Disparities in Mental Health and Well-Being between Heterosexual and Sexual Minority Older Adults during the COVID-19 Pandemic

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Abstract

Objectives: This study examines disparities in older adults’ mental health and well-being during the pandemic by sexual minority status. Methods: This study analyzed data on older adults from the Health and Retirement Study’s COVID-19 Module (N = 3142 for heterosexuals and N = 75 for sexual minorities). Weighted regressions linked concern about COVID-19, depression, pandemic emotional stress, and changes in loneliness, in-person contacts, income, and work to sexual minority status, controlling for sociodemographic characteristics. Results: Compared to heterosexuals, sexual minority older adults had more concern about the pandemic and emotional stress and showed a decrease in in-person contact during the pandemic—these differences were not explained by sociodemographic characteristics. Sexual minority older adults were also more likely to have changes in income and work during the pandemic, but these differences were explained by sociodemographic characteristics. Discussion: Sexual minority older adults have experienced worse mental health outcomes than heterosexuals during the COVID-19 pandemic, which merits intervention.

Keywords
Coronavirus impact, LGBTQ, minority experience, health inequality, psychosocial health

Introduction

With over 33 million confirmed cases and 600,000 deaths by August 2021 (U.S. Centers for Disease Control and Prevention, 2021), the United States is one of the countries hardest hit by the global COVID-19 pandemic. Epidemiological data has clearly demonstrated that older adults are more vulnerable to serious illness and death from the COVID-19 virus, and research has also documented that certain disadvantaged populations, such as racial minorities and low socioeconomic status (SES) older adults, are more vulnerable to worsening mental health during the pandemic (Choi & Yang, 2021; Fingerman et al., 2021; Holtgrave et al., 2020; Kim & Bostwick, 2020; Millett et al., 2020; Tai et al., 2021). Older adults who are sexual minorities, which the American Psychological Association (2021) defines as persons from diverse populations including but not limited to lesbian, gay, bisexual, pansexual, queer, fluid, and asexual sexual orientations, are another potentially vulnerable subpopulation, but they have received relatively little attention in the discourse and research about the pandemic. We know little about how old age combines with sexual minority status to shape the well-being of persons during the COVID-19 crisis, but there are both scientific and practical reasons for thinking it merits study. Recent estimates suggest there are more than 11 million self-identified sexual minorities in the United States (Williams Institute, 2021) and nearly one-fourth (2.4 million) are aged 65 or older (American Psychological Association, 2013)—a number equivalent to the size of the entire population of New Mexico. The size of the sexual minority older adult population alone merits a fuller understanding of how they have fared during the pandemic.

A social ecological perspective can enhance our understanding of the well-being of sexual minority older adults during the pandemic by recognizing multiple levels of factors that simultaneously affect individuals’ opportunities and outcomes (Bronfenbrenner, 1979; Bronfenbrenner & Ceci, 1994).

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From such a perspective, sexual minorities, particularly older sexual minorities, will likely experience worse social and mental health impacts during the pandemic (Movement Advancement Project, 2020; Phillips et al., 2020; Williams Institute, 2020a, 2020b, 2021) because the existing interpersonal, institutional, and social oppressions they experience at multiple levels may be exacerbated by pandemic conditions. Indeed, prior to the pandemic, voluminous research has documented that sexual minorities face daily experiences of interpersonal, institutional, and social oppression that accumulate over the life course into inequalities in mental health outcomes and well-being (Chen & Shiu, 2017; Herek & Garnets, 2007; Nelson & Andel, 2020; Patterson et al., 2020). For example, sexual minority populations still frequently experience interpersonal discrimination, harassment, and violence in daily life (Ayhan et al., 2020; Casey et al., 2019; Harper & Schneider, 2003; Katz-Wise & Hyde, 2012; Mallory et al., 2015). Despite the recognition of same-sex marriage and other legal advances, there are still structural barriers at the societal and community levels that constrain the opportunities and human rights of sexual minorities in the United States. U.S. states vary in how well their nondiscrimination laws in housing, credit, and employment protect sexual orientation (Movement Advancement Project, 2021), and cultural norms and social recognition of sexual minorities vary from place to place (Lewis et al., 2017). Psychologist Mark L. Hatzenbuehler (2016) coined the term “structural stigma” to describe such societal-level conditions that constrain the opportunities, resources, and well-being of sexual minorities. Due to the continuing existence of these multiple levels of oppression, prior research shows that among older adults, sexual minorities are more likely than heterosexuals to experience poor health, disability, and mental distress. For example, a classic study by Fredriksen-Goldsen and colleagues (2013) using data from the Washington State Behavioral Risk Factor Surveillance System found that sexual minority older adults have a higher risk of disability and poor mental health than heterosexuals. Using nationally representative data from the 2013–2014 National Health Interview Survey, another study found that rates of disability and mental distress are higher among sexual minority older adults than heterosexuals and that sexual minority older women are more likely than their heterosexual counterparts to report poor general health (Fredriksen-Goldsen et al., 2017). Other research studies found that even among partnered older adults, those in same-sex relationships exhibit greater odds of psychological distress than their heterosexual counterparts (Gonzales & Henning-Smith, 2015). A recent review of the literature concluded that sexual minority older adults “evidence more mental distress than their heterosexual peers” (King & Richardson, 2017). In sum, the health inequalities between sexual minority older adults and heterosexual older adults were well-documented and substantial before the outbreak of the COVID-19 pandemic.

