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Experience of Racial Discrimination was Associated with Psychological Distress and Worsening Sex Life Among Adult Americans During COVID-19

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Abstract

The recent escalation of racism in the U.S. during the COVID-19 pandemic points to the importance of examining the association between experienced racism and sexual health. Based on data from a nationally representative survey conducted in the U.S. in October 2020 (n = 1,915), Chi-square tests and multivariable logistic regressions were estimated to examine the

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association between experience of racism and changes in sex life during the pandemic. We further performed a causal mediation analysis using the bootstrap technique to assess the mediating role of psychological distress in the observed association between the experience of racism and changes in sex life. Among the respondents, the proportions reporting better, worse, or no change in sex life were, respectively, 15%, 21%, and 64%. Experiencing racial discrimination during COVID-19 was significantly associated with worsening sex life (adjusted odd ratio [AOR] = 1.53; 95% confidence interval [CI] = 1.04, 2.25). Respondents with experienced racism were also more likely to report psychological distress (AOR = 1.68; 95% CI = 1.09, 2.59). About one-third (32.66%) of the observed association between experienced racism and worsening sex life was mediated through psychological distress. Addressing racism and its association with psychological distress has the potential to improve sexual health and reduce related racial and ethnic disparities.

Introduction

Racism may take the form of “thoughts, attitudes and practices that create hierarchies of superiority and inferiority based on characteristics such as race, ethnicity, and nation” (Elias et al., 2021, p. 788). Despite cumulative efforts in addressing racial discrimination over generations, the prevalence of perceived racial discrimination among racial and ethnic minority Americans remains high, and it was estimated that 50% to 75% of minority groups, including Black, Hispanic, and Asian Americans, reported experience of racism (Lee et al., 2019). Results from a nationally representative survey conducted in 2020 revealed that while 9% of Americans of 18 years or older reported experiencing racism during the COVID-19 pandemic, the corresponding rate went as high as 19% among African and Asian Americans (Su et al., 2022). Concurrent with this trend was the recent increase in racially motivated hate crimes against African and Asian Americans during the COVID-19 pandemic (Su et al., 2022; Turner-Musa et al., 2020).

As many racial and ethnic minority groups struggle to cope with a disproportionate burden of COVID-19, the experience of racial discrimination incurs an additional layer of psychological distress (Fortuna et al., 2020; Gauvin et al., 2022). Poor mental health has been identified as the most common health outcome in correlation with racism (Kairuz et al., 2021; Paradies et al., 2015; Schouler-Ocak et al., 2021). Increasing experience of racial discrimination during the COVID-19 pandemic is an important factor underlying the deteriorating mental health among Americans of racial and ethnic minorities (Shi et al., 2022). Findings based on analyses of national survey data revealed significant increases in depression and anxiety among racialized minorities compared to Whites during the COVID-19 pandemic (Thomeer et al., 2023). This study also revealed that elevated mental health burden among Blacks was partly due to the murder of George Floyd in 2020, and for Asians, it was linked to the murder of six Asian women in Atlanta in 2021 (Thomeer et al., 2023).

Besides posing a threat to mental health, experience of racial discrimination can also compromise sexual health, which can be defined “as a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity” (The World Health Organization [WHO], 2002). This definition

provides insights into the pathways via which exposure to racism can negatively impact sexual health. Perceived racism can first compromise emotional, mental, and social well-being before eventually leading to physical dysfunctions in sexual activities. Cumulative evidence from a number of studies have pointed to a strong association between the experience of psychological distress and a decline in sexual activities (Bach et al., 2013; Brody & Costa, 2009; Esfahani & Pal, 2018; Galinsky & Waite, 2014; Mollaioli et al., 2021; Schiavi et al., 2020). This association was also revealed during the COVID-19 pandemic when sexual health was declining in terms of sexual desire, frequency, or quality of sex life (Ballester-Arnal et al., 2021; Cito et al., 2021; Delcea et al., 2021; Feng et al., 2021; Fuchs et al., 2020; Ibarra et al., 2020; Ko et al., 2020; Lehmillier et al., 2021; Li et al., 2020; Pollard & Rogge, 2022; Schiavi et al., 2020).

