Sexual Minority Adults Experienced More Severe And Longer COVID-19 Symptoms Than Heterosexual Adults

850

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BACKGROUND

- Lacking access to COVID-19-related care could prolong symptoms and accentuate adverse health outcomes among vulnerable populations, including sexual minority populations.
- We investigated the relationships between sexual orientation and COVID-19 diagnosis, symptoms, and vaccination status.

METHODS

- **Data source:** 2022 National Health Interview Survey (NHIS)
- **Measures**:
  - Sexual orientation: self-reported sexual orientation was categorized as sexual minority (gay, lesbian, bisexual, or other) and heterosexual.
  - COVID-related variables:
    - Ever been told they had COVID-19 by healthcare providers
    - Ever had positive COVID-19 antibody or blood test
    - Had severe symptoms of COVID-19 (severe: severe symptoms; non-severe: moderate symptoms, mild symptoms, or no symptoms)
    - Had COVID-19 symptoms for 3 or more months
    - Currently has COVID-19 symptoms
    - Received at least one dose of COVID-19 vaccine
  - Sociodemographic variables: age, race/ethnicity, education, health insurance coverage, and self-reported general health status
- **Statistical Analysis**:
  - Weighted percentages of COVID-related measures and Rao-Scott Chi-Squared p-value were reported by sexual orientation.
  - Multivariable analyses were conducted between sexual orientation and COVID-related measures, adjusted for sociodemographic characteristics. Analyses were weighted.
- **Statistical Software**: SAS

Sexual minority populations were more likely to receive COVID-19 vaccination, but also more likely to have long and severe COVID-19 symptoms than heterosexual peers.

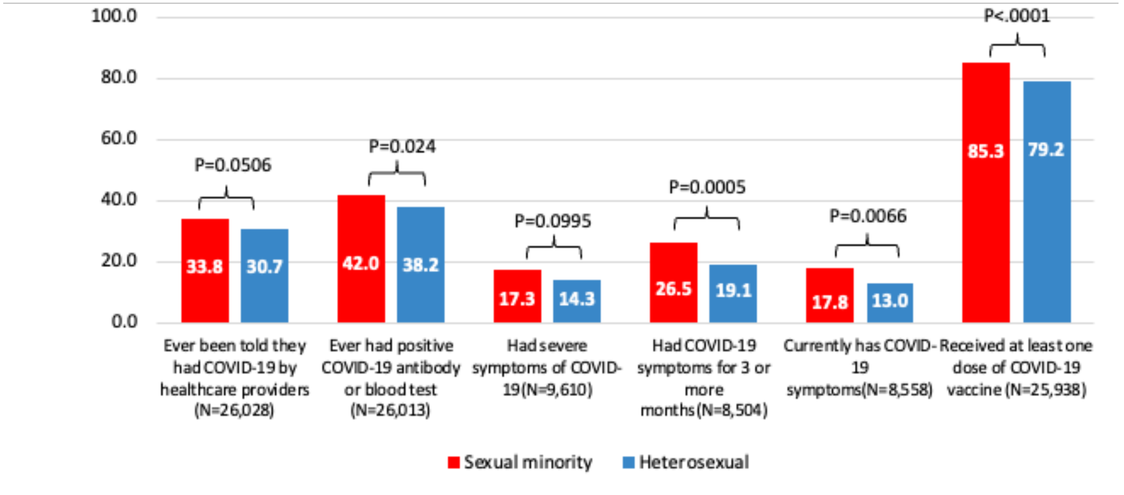
RESULTS

- Among 26,057 participants, 1,324 (5.5%) self-identified as sexual minority, and 24,733 (94.5%) self-identified as heterosexual.
- A higher proportion of sexual minority participants reported 18-35 years old than heterosexual peers (68.9% vs. 28.2%), distributions of other sociodemographic characteristics were similar.
- Significantly higher proportions of sexual minority participants reported ever had positive COVID-19 tests, had COVID-19 symptoms for ≥ 3 months, had current COVID-19 symptoms, and received at least one dose of COVID-19 vaccine.

Table 1. Sociodemographic characteristics of participants by sexual orientation

	Sexual Minority (N=1324)		Heterosexual (N=24733)	
	N	Weighted %	N	Weighted %
Age (N=26,008)				
18-35 years old	665	62.9	5083	28.2
36-50 years old	287	18.1	5450	24.6
51-65 years old	235	13.2	6437	25.4
65+ years old	136	5.8	7715	21.8
Race (N=24,758)				
White	1011	79.0	18447	77.1
Black/African American	129	11.5	2801	12.8
Other	126	9.5	2244	10.1
Education (N=25,939)				
High school or lower	315	31.1	8380	37.7
Some college or associate degree	392	33.5	6935	29.4
Bachelor 's degree or higher	611	35.4	9306	32.9
Health insurance coverage (N=25,996)				
Not covered	93	8.9	1821	9.6
Covered	1226	91.1	22856	90.4
Self-reported general health status (N=26,055)				
Excellent	245	17.5	5102	22.1
Very good	445	33.4	8556	34.7
Good	428	32.6	7351	29.2
Fair	168	13.4	2826	10.8
Poor	38	3.1	896	3.2

Figure 1. COVID-19 diagnosis, symptoms, and vaccination status by sexual orientation



RESULTS (Cont'd)

Table 2. Association between sexual orientation and COVID-19 diagnosis, symptoms, and vaccination status

Sexual minority vs. Heterosexual	
Outcomes	**aOR (95%CI)†**
Model 1: Ever been told they had COVID-19 by healthcare providers (Yes vs. No)	0.91 (0.78-1.06)
Model 2: Ever had positive COVID-19 antibody or blood tests (Yes vs. No)	0.91 (0.79-1.05)
Model 3: Severity of COVID-19 symptoms (Severe vs. Non-Severe)	1.36 (1.01-1.05)*
Model 4: Had COVID-19 symptoms for 3 or more months (Yes vs. No)	1.56 (1.21-2.02)**
Model 5: Currently has COVID-19 symptoms (Yes vs. No)	1.63 (1.23-2.15)**
Model 6: COVID-19 vaccination status (Yes vs. No)	2.19 (1.78-2.71)***

*P<0.05, **P<0.01, ***P<0.0001
†Adjusted for age, race/ethnicity, education, health insurance, and self-reported general health status

- After adjusted for sociodemographic variables, sexual minority group were more likely to have severe COVID-19 symptoms, have COVID-19 symptoms for ≥ 3 months, had current COVID-19 symptoms, and received at least one dose of COVID-19 vaccine.

CONCLUSIONS

- In this national U.S. sample, sexual minority populations experienced more severe and prolonged COVID-19 symptoms than their heterosexual counterparts.
- At the same time, sexual minority populations were more likely to be vaccinated than heterosexual peers.
- Future research is needed to explore factors contributed to severe or prolonged COVID-19 symptoms in sexual minority populations.

LIMITATIONS

- We did not assess the number of doses and dates participants received the vaccine, which may be related to long and severe COVID-19 results among sexual minority populations.
- We did not include healthcare utilization, a potential correlate to COVID-19 diagnosis and symptoms by literature, in the model.

CONTACT INFORMATION

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