The present study proposes that the pre-existing inequalities that affect the mental health and well-being of sexual minorities will be amplified during the pandemic. Prior research points to three potential mechanisms that place sexual minority older adults at increased risk for poor mental health and well-being during the pandemic. First, prior studies have found that sexual minority populations are more likely to have pre-existing health conditions such as asthma, diabetes, or heart disease that could increase the risk of complications and death from the COVID-19 virus (Beach et al., 2018; Caceres et al., 2019; Fredriksen-Goldsen et al., 2017). Further, having one or more pre-existing conditions that elevate one’s physical health risk during the pandemic may lead to greater anxiety, stress, and worry. Second, the pandemic may disrupt networks of support and specialized services that sexual minority older adults rely on more heavily than heterosexuals. For example, prior research has found that sexual minority older adults depend more significantly on friends (i.e., “chosen families”) than family members for care and support (Muraco & Fredriksen-Goldsen, 2011; Orel, 2017). Furthermore, sexual minorities are often reluctant to see regular healthcare providers and instead rely more on specialized healthcare providers that self-identify as being friendly to sexual minorities and sensitive to their needs (Hsieh & Shuster, 2021; Martos et al., 2017, 2018). During the pandemic, public health recommendations that discourage contact with others outside the home, or local policies that forbid it, will limit sexual minority older adults’ access to their social support networks. And, if healthcare providers or facilities close or are harder to access during the pandemic, sexual minority older adults will likely have more difficulty than their heterosexual peers finding suitable substitutes. It is also important to note that although sexual minorities live throughout the United States, they are concentrated in the cities and states hardest hit by the COVID-19 pandemic (Newport & Gates, 2015; Williams Institute, 2020a), including California, Florida, Texas, New York, and the major metropolitan areas within these states (Gates, 2013; Williams Institute, 2020c). The pandemic may disproportionately impact sexual minorities because they tend to live in places with the highest numbers of confirmed cases and deaths (U.S. Centers for Disease Control and Prevention, 2021). In all these ways, COVID-19 and its impacts are likely reverberating significantly in the lives of sexual minority older adults.

As such, this study hypothesizes that older adults who are sexual minorities will have poorer mental health and well-being during the pandemic than their counterparts who are heterosexual. This study is one of the first to examine the mental health and social well-being consequences of the COVID-19 pandemic on sexual minority older adults, and the only one, to the author’s knowledge, to use nationally representative data. The study will make use of data from the Health Retirement Study (HRS) that has rich measures on both heterosexual and sexual minority older adults that can be used
to uncover inequalities in mental health and well-being by sexual minority status. The study’s findings will add to the growing literature on how the COVID-19 pandemic has disproportionately impacted minority and marginalized populations, knowledge that is essential to ultimately reduce these populations’ vulnerability during this or future pandemics.

**Methods**

**Data**

The data in this study comes from the June 2020 COVID-19 module of the HRS. The HRS is a longitudinal panel study that has surveyed a representative sample of adults over age 50 in the United States since 1992. In June 2020, a COVID-19 module was administered to a subsample of HRS respondents to gather data about older adults’ experiences during the pandemic. Data were collected in two stages. First, all respondents participated in a phone interview with a core survey. Second, respondents were asked to complete a leave-behind questionnaire after the core phone interview. The leave-behind questionnaire was mailed to respondents along with a postage-paid envelope for return. The purpose of the leave-behind questionnaire was to collect additional information from respondents without adding to the phone interview length. The HRS has used this format of data collection since 2004 (Smith et al., 2017). The leave-behind questionnaire in the 2020 COVID-19 module included additional questions about older adults’ social and mental well-being during the COVID-19 pandemic. Taken together, data from both parts of the 2020 COVID-19 module offer rich information for researchers to assess the mental health and social well-being of older adults in the United States during the pandemic period. Given the urgency of the pandemic, the HRS made its data available to researchers in Spring 2021 under an accelerated process.

For the June 2020 COVID-19 module, 3217 older adults completed the phone interview, and 2129 older adults also completed and returned the leave-behind questionnaire. When properly weighted, results from the HRS can be generalized to the population of older adults in the United States.