So far, few studies have assessed the association between exposure to racial discrimination and changes in sexual health, and how this association might have been mediated by psychological distress. Thus, we hypothesized that: 1) those who have experienced racial discrimination during the COVID-19 pandemic are more likely to experience worsening sexual health; 2) those with serious psychological distress during the pandemic are more likely to experience worsening sexual health; and 3) psychological distress mediates the association between racial discrimination and changes in sexual health.

Method

Study Design/Setting

In October 2020, the National Opinion Research Center (NORC) at the University of Chicago conducted a nationally representative survey jointly designed by investigators from several U.S. universities and the American Cancer Society. The Health, Ethnicity, and Pandemic (HEAP) Survey aimed to examine disparities in health and healthcare access among U.S. adults during the pandemic. The initial sample was randomly drawn from NORC's AmeriSpeak Panel, a probability-based panel designed to be representative of the US noninstitutionalized population, with Hispanics, Blacks, Asians, and Pacific Islanders oversampled (Chen et al., 2021; Zhang et al., 2021). The HEAP survey was delivered in English and Spanish through the internet or telephone based on the preferences of respondents. NORC implemented stratified sampling and poststratification weighting procedures to ensure the study sample was nationally representative of US adults (age 18 years). Detailed information regarding the panel recruitment and selection methodology can be found in previous publications using HEAP data (Chen et al., 2021; Hill et al., 2021; Matthews et al., 2022; Zhang et al., 2021).

The HEAP survey was conducted among 2,709 adult Americans. The final weighted sample used in this study consisted of 1,915 sexually active respondents with complete information on related variables, including sex life, racism experience, Kessler Distress Scale, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of bodyweight changes during the pandemic.

Measures

Outcome Variables—The primary outcome, changes in sex life, was based on the survey question: “Overall, how has your sex life changed during the pandemic, considering both the frequency and quality?” (Better, No change, or Worse). Those who reported “not sexually active,” “prefer not to answer,” or “don’t know” (595 responses) as well as incomplete/missing information on related covariates (199 responses) were excluded from the analysis.

Explanatory Variables—Our selection of the explanatory variables in the analysis was guided by the psychosocial aspects of sexual dysfunction, which suggest that the etiology of sexual dysfunction usually results from a complex interaction of biological, psychological, and social factors (Barton & Joubert, 2000). In our analysis, we used two key explanatory variables to denote psychological factors associated with sexual health. One was perceived racism during COVID-19, which was based on the survey question: *“Have you personally experienced any discrimination or unfair treatment because of your racial or ethnic background during the COVID-19 pandemic?”* with responses of *“Yes or no.”* The other key explanatory variable was psychological distress which was measured by the Kessler Distress Scale-6 (K6; Umucu et al., 2022). The K6 was based on the survey question: *“During the past 30 days, about how often did you feel each of the six following items?”* The six items included “nervous,” “hopeless,” “restless or fidgety,” “depressed,” “everything was an effort,” and “worthless” in the past 30 days. The responses to each of these six item measures ranged from 0 for “none of the time” to 4 for “all of the time,” which translated into a score ranging from 0 to 24. Based on this score, we created a dichotomous variable on psychological distress with a score of 13 or higher indicating serious psychological distress and a score of lower than 13 as having no serious psychological distress (Kessler et al., 2002; Liu et al., 2020; Shi et al., 2022; Williams et al., 2019). This cutoff point indicates that participants with a K6 score of 13 or higher have a high likelihood of developing a mental disorder while those respondents with a score of lower than 13 have a low likelihood of developing a mental disorder (Fushimi et al., 2012).

Biological factors associated with sexual function were proxied by demographics and health status. The demographic characteristics considered in this study included age groups (18–29, 30–49, 50–69, and 70+), gender (male, female), race/ethnicity (non-Hispanic White, Hispanic, Non-Hispanic Black, non-Hispanic Asian, and other), country of birth (born in the US vs. foreign countries), and marital status (married, unmarried). Respondents’ health status was denoted by two survey questions, including self-rated health (excellent, very good, good, fair, poor) and self-assessment of changes in bodyweight during the pandemic (no change, gained weight, lost weight). Social factors associated with sexual function included education level (less than high school, high school, vocational/tech school/some college, bachelor’s degree, or above), employment status (employed, retired, unemployed), and religiosity, which was measured by the frequency of attending religious meetings (more than once a week, once a week, once or twice a month, a few times a year, seldom, never).

