full-time (-.06*)		Income >\$200,000 (-.13*) Prefer not to say (-.09 ⁺) Education Some college (.09**) College or more (.07 ⁺)	Income \$100,000–\$200,000 (-.09 ⁺) >\$200,000 (-.26*) Politics Strong Republican (.14**)
Fall 2020 “optimism blip” (0/1)	Politics Strong Democrat (-.61**) Lean Democrat (-.45*) Race/ethnicity Black (-.65*) Hispanic (-.42 ⁺)		Has a child younger than 18 (.42*) Education College or more (-.33*) Race/ethnicity Black (-.52 ⁺) Hispanic (-.39 ⁺) Age 40s (-.52*)	

Source: Public Discourse and Ethics Survey, waves 1 to 7.

Note: N = 1,066 (n = 510 men, n = 556 women); T = 5,715 (T = 2,787 men, T = 2,928 women). Unabridged models are shown in Appendix Tables A8 to A11. COVID-19 = coronavirus disease 2019.

⁺p < .10. *p < 0.05. **p < 0.01. ***p < 0.001.

The Pandemic Recovery. The trend for recovery after the initial pandemic drop was surprisingly flat, and only one social factor emerged as predictive of any general rebound effect in quality satisfaction. For married men, working full-time predicted declining satisfaction ($-.06, p < .05$) relative to other men in the 18 months following the pandemic onset. Taken together, finding that working full-time predicted an intercept change in frequency satisfaction at the pandemic onset but a post-COVID-19 slope change in quality satisfaction may suggest that, for many men, frequency satisfaction dropped first and remained low, and quality dissatisfaction then followed suit over time. No significant predictors emerged for recovery trends of quality satisfaction among women.

Recovery trajectories for sexual frequency satisfaction, although still fairly flat on average, were nuanced by a few social factors. The small group of men and women in the highest income group were predicted to decline sharply as the pandemic progressed relative to others (men, $-.13 [p < .05]$; women, $-.26 [p < .05]$), and men with the least education lagged behind their counterparts (some college, $.09 [p < .01]$). Conversely, women who identified as strong Republicans had a solid upward trend ($.14, p < .01$).

The Fall 2020 Bump. We turn now to exploring what we call “the optimism blip” of the fairly isolated spike in satisfaction during the November 2020 wave. This brief recovery from the pandemic era suppression of sexual satisfaction is driven primarily by men, though certainly not all groups of men. For men’s quality satisfaction, White men are the primary beneficiaries of this respite in contrast with Black ($-.61, p < .05$) and to a lesser degree Hispanic ($-.42, p = .07$) men. The politically unaffiliated have the highest predicted quality satisfaction bump, particularly compared with both the strong ($-.61, p < .01$) and leaning ($-.45, p < .05$) Democrats. The frequency satisfaction bump was most experienced by fathers ($.42, p < .05$) and White men (Black, $-.52 [p = .06]$; Hispanic, $-.39 [p = .07]$) but excluded men with the most education ($-.33, p < .05$), and in their 40s ($-.52, p < .05$). In other words, it appears that fall 2020 saw a brief improvement in sexual well-being outcomes, though this respite was primarily experienced by men who were White, politically unaffiliated, fathers, in their 50s, and least educated. There were no reliable predictors of a satisfaction swell among women in either outcome.

Summary

Overall, we documented a clear drop in both sexual quality and frequency satisfaction directly following the onset of the COVID-19 pandemic. Perhaps more alarmingly, average sexual satisfaction in both areas remained largely suppressed across the observation period. There was a brief respite in fall 2020, with levels quickly falling back to post-pandemic suppression. As anticipated, these outcomes were

not uniform across all subgroups, and it is clear that social location dynamics served to amplify or ameliorate the pandemic period effects.

As a group, men reported a more marked decline in average sexual satisfaction than women for both quality and frequency following the pandemic “intervention.” Among men, employment status, money, and schooling appeared as key social statuses predicting the changes in reported satisfaction, with men who were least educated, employed full-time, or with the highest level of family income reporting more significant declines than their counterparts. Among women, changes in reported sexual satisfaction were best predicted by the relative social positions of age, education, income, and political affiliation. Drops in reported satisfaction were most pronounced among the youngest and oldest women, those with the least education, or women with the highest family income, but increases were seen for women with a strong affiliation with the Republican Party.