**Identification of Sexual Minority Older Adults**

The present study used data from both 2020 COVID-19 module and prior waves of the HRS to identify sexual minority older adults. Beginning in 2016, newly enrolled respondents in the HRS were asked a question about sexual orientation: “Do you consider yourself to be gay/lesbian, straight, bisexual, or something else?” Wording of the question differed slightly depending on the biological sex of the respondent, that is, the question used the word “gay” for biological males and “lesbian” for biological females. Per previous research, in this study, anyone who answered lesbian/gay, bisexual, “something else,” or “unsure” was categorized as a sexual minority (Boyd et al., 2019; Evans-Polce et al., 2020; Kcomt et al., 2021). For respondents who enrolled before 2016, the household roster and marital status were used to extract sexual minority status. If an older adult was in a same-sex marriage or same-sex cohabitation for at least two waves of the HRS, the respondent was categorized as a sexual minority. This two-wave criterion was used to reduce the chance of misclassifying a heterosexual older adult as a sexual minority due to reporting error in the spouse’s gender in one wave of the survey. Following these procedures, the sample included 75 sexual minority older adults who completed the COVID-19 module of the HRS, 52 of which also completed the leave-behind questionnaire. The sociodemographic characteristics of the 2020 COVID-19 module sample were compared to the broader group of sexual minority older adults in the HRS core survey; differences were found to be minimal. Thus, sexual minority older adults in this study were similar in terms of sociodemographic characteristics to the sexual minority older adults in the HRS core survey.

**Measures of Mental Health and Well-Being**

To explore mental health and well-being during the pandemic from multiple domains, seven indicators were created from data included in the HRS: depression, concern about COVID-19, pandemic emotional stress, change in loneliness, change in in-person contacts, change in income, and change in work. For depression, the HRS questionnaire included the 8-item Center for Epidemiological Depression (CES-D) scale. Respondents reported whether or not they experienced eight specific symptoms (e.g., “I felt depressed,” “I felt everything I did was an effort,” and “My sleep was restless”) for “much of the past week.” To create a total depressive symptom score, positive symptoms were reverse-coded and all symptoms were summed; the final scores ranged from 0 to 8. The internal consistency of the CES-D scale was found to be acceptable. Cronbach’s alpha for this scale was 0.81 for respondents who completed the core phone interview (N = 3217) and 0.79 for respondents who completed both the phone interview and the leave-behind questionnaire (N = 2129). The summary depression score was created only for respondents who had valid data on at least six of the eight CES-D symptom items. Depressive symptoms were treated as a continuous variable in the statistical analysis.

Concern about COVID-19 was measured with the following single-item question: “Overall, on a scale from 1-10, where one is the least concerned and ten is the most concerned, how concerned are you about the coronavirus pandemic?” Pandemic emotional stress was measured using respondents’ ratings on the following two questions: “Since the coronavirus pandemic, how often did you feel emotionally overwhelmed?” and “Since the coronavirus pandemic, how often did you feel stressed?” Answers included
hardly ever or never (= 0), sometimes (= 1), and often (= 2). The two questions were highly correlated with a correlation coefficient of 0.75. As such, the two items were summed to create a pandemic emotional stress scale. The pandemic emotional stress scale ranged from 0 to 4 with a good internal consistency (Cronbach’s alpha = 0.85). Change in loneliness was measured by a single-item question that asked respondents to compare their perception of loneliness during the pandemic to before the outbreak. Answer categories for this question were “about the same,” “less so,” or “more so.” Change in not enough in-person contact was separately measured through a similar, single-item question that asked respondents to compare their perception of “not getting enough in-person contact with people outside the household” during the pandemic to before the outbreak. Answer categories for this question again were “about the same,” “less so,” or “more so.” Lastly, respondents reported whether their income experienced “no change,” “went up,” or “went down” and if their work had changed owing to the pandemic, that is, “no change,” “not working before the pandemic,” or “being affected by the pandemic.”

Covariates

The statistical analyses included a wide range of covariates. First, demographic characteristics including age, gender, and race/ethnicity (coded as Non-Hispanic White, Non-Hispanic Black, Hispanic, and Others) were included as covariates. To capture the potential non-linear effect of age, an age-squared term was also included. Second, the analyses included several covariates to account for variations in family structure and socioeconomic resources, including education (coded as less than high school, high school, some college, or college and above), household income (coded as less than $5000 per year, $5000-$24,999 per year, $25,000-$49,999 per year, $50,000-$99,999 per year, or above $100,000 per year), marital status (i.e., currently married or not), employment status (coded as employed, unemployed, or retired), number of adults in the household, and number of children in the household. Finally, self-rated health was included to control for older adults’ general health status. The one-item assessment of self-rated health (SRH) is a global measure of health status that is widely used in many surveys. Respondents were asked “Would you say your health is excellent, very good, good, fair, or poor?” Answers ranged from 1 (excellent) to 5 (poor).