Statistical Analysis

We used poststratification weighting throughout our statistical analyses to account for nonresponses and complex sampling design. Descriptive analysis was performed to compare

respondents who reported better, no change, or worse sex life during the pandemic in terms of the experience of racism, the K6 measure, and other variables of interest. Chi-squared tests were estimated to denote if differences in these variables across the three groups were statistically significant. In the case of significant associations, pairwise comparisons were conducted using an adjusted significance level of three pairs of comparisons based on changes in sex life during COVID-19, including better versus no change, better versus worse, and no change versus worse. Univariable and multivariable logistic regressions were performed to examine correlates of changes in sex life during COVID-19.

The conceptual framework of the mediation analysis in this study was informed by Baron and Kenny's model of mediation analysis that emphasizes the process of investigating underlying factors through which two variables are associated (Baron & Kenny, 1986). In the first step of the mediation analysis, the correlation between experienced racism and sex life was examined to evaluate if experienced racism would have a statistically significant association with sex life without considering the factor of psychological distress. The second step of the mediation analysis involved estimating the correlation between experienced racism and psychological distress based on K6. This was followed by assessing the correlation between experienced racism and sex life with the inclusion of the psychological distress factor (Figure 1). To further examine the mediation effect of psychological distress in the association between experienced racism and worsening sex life, we used the bootstrap method to estimate the direct, indirect, and total mediation effects with the use of a bootstrap sample of 1,000 and bias corrected 95% confidence limits (Yung et al., 2018).

Values of $p < .05$ based on two-tailed tests were considered statistically significant. Odds ratios and their 95% confidence intervals (CI) were reported. All statistical analyses, including data merging, cleaning, coding, and analysis, were performed using SAS 9.4 software (SAS Institute Inc, 2013).

Results

The descriptive analysis in Table 1 showed that 79% of the respondents reported better or no change in their sex life during COVID-19 and the remaining 21% reported worsening sex life. There was a significant bivariate association between changes in sex life and experienced racism during COVID-19 ($p = .001$). Among respondents with experienced racism, about 30% of them reported that their sex life became worse during COVID-19, whereas the corresponding percentage among those without experienced racism was 20%. The results also showed that changes in sex life during the pandemic differed across racial and ethnic groups, with non-Hispanic Blacks showing the highest rate of worsening sex life (27%), followed by 25% among Hispanics, 19% among non-Hispanic Asians, and 18% among non-Hispanic Whites.

Results from the unadjusted model of the regression, as summarized in Table 2, showed that experiencing racism during COVID-19 was significantly associated with changes in sex life during the pandemic ($p < .05$). Based on the unadjusted model, those who had experienced racism were 75% more likely to report worsening sex life during the pandemic. Within the same model, having serious psychological distress was associated with worsening sex life

(OR = 2.55; 95% CI = 1.95, 3.33). This indicates that, relative to those with no serious psychological distress, the odds for those with serious psychological distress was 2.55 times as much to experience worse sex life during the pandemic.

After adjusting for the effect of age, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of body weight changes during the pandemic, Model 1 of the adjusted regression showed that experienced racism during COVID-19 was significantly associated with worsening sex life (AOR = 1.53; 95% CI = 1.04, 2.25). Specifically, those respondents who had experienced racism were 53% more likely to report worsening sex life during the COVID-19 pandemic.

The only difference between Model 1 and Model 2 in Table 2 is that psychological distress, as indicated by K6, was incorporated into the analysis as an additional covariate in Model 2. With this change, the association between the experience of racism and worsening sex life weakened and became nonsignificant (AOR = 1.44; 95% CI = 0.97, 2.12). In the same model, having serious psychological distress was significantly associated with worsening sex life (AOR = 2.16; 95% CI = 1.59, 2.93). This indicates that the odds for those with serious psychological distress was 2.16 higher to experience worse sex life during the pandemic compared to those with no serious psychological distress holding all other predictor variables constant.