Discussion and Conclusions

In addition to this study’s other contributions, we suspect there may be an important inference for future research on relationships as well. As Perel (2006) eloquently described in her book inspiring this study’s title, a couple’s sex life often suffers without a balance of both connection and separateness, but many couples do not recognize the need to maintain a healthy level of differentiation within their intimate relationship. As suggested by our findings on the lingering pandemic effects, couples who experienced lengthy quarantines may have difficulty regulating their sexual dynamics after such a period of intense togetherness. In addition to key indicators about couple dynamics such as length of the relationship and age at formation, perhaps data collection efforts on relationship dynamics moving forward should now also include standard questions for quarantine incidence, length, and intensity.

Although the precise driving forces behind the “optimism blip” are left to speculation, our results provide hints about the nature of the temporary uptick in sexual satisfaction. The brief rebound during fall 2020 may reflect the short-lived hopefulness among some people that the world was returning to “normal” and the worst of the pandemic was behind. For example, Democratic men were excluded from the bump in quality satisfaction and Republican women recovered faster than others, which seems consistent with data showing that Democrats have more closely followed social restrictions and been more concerned about COVID-19 infection. Similarly, the racialized nature of the respite in men’s satisfaction mirrors other racially coded well-being outcomes in the United States. Coming on the heels of multiple high-profile race-related police brutality cases, a racially charged presidential election, and minority communities being ravaged by COVID-19 at disproportionate rates, it is perhaps unsurprising to find it was White American men, and not

Black or Hispanic men, who benefited from the brief swell in both kinds of satisfaction.

Despite the advantages of this study's longitudinal approach, some limitations should be noted. First, there were a few potentially important variables not available in this data set. For example, rather than a simple binary for parenthood, the age of children might have revealed meaningful distinctions in light of varying care intensity, delayed vaccination availability for children, and intermittent school closures. As noted earlier, it would have been preferable to control for potential changes in a few of the demographic variables such as job loss, income change, or relationship dissolution, but the social factors used here are limited to baseline responses. Similarly, some troubled marriages may have ended during the observation period, changing personal satisfaction trajectories. Although we believe that the initial social statuses used here represent levels of risk during an emergent disaster, future research would do well to more specifically examine how changes in demographic factors could add additional barriers to well-being.

Regarding gender differences, many researchers have documented how some pandemic stressors have been asymmetrically borne by women (Bariola and Collins 2021; Schieman et al. 2021; Yavorsky et al. 2021), including increases in sexual dysfunctions (de Oliveira and Carvalho 2021; Masoudi et al. 2022; Omar et al. 2021; Wignall et al. 2021). It is somewhat counterintuitive, then, to find that the subjective sexual satisfaction measures did not drop as severely on average for women as they did for men. Instead, we found that the drop among women was more highly contingent on factors such as age and education. Indeed, subjective satisfaction more likely reveals a gap between a person's expectations and their lived experience rather than providing a direct proxy for objective sexual experiences. It is well documented that societal expectations around sex are constructed differently for men and women (Armstrong et al. 2012; Lentz and Zaikman 2021; Mintz 2017; van Anders et al. 2022), a premise we believe was indirectly demonstrated again here. Cultural scripts generally paint men as more interested, knowledgeable, and focal in sexual pleasure (Mahar et al. 2020; Rubin et al. 2019; Simon and Gagnon 1986; Wiederman 2005), so perhaps for many women, what they expected to receive or enjoy during sex was already constrained before the disaster. Subjective (dis)satisfaction is an important dimension of well-being, though it may be less tightly associated with objective sexual experiences of enjoyment for women than it is for men.

It may also be useful to ponder how sexual quality satisfaction is likely a unidirectional outcome (i.e., people presumably want higher quality sex, however they define it), but frequency satisfaction may be a bidirectional outcome (i.e., some people may prefer increases in sexual frequency while others, particularly those who may be performing obligatory sex, may prefer when sexual frequency decreases). Thus, even the fundamental nature of perceiving and reporting

these sexual satisfaction outcomes may be shaped by social status and gender.

The COVID-19 pandemic onset was clearly linked to drops in reported sexual satisfaction among many married Americans as well as continued suppression for at least 18 months. And, in addition to these findings, the measures used here serve as an illustration of how subjective sexual satisfaction could be linked to broader social dynamics such as precarity, stress, and optimism. Various social groups experienced changes in their sex lives in divergent ways during this period of upheaval, and we hope that future researchers will continue to explore these mechanisms in more depth.

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Supplemental Material

Supplemental material for this article is available online.

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