Analytical Strategy

In the analysis, multiple imputations were used to deal with missing values. The rationale for multiple imputations is to use the distribution of the observed data to estimate a set of plausible values for the missing data. In this method, multiple sets of imputed data were created and analyzed to obtain a set of parameter estimates, which were then combined to obtain the overall estimates (Allison, 2001). Because missing values occurred in several of the variables in the present study, the study used multiple imputations with chained equations to generate imputations based on a set of imputation models, one for each variable with missing values (White et al., 2011). Multiple imputations with chained equations were able to handle different variable types because each variable was imputed using its own imputation model. Although not all variables in the study had missing values, the chained equations approach included all variables (dependent and independent) in the estimations of missing values.

Once missing values were dealt with, the first step in the analysis was to estimate weighted descriptive statistics for both heterosexual and sexual minority older adults. All bivariate analyses were adjusted for multiple comparisons using the Bonferroni correction. Next, a series of weighted regressions were used to link each measure of well-being and changes in experience to respondents’ sexual minority status, accounting for covariates. Logistic regression was used for binary outcomes, OLS regression was used for continuously measured outcomes, and multinomial regression was used for categorical outcomes. Because the questions about pandemic emotional stress, change in loneliness and change in in-person contact were asked only in the leave-behind questionnaire; the sample size for the analysis of these three indicators was reduced to include only those who completed the leave-behind questionnaire (N = 2129). All regressions were properly weighted.

Results

Table 1 shows the weighted descriptive statistics of the older adults in the analytical sample. Compared to heterosexuals, sexual minority older adults were younger (heterosexual = 69.22, sexual minority = 61.73; p = 0.01), were more likely to be racial and ethnic minorities (57.7%, Non-Hispanic White for heterosexual and 46.7%, Non-Hispanic White for sexual minority; p = 0.02), and had a higher income (13.4%, $50,000 or more for heterosexual and 17.4%, $50,000 or more for sexual minority; p = 0.01). Table 2 shows the mental health and well-being of older adults during the COVID-19 pandemic by their sexual minority status, with considerable disparities evident. For example, sexual minority older adults were much more concerned about COVID-19 than their heterosexual counterparts (7.77 for heterosexual and 8.44 for sexual minority; p = 0.042) and scored higher on the pandemic emotional stress scales (1.25 for heterosexual and 1.80 for sexual minority; p = 0.014). Older adult sexual minorities were also more likely to report an increase in loneliness than heterosexuals (25.9% for heterosexual and 34.6% for sexual minority; p = 0.049). Moving to changes in income and work, nearly 45% of sexual minority older adults reported their work was affected by the pandemic compared to only 28.4% of heterosexual older adults (p = 0.007). While older adult sexual minorities were also more likely to report a decrease in
income during the pandemic than heterosexuals (16.5% for heterosexual and 27.0% for sexual minority), the difference was not statistically significant.

Table 3 shows the results of the weighted OLS regressions that linked sexual minority status to the three measures of mental health: depression, concern about COVID-19, and pandemic emotional stress. After accounting for differences due to a wide range of sociodemographic characteristics, Table 3 still shows considerable disparities in mental health by sexual minority status. Older adult sexual minorities were more concerned about COVID-19 (coeff. = 0.912, p = 0.008) and felt more pandemic emotional stress than heterosexuals (coeff. = 0.555, p = 0.042). However, there was no statistical difference in depression between sexual minority older adults and heterosexual older adults. The coefficients of a few covariates in Table 3 are worth mentioning. Compared to males, females had higher depression scores (coeff. = 0.249, p = 0.002), more concern about COVID-19 (coeff. = 0.620, p < 0.001), and a greater level of pandemic emotional stress (coeff. = 0.609, p < 0.001). For race/ethnicity, being Non-Hispanic Black or Hispanic was associated with more concern about COVID-19 (coeff. = 1.490, p < 0.001; coeff. = 1.056, p < 0.001). Better self-rated health was associated with lower depression scores (coeff. = −0.598, p < 0.001) and less pandemic emotional stress (coeff. = −0.171, p < 0.001), but not concern about COVID-19.

Table 4 shows the results of the multinominal logistic regressions that linked sexual minority status to four measures of well-being during the pandemic: changes in income, work, in-person contacts, and loneliness. Although sexual minority older adults and heterosexuals differed in their likelihood of changes in income and loneliness, the differences were fully explained by sociodemographic characteristics. However, the differences by sexual minority status for changes in work and not enough in-person contacts remained even after covariates were included. Older adult sexual minorities were more likely to have their work affected by the pandemic (RRR = 2.415, 95% confidence interval = 1.082 to 5.393, p = 0.031) and were