As a part of our mediation analysis, Table 3 presents the association between experienced racism and psychological distress during COVID-19. The unadjusted model of Table 3 shows that experienced racism was significantly associated with having serious psychological distress during COVID-19 (OR = 1.98; 95% CI = 1.36, 2.87). After controlling for the effect of age category, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of body weight changes during the pandemic, experienced racism remained significantly associated with having serious psychological distress (AOR = 1.68; 95% CI = 1.09, 2.59). Specifically, the adjusted odds for those who had experienced racism were 68% more likely to have a K6 score of 13 or higher, indicating serious psychological distress.

Results based on Table 4 illustrated the mediation effect of psychological distress in the association between experienced racism and worsening sex life using the bootstrap estimation method. The results showed a significant direct mediation effect (AOR = 1.47; Bootstrap Bias Corrected 95% CI = 1.06, 1.97), indirect effect (AOR = 1.15; Bootstrap Bias Corrected 95% CI = 1.07, 1.30), and total effect (AOR = 1.69; Bootstrap Bias Corrected 95% CI = 1.21, 2.26). About one-third of the observed association between experienced racism and worsening sex life was mediated through psychological distress.

Results in Table 5 illustrate racial and ethnic disparities in changes in sex life during the COVID-19 pandemic. Based on Model 1, without including experienced racism in the analysis, relative to non-Hispanic Whites, the odds for Blacks (AOR = 1.58; 95% CI = 1.11–2.25) and Hispanics (AOR = 1.45; 95% CI = 1.04, 2.03) to report the experience of worsening sex life were significantly higher. These disparities, however, became attenuated and less evident in Model 2, with experienced racism included in the analysis, suggesting

that part of the observed racial and ethnic disparities in sex life was attributable to greater exposure to racism among minority groups, including Hispanics, non-Hispanic Blacks, and non-Hispanic Others.

Discussion

Results from this study indicated that approximately two out of ten sexually active American adults experienced negative changes in their sex life during COVID-19, and the corresponding proportion was higher among racial and ethnic minorities, including Hispanic, non-Hispanic Black, non-Hispanic Asian, and non-Hispanic other. These findings reinforced previous research documenting changes in sexual health during COVID-19. For example, findings based on a systematic review of results from 21 studies on changes in sexual activities during COVID-19 suggested that participants in the majority of these studies reported a reduction in the number of sexual relations and an increase in the frequency of solo sex activity, especially masturbation, compared to the time before the COVID-19 pandemic (Masoudi et al., 2022).

One of the most important findings from this study was that having experienced racism during the pandemic was associated with worsening sex life. This finding underscores the importance of examining exposure to racism as a potential driver of disparities in sex life. It also highlights the particular racial and ethnic groups that may be at heightened risk of experiencing unfavorable changes in their sex life in the face of escalated racism during the COVID-19 pandemic. Prior studies have documented several health-related factors that are associated with sex life, including physical, emotional, and mental health, as well as other sociodemographic factors such as age, marital status, and education attainment level (Camacho & Reyes-Ortiz, 2005; De Moraes et al., 2016; Laumann et al., 1999; Nappi et al., 2016; Traa et al., 2012). However, whether exposure to racism is associated with sex life changes has not seen similar investigation. Findings from this study call for the need to address racism as a risk factor for sexual health. While a growing body of research has identified racism as a determinant of health (Paradies et al., 2015), this study adds to that line of work by establishing the significant association between experienced racism and worsening sex life during a devastating pandemic.

Previous research provided insights into how the experience of racial discrimination can be associated with sexual activities. Social determinants of health that are associated with institutionalized and interpersonal racism (such as poverty, unemployment, and limited education) can make women more vulnerable to disparities in sexual outcomes (Prather et al., 2018). Cumulative evidence from a number of studies suggested that individuals who have experienced racism-related poverty or unemployment may change their sexual behavior and become involved in risky sexual activities to meet basic needs (DiNenno et al., 2012; Krishnan et al., 2008; Prather et al., 2018; Stratford et al., 2008; Tsui et al., 2008). Exposure to racial discrimination can lead to a decrease in self-esteem and an increase in sexual dysfunctions among racial minority groups (Silvestrini, 2020). This linkage is consistent with our findings among sexually active Americans during the COVID-19 pandemic.