**Table 1.** Descriptive Statistics of Older Adults from the 2020 Health and Retirement Study COVID-19 Module.

| Sample Size | Full Sample | Heterosexual | Sexual Minority | p value |
|-------------|-------------|--------------|-----------------|---------|
| Sample Size | 3217        | 3142         | 75              | -       |
| Female      | 59.3%       | 59.4%        | 56.0%           | 1.00    |
| Age         | 69.05 (10.50) | 69.22 (10.48) | 61.73 (8.59)   | .01*    |
| Married     | 53.7%       | 53.8%        | 46.7%           | 1.00    |
| Race        |             |              |                 |         |
| Non-Hispanic White | 57.5% | 57.7% | 46.7% | .02    |
| Non-Hispanic Black | 21.0% | 21.1% | 13.3% |         |
| Hispanic    | 16.0%       | 15.7%        | 29.3%           |         |
| Others      | 5.6%        | 5.4%         | 10.7%           |         |
| Education   |             |              |                 | 1.00    |
| < High school | 15.1% | 15.0% | 17.3% |         |
| High school | 31.0%       | 31.1%        | 18.7%           |         |
| Some college | 26.3% | 26.2% | 29.3% |         |
| College and above | 27.4% | 27.2% | 34.7% |         |
| Employment  |             |              |                 | .01*    |
| Employed    | 27.6%       | 27.5%        | 32.0%           |         |
| Unemployed  | 5.6%        | 5.5%         | 10.7%           |         |
| Retired     | 48.9%       | 49.5%        | 24.0%           |         |
| Others/Unknown | 17.9% | 17.5% | 33.3% |         |
| Personal Annual Income |           |              |                 |         |
| 0–4999  | 45.8%   | 46.3% | 25.3% | .01*    |
| 5000–24,999 | 6.8%   | 6.7%  | 10.7% |         |
| 25,000–49,999 | 8.3%  | 8.3%  | 8.0%  |         |
| 50,000–99,999 | 7.9%  | 7.7%  | 14.7% |         |
| ≥100,000        | 5.7%    | 5.7%  | 2.7%  |         |
| Unknown        | 25.5%   | 25.2% | 38.7% |         |
| Self-rated health | 3.08  | 3.07  | 3.17  | 1.00    |
| Number of children in household | 0.25 (0.98) | 0.25 (0.98) | 0.27 (0.86) | 1.00 |
| Number of adults in household | 2.43 (1.71) | 2.42 (1.69) | 2.88 (2.08) | .60    |

Note. * p < .05, ** p < .01, *** p < .001.
more likely to report that not getting enough in-person contact increased during the pandemic (RRR = 2.817, 95% confidence interval = 1.183 to 6.706, \( p = 0.019 \)). Again, several covariates that were associated with changes in well-being during the pandemic are worth noting. For example, being female was associated with an increase in not getting enough in-person contact during the pandemic (RRR = 1.504, 95% confidence interval = 1.144 to 1.977, \( p = 0.003 \)) and feeling more loneliness (RRR = 1.632, 95% confidence interval = 1.213 to 2.196, \( p = 0.001 \)). Higher education was associated with an increase in not getting enough in-person contact.

Finally, because it is possible that some of the well-being outcomes (i.e., changes in income, work, not getting enough in-person contact, and loneliness) may also explain the associations found between sexual minority status and mental health (i.e., depression, COVID-19 concern, and pandemic emotional stress), two additional sensitivity analyses were performed that included the well-being variables in the regression model. The sensitivity analyses found the association between COVID-19 concern and sexual minority status was not explained by the inclusion of the well-being variables, but the association between pandemic emotional stress and sexual minority status was explained by two of the well-being variables: changes in not getting enough in-person contact and changes in loneliness.

### Table 2. Descriptive Statistics of Older Adults’ Mental Health and Well-Being by Sexual Minority Status from the 2020 Health and Retirement Study COVID-19 Module.

|                          | Full Sample | Heterosexual | Sexual Minority | \( p \) value |
|--------------------------|-------------|--------------|----------------|--------------|
| **Sample Size**          | 3217        | 3142         | 75             | -            |
| **Mental Health**        |             |              |                |              |
| Depression               | 1.43 (1.99) | 1.42 (1.99) | 1.67 (2.26)    | 1.00         |
| Concern about COVID-19   | 7.79 (2.66) | 7.77 (2.67) | 8.44 (2.02)    | .042*        |
| Pandemic emotional stress| 1.26 (1.24) | 1.25 (1.23) | 1.80 (1.32)    | .014*        |
| **Changes in Well-Being**|             |              |                |              |
| Income changes           |             |              |                | .42          |
| About the same           | 78.8%       | 79.0%        | 70.3%          |              |
| Went up                  | 4.5%        | 4.5%         | 2.7%           |              |
| Went down                | 16.8%       | 16.5%        | 27.0%          |              |
| Work changes             |             |              |                | .007**       |
| Yes                      | 28.8%       | 28.4%        | 48.0%          |              |
| No                       | 45.1%       | 45.2%        | 40.0%          |              |
| Not working/Retired      | 26.1%       | 26.4%        | 12.0%          |              |
| Loneliness changes       |             |              |                | .049*        |
| About the same           | 68.6%       | 68.9%        | 55.8%          |              |
| Less so                  | 5.3%        | 5.3%         | 9.6%           |              |
| More so                  | 26.1%       | 25.9%        | 34.6%          |              |
| Changes in not getting enough in-person contact | | | | 1.00 |
| About the same           | 50.7%       | 50.9%        | 41.2%          |              |
| Less so                  | 10.4%       | 10.4%        | 9.8%           |              |
| More so                  | 38.9%       | 38.6%        | 49.0%          |              |

Note. * \( p < .05 \), ** \( p < .01 \), *** \( p < .001 \).

Discussion

The present study is one of the first studies of mental health and well-being during the COVID-19 pandemic that uses a nationally representative sample of sexual minority older adults and therefore provides new and critical insight into the pandemic experiences of an under-researched population. Taken together, the results of the weighted regressions make clear that compared to their heterosexual counterparts, sexual minority older adults had poorer mental health outcomes and their lives were more likely to be disrupted by the COVID-19 pandemic, specifically at work and socially. This study has three key findings. First, on average, sexual minority older adults reported poorer mental health and well-being during the pandemic than heterosexual older adults, and most of the associations were not explained by differences in sociodemographic characteristics. Second, sexual minority older adults experienced more difficulty socially than their heterosexual counterparts during the pandemic, as manifested by a greater decline in-person contact. Importantly, the differences in well-being and mental health that were found in the analysis cannot be fully explained by differences in age, marital status, racial-ethnic background, household composition, and self-rated health. However, somewhat surprisingly, sexual minority
Table 3. Results from Weighted OLS Regressions Linking Sexual Minority Status to Older Adults’ Mental Health During the COVID-19 Pandemic.

|                          | Depression Coeff. (SE) (95% CI) p value | Concern about COVID-19 Coeff. (SE) (95% CI) p value | Pandemic emotional stress Coeff. (SE) (95% CI) p value |
|--------------------------|----------------------------------------|---------------------------------------------------|-----------------------------------------------------|
| Sexual Minority          | .099 (.293)                            | .912** (.344)                                     | .555* (.276)                                        |
| Age                      | .028 (.061)                            | .152 (.104)                                       | .032 (.046)                                         |
| Age (squared)            | -.092, .148 (.648)                     | -.052, .356 (.147)                                | -.058, .122 (.481)                                 |
| Female                   | .249** (.081)                          | .620*** (.135)                                    | .609*** (.066)                                     |
| Married                  | -.472*** (.099)                        | .047 (.149)                                       | -.099 (.079)                                       |
| Race (ref: Non-Hispanic White) |                                       |                                                   |                                                     |
| Non-Hispanic Black       | .071 (.127)                            | 1.490*** (.166)                                   | -.173 (.090)                                       |
| Hispanic                 | -.207 (.147)                           | .1056*** (.207)                                   | .258* (.126)                                       |
| Others                   | .264 (.172)                            | .622* (.267)                                      | .149 (.194)                                        |
| Education (ref: High school) |                                       |                                                   |                                                     |
| High school              | -.261 (.158)                           | .315 (.243)                                       | .040 (.127)                                        |
| Some college             | -.571, .049 (.373)                     | -.161, .791 (.196)                                | -.209, .289 (.747)                                 |
| College and above        | -.302, .274 (.922)                     | .130 (.228)                                       | -.155 (.118)                                       |
| Employment (ref: Unemployed) |                                       |                                                   |                                                     |
| Employed                 | -.271 (.186)                           | -.065 (.288)                                      | .085 (.185)                                        |
| Others                   | .358 (.226)                            | -.218 (.316)                                      | -.083 (.186)                                       |
| Retired                  | -.237 (.195)                           | -.141 (.305)                                      | -.205 (.170)                                       |
| Personal Annual Income (ref: 0–4999) |                                       |                                                   |                                                     |
| 5000–24,999              | -.304 (.179)                           | .028 (.317)                                       | .051 (.176)                                        |
| 25,000–49,999            | -.655, .047 (.90)                      | -.593, .649 (.931)                                | -.294, .396 (.770)                                 |
| 50,000–99,999            | -.257 (.182)                           | -.352 (.286)                                      | -.398** (.137)                                     |
| ≥ 100,000                | -.614, .100 (.159)                     | -.913, .209 (.219)                                | -.667, .129 (.004)                                 |
| Unknown                  | -.414** (.149)                         | -.013 (.251)                                      | -.026 (.143)                                       |
| Self-rated health        | -.706, -.122 (.006)                    | -.505, .479 (.959)                                | -.306, .254 (.858)                                 |
| Number of children in household | -.780, -.160 (.003)                    | -.1056, .132 (.127)                               | -.495, .085 (.166)                                 |
| Number of adults in household | .105, .071 (.707)                     | -.082, .200 (.418)                                | -.240, .102 (.001)                                 |