One unique finding from this study was that about one-third of the association of experienced racism with sex life was mediated through psychological distress. This points to the relevance of supporting the victims of racism to effectively cope with the experience and its related psychosocial distress (Su et al., 2022). Such a strategy becomes especially crucial when it becomes impractical or impossible to directly confront or challenge the perpetrators or sources of racial discrimination. The association between exposure to racism and mental health has been well documented in the literature (Paradies et al., 2015; Pieterse et al., 2012; Schouler-Ocak et al., 2021; Shi et al., 2022; Williams & Williams-Morris, 2000). Consistent with previous studies, our mediation analysis showed that experienced racism was significantly associated with psychological distress, which in turn was correlated with negative changes in sex life (Bach et al., 2013; Brody & Costa, 2009; Esfahani & Pal, 2018; Galinsky & Waite, 2014; Rosenberg et al., 2021). Depression, anxiety, and stress have been identified as risk factors for sexual dysfunction (Östman, 2008; Perry & Wright, 2006; Schiavi et al., 2020; Zemishlany & Weizman, 2008). Victims of racism are more vulnerable to these risk factors. Developing evidence-based interventions to address racism and to support victims of racism becomes urgent in the aftermath of COVID-19 as many Americans are recovering from the pandemic and a concurrent escalation of racism in the nation.

This study yielded new insights into racial disparities in sex life. Relative to non-Hispanic Whites, Blacks were more likely to report worsening sex life during COVID-19 and this gap remained statistically significant after adjusting for demographics and other variables in the study. Given the role of suboptimal sexual health in quality of life and interpersonal relationships (De Berardis et al., 2002; Owiredu et al., 2011), this observed racial disparity in sexual life might worsen existing disparities in other aspects of life, including financial stressors such as separation or divorce (Gheshlaghi et al., 2014). However, this racial gap became notably attenuated when the factor of experienced racism was added to the regression analysis. While previous studies revealed racial disparities in sexual health (Dariosis et al., 2011; Mojola & Everett, 2012), how these disparities were related to the experience of racism remained underexplored. Our findings suggested that part of the observed racial disparities in sex life was related to the disproportionate exposure to racism amongst Blacks. It is also likely that the disproportionate burden of COVID-19 experienced by Blacks (Mackey et al., 2021) could have contributed to their higher risk for experiencing a deterioration in sex life during the pandemic.

Limitations

The findings from this study should be interpreted with consideration of several limitations. First, the data on experienced racism and changes in sex life were collected during the COVID-19 pandemic, which may not necessarily reflect realities on these factors in other periods. Second, changes in sex life were measured by one generic question (i.e., *Overall, how has your sex life changed during the pandemic, considering both the frequency and quality?*), while other related items such as sexual desire and satisfaction may provide a broader description of sex life (Jardin et al., 2017; Meston & Trapnell, 2005). Thirdly, the HEAP survey was only conducted in English and Spanish, which constrains the inclusion of Asian immigrants with limited English proficiency who may be most vulnerable to

discrimination and xenophobia during COVID-19 (Su et al., 2022). Future research can improve the representativeness of Asian immigrants by providing the survey in multiple Asian languages and assessing how this change might impact some of our study findings such as the lack of significant differences between Whites and Asians in the odds of reporting worsening sex life. Finally, the data used in this study were based on self-reported responses, and therefore potential recall biases may occur in response to some of the survey questions. Despite these limitations, to our knowledge, this study represents a rare effort to examine the association between experience of racial discrimination and changes in sex life using a nationally representative survey, and the key findings from this study would inform future efforts to improve sexual health among racial and ethnic minority populations and address-related disparities.

Conclusion

Based on data from a nationally representative survey, this study highlighted the association of racial discrimination with the experience of worsening sex life among American adults during COVID-19. Part of this association was mediated through psychological distress. Non-Hispanic Blacks and Hispanics were more vulnerable than Whites to unfavorable changes in sex life, which was partially explained by their higher exposure to racial discrimination. These findings point to the need for advancing the efforts to further address racial discrimination as a driver of sexual health and related disparities.

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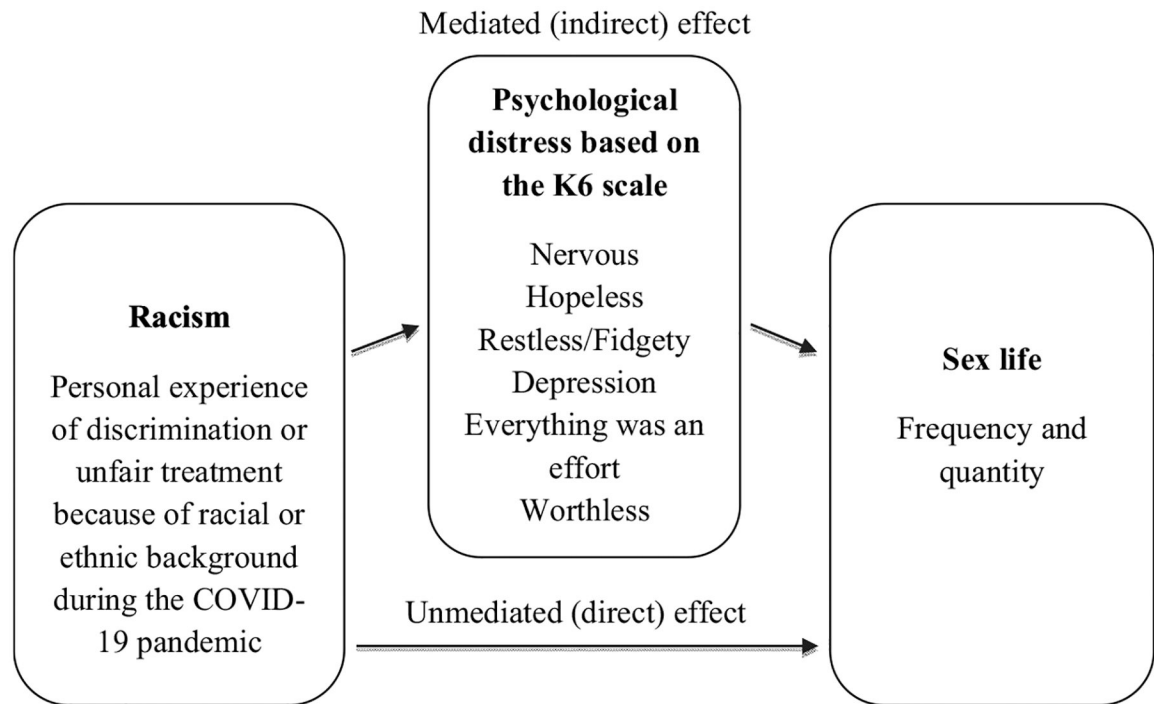


Figure 1.
Conceptual framework for the mediation analysis.

Table 1.
A comparison between adult Americans who reported diverse changes in sex life during COVID-19.

Variables	Changes in sex life during COVID-19 (%)						
	N	Better (%)	No change (%)	Worse (%)	p-Value	Pairwise comparisons p-value	
						Better vs. No change	Better vs. Worse
Experienced racism during COVID-19	1915	15.37	63.72	20.91			
Yes	170	20.05	49.54	30.41	<.001	0.007	0.60
No	1745	14.91	65.10	19.99			
Kessler Distress Scale							
No serious psychological distress	1618	14.55	67.32	18.13	<.001	<.001	0.039
Serious psychological distress	297	19.81	44.13	36.06			
Age							
18–29	355	24.73	45.58	29.68	<.001	<.001	0.004
30–49	735	21.33	54.25	24.42			
50–69	663	6.86	77.60	15.54			
70+	162	2.67	89.54	7.79			
Gender					.220		
Male	971	14.04	65.26	20.69			
Female	944	16.73	62.14	21.13			
Race/Ethnicity							
Non-Hispanic White	1151	15.14	66.90	17.96	<.001	0.179	0.060
Hispanic	345	18.08	57.40	24.52			
Non-Hispanic Black	235	15.68	57.39	26.93			
Non-Hispanic Asian	109	12.85	68.12	19.04			
Other	74	8.91	57.49	33.60			
Country of Birth					.505		
In the US	1707	15.10	63.70	21.20			
Outside the US	208	17.56	63.92	18.52			
Marital Status							
Unmarried	815	20.39	54.50	25.11	<.001	<.001	0.161
							<.001