Note. * p < .05, ** p < .01, *** p < .001. Because the questions that were used to calculate the pandemic emotional stress scale were only in the leave-behind questionnaire, the sample size dropped to 2129 when pandemic emotional stress was the outcome variable.
Table 4. Results from Weighted Multinomial Logistic Regressions Linking Sexual Minority Status to Older Adults’ Changes in Well-Being During the COVID-19 Pandemic.

|                        | Sexual Minority | Age (squared) | Female | Married | Race (ref: Non-Hispanic White) | Hispanic | Non-Hispanic Black | Education (ref: < High school) | College and above | Employment (ref: Employed) | Unemployed | Retired | Others |
|------------------------|-----------------|---------------|--------|---------|--------------------------------|----------|-------------------|-----------------------------|-----------------|---------------------------|------------|---------|--------|
| **Changes in Well-Being** |                 |               |        |         |                                |          |                   |                             |                 |                           |            |         |        |
| Income changes (ref: the same) |                 |               |        |         |                                |          |                   |                             |                 |                           |            |         |        |
| Want down              | 1.188 (1.09, 1.29) | 0.031 | 1.07 (1.06, 1.29) | 0.155 | 0.027 (0.97, 1.09) | 0.116 | 1.26 (1.07, 1.43) | 0.001 | 0.453 (1.01, 1.38) | 0.040 | 1.317 (0.83, 2.14) | 0.268 | 1.560 (0.80, 3.06) | 0.277 |
| Want up                | 1.065 (1.07, 1.07) | 0.496 | 1.25 (1.03, 1.49) | 0.012 | 0.682 (0.41, 1.10) | 0.787 | 0.90 (0.65, 1.29) | 0.458 | 0.370 (0.23, 0.58) | 0.021 | 1.173 (0.71, 2.00) | 0.467 | 0.984 (0.48, 1.98) | 0.023 |
| Not working            | 0.100 (0.99, 1.00) | 0.988 | 0.99 (0.99, 1.00) | 0.988 | 0.99 (0.99, 0.99) | 0.988 | 0.99 (0.99, 0.99) | 0.988 | 0.99 (0.99, 0.99) | 0.988 | 0.99 (0.99, 0.99) | 0.988 | 0.99 (0.99, 0.99) | 0.988 |
| **Changes in not getting enough interpersonal contact and changes in loneliness were only in the leave-behind questionnaire, the sample size dropped to 2129 when these two variables were the outcome variables.**
older adults did not differ from heterosexual older adults in their levels of depression.

To date, many studies from different countries and with different sampling strategies, sample sizes, and research designs have investigated the well-being and mental health of older populations during the pandemic. Some studies have found that older adults have a lower prevalence of depression symptoms, psychological distress, and anxiety compared to younger adults (e.g., Arpino et al., 2021; Bohn et al., 2021; Kobayashi et al., 2021; Taylor et al., 2021). However, variations in mental health and well-being in the older adult population has been understudied. In particular, how sexual minorities’ well-being and mental health has differed during the pandemic, if at all, has been less clear in the existing literature. Using nationally representative data, this is one of the few studies that reveals that sexual minority older adults have born a disproportionate mental and social burden during the COVID-19 pandemic compared to their heterosexual counterparts in the United States. The study’s findings highlight the health inequities and social injustices that sexual minority older adults face in the United States during an emergency like the COVID-19 pandemic. Of course, the relationships found in this study are not causal, and thus, caution must be taken with interpretation. Future studies that investigate whether pandemics worsen inequalities for sexual minorities would provide firmer ground for interpretation. Notwithstanding, findings from this study still add to the growing literature on health disparities and aging populations in times of a national, public health crisis (Walubita et al., 2021) and a small but growing literature on the health and well-being of sexual minority adults worldwide (e.g., Barrientos et al., 2021; Hafford-Letchfield et al., 2021; Westwood et al., 2021).

It is worth considering why sexual minority older adults’ pandemic emotional distress was not explained by sociodemographic factors. Descriptive statistics suggest that sexual minority older adults in this sample were also more likely to be in other socially disadvantaged categories, for example, a racial or ethnic minority or unmarried. As such, this finding may underscore the relatively powerful disadvantage that being a sexual minority and a racial and ethnic minority confers. Further, although the descriptive statistics find that consistent with previous research (Fine, 2015; Herek et al., 2010), sexual minority older adults have more education, this educational advantage may not be able to fully compensate for the structural and institutional oppressions that sexual minority older adults experience in everyday life, such as the lack of legal protection from discrimination in housing, credit, and employment. In other words, among sexual minority older adults, education may be less protective of health and well-being than it is for heterosexuals (Zhang et al., 2020) and in this study, may have helped drive the observed disparities. Future studies that investigate such mechanisms further will advance the understanding of how sexual minority status may translate to poorer well-being and heightened mental health inequities during crises like the COVID-19 pandemic.