Variables	Changes in sex life during COVID-19 (%)							
	N	Better (%)	No change (%)	Worse (%)	p-Value	Pairwise comparisons p-value		
						Better vs. No change	Better vs. Worse	No change vs. Worse
Married	1100	11.65	70.55	17.80				
Education level					.124			
Less than high school	208	18.88	64.39	16.74				
High school graduate or equivalent	508	14.83	66.33	18.84				
Vocational/tech school/some college	508	16.42	63.18	20.41				
Bachelor's degree or above	691	13.94	62.01	24.05				
Employment Status					<.001	<.001	0.053	<.001
Employed	1211	17.36	60.00	22.64				
Retired	269	3.68	84.79	11.53				
Unemployed	435	17.06	61.03	21.90				
Religious attendance					<.001	<.001	<.001	<.001
More than once a week/Once a week	499	15.89	69.48	14.63				
Once or twice a month/A few times a year	408	22.18	59.43	18.39				
Seldom/Never	1008	12.35	62.61	25.04				
Self-Rated Health					.160			
Excellent/Very Good/Good	1691	15.39	64.34	20.27				
Fair/Poor	223	15.22	59.06	25.72				
Self-assessment of bodyweight changes during the pandemic					<.001	<.001	<.001	<.001
No change	700	13.07	75.47	11.45				
Gained weight	809	16.15	55.28	28.65				
Lost weight	405	17.76	60.26	21.97				

Association between experienced racism and reporting worsening sex life among adult Americans during COVID-19 (n = 1915).

Table 2.

Variables	Adjusted Odds Ratio (95% CI) [†]	
	Model 1	Model 2
Experienced racism during COVID-19		
No	Reference	Reference
Yes	1.75** (1.24, 2.48)	1.53* (1.04, 2.28)
Kessler Distress Scale-6		
No serious psychological distress	Reference	Reference
Serious psychological distress	2.55** (1.95, 3.33)	2.16** (1.59, 2.93)

[†]In both adjusted models, other variables included in the weighted logistic regressions were age category, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of bodyweight changes during the pandemic.

Table 3.

Association between experienced racism and having serious psychological distress during COVID-19 (n = 1915).

Variable	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI) [†]
Experienced racism during COVID-19		
No	Reference	Reference
Yes	1.98 ** (1.36, 2.87)	1.68 * (1.09, 2.59)

* $p < .05$;

** $p < .01$.

[†] In the adjusted model, other variables included in the weighted logistic regressions were age category, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of bodyweight changes during the pandemic.

Table 4.

Causal mediation analysis using bootstrap to test the mediation effects of psychological distress in the association between experienced racism and worsening sex life.

Model pathways	Adjusted Odds Ratio (Bootstrap Bias Corrected 95% CI) [†]
Natural Direct Effect (NDE)	1.47 [*] (1.06, 1.97)
Natural Indirect Effect (NIE)	1.15 ^{**} (1.07, 1.30)
Total Effect	1.69 ^{**} (1.21, 2.26)
Percentage Mediated	32.66

^{*}
 $p < .05$;

^{**}
 $p < .01$.

[†] In this bootstrap of causal mediation analysis, we controlled for age category, gender, race/ethnicity, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of bodyweight changes during the pandemic.

Table 5. Racial and ethnic differences in the odds of reporting worsening sex life during COVID-19.

Variables	Adjusted Odds Ratio (95% CI) [†]	
	Model 1	Model 2
Race/Ethnicity		
Non-Hispanic White	Reference	Reference
Hispanic	1.45* (1.04, 2.03)	1.39 (0.99, 1.96)
Non-Hispanic Black	1.58* (1.11, 2.25)	1.48* (1.03, 2.12)
Non-Hispanic Asian	0.99 (0.58, 1.73)	0.92 (0.53, 1.60)
Non-Hispanic Other	1.82* (1.06, 3.11)	1.71 (0.99, 2.94)
Experienced racism during COVID-19		
No	-	Reference
Yes	-	1.53* (1.04, 2.28)

[†]In both adjusted models, other variables included in the weighted logistic regressions were age category, gender, country of birth, marital status, education level, employment, religious attendance, self-rated health, and self-assessment of bodyweight changes during the pandemic.