It is also worth considering why sexual minority older adults experienced more COVID-19 concern and pandemic emotional stress during the pandemic, but not more depression. One potential explanation is that sexual minority older adults managed to avoid depression during the pandemic because they have coping strategies in place to deal with emergencies and unexpected events, like the concept of “crisis competency” developed by Kimmel (1978). This interpretation aligns with prior research that finds that coping among sexual minority populations has led to variations in successful aging across physical, mental, emotional, and social domains (Van Wagenen et al., 2013). Seen this way, the negative impact of the COVID-19 pandemic on sexual minority older adults is real, but also points to a certain degree of resilience in this minority population.

As always, the research undertaken is not without limitations. First, the analysis in this study was cross-sectional and therefore, as noted earlier, the results cannot be interpreted as causal. Second, the total number of sexual minority older adults in the HRS sample was relatively small, leaving the study without enough statistical power to incorporate an intersectional framework for the analysis of disparities. This issue is common for many publicly funded, nationally representative datasets, but is also a limitation that must be corrected to understand the unique experiences of minority, marginalized populations. Without better data, there cannot be an evidence-informed and equitable response to the COVID-19 pandemic and future crises. Third, although the interpretation of this study’s results has drawn reasonable connections between the findings and extant evidence of factors that impact the health of sexual minority older adults, the empirical analysis did not directly assess experiences, such as exposure to structural stigma. Future qualitative work that directly assesses experiences may help to elucidate the causal pathways that this study can only suggest as associations. Finally, many of the HRS’s COVID-19 related measures have not been previously validated and many of them are single-item measures. However, given the quickly evolving nature of the COVID-19 pandemic and its status as a public health emergency, there was not enough time for the survey team to validate instruments per the usual procedure without unreasonably delaying the collection and release of data to researchers for analysis. Future studies should validate these measures to provide firmer estimates and clearer understanding of the social and mental health consequences of the COVID-19 pandemic on older adults.

Taken together, the study’s findings highlight several important implications for practice and public policy concerning sexual minority older adults. First, the findings underscore the critical importance of including questions about sexual orientation and gender identity in large-scale surveys and government data collection efforts, a current shortcoming that scholars and advocates have asked public officials to
address (e.g., Akre et al., 2021; Martino et al., 2021). Currently, data on the experience of sexual minorities during the pandemic is sparse. New data with larger sample sizes and detailed measures will allow for a better understanding of the lives and well-being of sexual minority older adults during this pandemic as well as any future public health crisis. Second, the finding that sexual minority older adults experienced a greater reduction in in-person social contact during the pandemic highlights the need for policy attention to sexual minorities’ somewhat unique social support needs. Because sexual minority older adults may not feel comfortable using existing support services and networks that are largely populated by heterosexuals, it may be necessary to create targeted service programs or dedicated on-line support groups for sexual minority older adults. Such programs and services could collaborate with local community organizations that represent sexual minorities to improve outreach and effectively meet social needs. Finally, the study found that compared to other adults, sexual minority older adults were more concerned about COVID-19 and its potential impact on their lives. As such, governments, social service organizations, and healthcare providers, particularly those in cities or regions that have a higher proportion of sexual minorities, would do well to put extra effort around providing up-to-date information on services and support to sexual minority older adults, thus easing these older adults’ concerns and worries in times of crisis.

Conclusion

Since the outbreak of the coronavirus disease, minority and marginalized older adults have faced greater risk of COVID-19 exposure, infection, and complications, in large part because of the daily realities of historical and ongoing oppression and social injustice (Walubita et al., 2021). A growing number of studies have also demonstrated that the pandemic has had far-reaching consequences beyond the physical effects of the disease itself. Unfortunately, one such consequence is the disproportionate, negative effect of the COVID-19 pandemic on sexual minority older adults, a population that is often overlooked in both LGBTQ literature and aging studies (Fredriksen-Goldsen & Muraco, 2010). This study is one of few that examines the well-being of diverse populations during the pandemic, and the first to do so using a nationally representative sample. By analyzing a nationally representative sample from the HRS that includes data collected during the pandemic (2020), the study finds that compared to heterosexual older adults, sexual minority older adults experienced more concern about COVID-19 and emotional stress and were more likely to reduce their in-person contacts, and also had a higher chance of income and work disruptions. Although the differences in income and work disruptions were explained by sociodemographic characteristics, the psychosocial outcomes were not. These findings suggest two things. First, again it is clear that COVID-19 does not impact all populations equally. In this case, sexual minority older adults are a disadvantaged population that is disproportionately affected and, in order to achieve equitable well-being, deserve focused policy attention. Second, fully understanding the disproportionate impacts of a public health crisis like COVID-19 requires better data. Publicly funded data collection efforts must include questions about sexual orientation or gender identity so that sufficient sample sizes are available to unpack sexual minorities’ experiences during times of public health crises.

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